Wyoming education partners support a student-centered learning system in which all Wyoming students graduate prepared and empowered to create and own their futures.

WYOMING STATE BOARD OF EDUCATION

AGENDA | April 25, 2019 – 8:00 a.m.

Fremont County School District #25 121 N. 5th St. West, Riverton

State Board of Education

Opening Items

- Call to Order
- Roll Call
- Pledge
- Welcome
- Approve Agenda

Consent Agenda

- Minutes

Public Comment on Agenda Items (except computer science)

Convene State Board of Vocational Education

Action Item

- Wyoming's Perkins V Transition Plan

Adjourn State Board of Vocational Education

Reports

- State Superintendent's Update
- Coordinator's Report
    - Administrative Procedures (parts 2 and 3)
    - Legislative interim topics
    - Basket of Goods review committee
    - BoardDocs Update
- Treasurer's Report
    - Review budget narrative
    - Proposed budget changes
- Committees
    - Communications Committee
    - Administrative Committee

- Committee Assignments

Discussion Items

- Certified Personnel Evaluation Systems Updates
  - Leader Evaluation Update
  - Chapter 29 – Teacher Evaluation (emergency and regular rules)
- Work Plan for Administrative Rules
- SCRIPT Training – Computer Science Deployment Strategic Planning
- Computer Science Standards

Public Comment on Computer Science

Action Items

- Chapter 10 Rules (Computer Science Standards)

Future Items

- May Meeting Location

Board Member Comments

(Comments about meetings or workshops attended, topics of concern, public recognition)

Public Comment

(Final comments from the public)

Adjournment – 4:00 p.m.

WYOMING STATE BOARD OF EDUCATION
March 21, 2019
2371 Hickory Street
Casper

Wyoming State Board of Education members present: Chairman Wilcox, Sue Belish, Superintendent Balow, Ryan Fuhrman, Bill Lambert, Kathryn Sessions, Forrest Smith, Max Mickelson, Debbie Bovee, and Dan McGlade.

Members absent: Nate Breen, Sandy Caldwell, Dr. Dean Ray Reutzel, and Robin Schamber.

Also present: Kylie Taylor, WDE; Dr. Thomas Sachse; Michelle Panos, WDE; Julie Magee, WDE; Mackenzie Williams, AG; and Randall Lockyear, AG.

March 21, 2019

CALL TO ORDER

Chairman Wilcox called the State Board of Vocational Education to order at 9:01 a.m.

Kylie Taylor conducted roll call and established that a quorum was present.

APPROVAL OF AGENDA

Sue Belish moved to approve the agenda as presented, seconded by Superintendent Balow; the motion carried.

Dr. Michelle Aldrich and John Bole from the WDE updated the board on the state reports and Perkins V Transition Plan, Dr. Aldrich indicated the WDE would bring the full transition plan back to the board in April for their action.

The State Board of Vocational Education adjourned at 9:38 a.m.

Chairman Wilcox called the State Board of Education to order at 9:39 a.m.

New board members, Bill Lambert and Debbie Bovee took the oath of office.

Sue Belish proposed to remove the Treasurer's Report from the Consent Agenda so the board could discuss.

Max Mickelson presented the summary review and expenditures report for the board's budgets, and went over the remaining balances and time left in the current biennium.

Max Mickelson moved to approve the Treasurer's Report, seconded by Ryan Fuhrman; the motion carried.

Sue Belish moved to approve the February 2019 minutes, seconded by Max Mickelson; the motion carried.

Presentation from 2018-19 Wyoming Teacher of the Year, Valerie Bruce

State Superintendent's Update

Superintendent Balow congratulated the new board members on their appointment to the SBE. Superintendent Balow updated the board on the confirmation of the updated state education plan that was approved by the U.S. Department of Education. The plan is in fulfillment of the Every Student Succeeds Act.

Coordinator's Report

SBE Coordinator, Tom Sachse, began his report with a legislative update and summary of how the General Session went. Tom indicated there might be some bills that come up in the future that will be of interest to the board.

Tom reviewed the basket of goods report that was presented at the board's February meeting, Tom asked the board to reflect on the standards promulgation process and consider whether and how to move forward given the system as it currently stands.

The Coordinator's report ended with a review of section one of the Administrative Procedures. The board was presented this section of the Administrative Procedures in February to be voted on during their March meeting.

SBE COMMITTEE UPDATES

Communications Committee

Ryan Fuhrman informed the board that the committee is continuing to work on guest blog posts and said the blog post from Dana Wyatt has received a lot of positive praise.

Administrative Committee

Sue Belish indicated the information from the administrative committee meeting was in the packet in her summary.

DISCUSSION ITEMS 1

Committee Assignments

Chairman Walt Wilcox presented an overview of the board committees and where there are gaps because of departing board members. Chairman Wilcox asked the board to look at the committees and to let him know via email or phone which committee(s) they would like to join.

Alternative Schedules

Julie Magee, WDE, presented the Alternative Schedules memo on behalf of Elaine Marces. Julie gave an overview of the Wyoming Statutes that allow school districts to apply for a waiver from the 175 student-teacher contract day requirement. Districts may request approval for an alternative schedule for up to two school years by submitting to the WDE an application that includes educational objectives, a calendar, and a description of the methods to be used to evaluate improved student achievement, evidence of two advertised public meetings, public comment records, and evidence of meeting required hours for each grade level.

Certified Personnel Evaluation Systems

Shelley Hamel, WDE, presented on approving district leader evaluation systems to the board. Districts electing to adopt an evaluation system based locally-designed evaluation standards require approval from the SBE. Early February, districts provided the WDE with general information about their leader evaluation systems. Information to approve the leader evaluations from districts and charter schools who based their systems on locally-designed evaluation standards, was presented to the board to be voted on.

ACTION ITEMS 1

Administrative Procedures Part One

Sue Belish moved to approve the Administrative Procedures part one as presented, seconded by Max Mickelson; the motion carried.

Alternative Schedules

Sue Belish moved to approve all schools in Campbell #1, Carbon #2, Crook #2, as well as Little Snake River Valley Schools in Carbon #1, Laramie #2, Lusk Elementary and Middle School, Niobrara High School, and Lance Creek Elementary School in Niobrara #1, all schools in Sheridan #1 and Sheridan #3 to operate on a four-day school week for the 2019-20 school year. Schools in Johnson #1 for split four/five-day weeks, and all schools in Sublette #1 for a schedule with early release on Fridays, seconded by Superintendent Balow; the motion carried.

Early Learning Resolution

Superintendent Balow moved to approve the Early Learning Resolution as presented, seconded by Sue Belish; the motion carried.

Certified Personnel Evaluation Systems

Max Mickelson moved to conditionally approve the leader evaluations from districts and charter schools who based their systems on locally-designed evaluation standards, seconded by Sue Belish; the motion carried.

Max Mickelson abstained from voting for Sweetwater #1, Ryan Fuhrman abstained from voting for Sheridan #2, Bill Lambert abstained from voting for Weston #1, and Forrest Smith abstained from voting for Park #1.

DISCUSSION ITEMS 2

Basket of Goods

After SBE Coordinator, Tom Sachse, presented his paper, “Thoughts on Basket of Goods and Services: Finding Equity and Quality in Wyoming’s Public School Content Standards.” Chairman Wilcox suggested a motion to establish a committee of practitioners to undertake this work; Bill Lambert moved to establish a committee of practitioners to undertake Basket of Goods work, seconded by Debbie Bovee, Kathryn Sessions opposed, Forrest Smith not on the line; the motion carried.

Computer Science Survey Results

Laurie Hernandez, WDE, and members from the WDE Standards Division, presented the comments collected from both surveys and the regional hearings on the draft Computer Science Standards. There were 151 responses collected, 128 were through the online survey and 23 were during the regional

hearings. A total of 50 people attended the regional hearings, of which 14 gave verbal comments and 12 provided written comment.

ACTIONS ITEMS 2

Computer Science Standards
Max Mickelson moved to promulgate the draft Computer Science Standards, seconded by Superintendent Balow; after a roll call vote, the motion failed.

Superintendent Balow moved to postpone promulgating the draft Computer Science standards and engage the committee to apply changes and include Ryan Fuhrman in committee discussions and decisions, seconded by Bill Lambert; the motion carried.

CLICK HERE FOR COMPUTER SCIENCE STANDARDS AND BASKET OF GOODS PUBLIC COMMENT

NEXT MEETING
The board's next meeting will take place in Riverton on April 25, 2019

The State Board of Education adjourned at 6:05 p.m.

U. S. Department of Education
Office of Career, Technical, and Adult Education

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The Carl D. Perkins Career and Technical Education Act of 2006, as amended by the *Strengthening Career and Technical Education for the 21st Century Act* (Perkins V)

GUIDE FOR THE SUBMISSION OF STATE PLANS

OMB Control Number: **1830-0029**
Expiration Date: _____

According to the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 1830-0029. The time required to complete this information collection is estimated to average INSERT WHEN COMPUTED hours per response, including the time to review instructions, search existing data resources, gather and maintaining the data needed, and complete and review the information collection. If you have any comments concerning the accuracy of the time estimate(s) or suggestions for improving this form, please write to: U.S. Department of Education, Washington, DC 20202-4651. If you have comments or concerns regarding the status of your individual submission of this form, contact your Perkins Regional Coordinator listed on Table 4 (page 5) of this Guide.

Dear Fellow Educators –

The *Strengthening Career and Technical Education for the 21st Century Act* (Perkins V) was signed into law by President Trump on July 31, 2018. This bipartisan measure reauthorizes the *Carl D. Perkins Career and Technical Education Act*, which provides roughly $1.3 billion annually in Federal funding, administered by the U.S. Department of Education (Department), for career and technical education (CTE) for our nation's youth and adults.

This new law represents an important opportunity to advance the Department's vision for our nation's CTE system: *Expand opportunities for every student to explore, choose, and follow career pathways to earn credentials of value.* As stated by U.S. Secretary of Education DeVos regarding passage of the law, "Congress came together to expand educational pathways and opportunities, and give local communities greater flexibility in how best to prepare students for the jobs of today and tomorrow."

Key provisions in the new law include:

- Requiring extensive collaboration among State- and local-level secondary, postsecondary, and business and industry partners to develop and implement high-quality CTE programs and programs of study;
- Introducing a needs assessment to align CTE programs to locally identified in-demand, high-growth, and high-wage career fields;
- Strengthening the CTE teacher and faculty pipeline, especially in hard-to-fill program areas, including STEM;
- Promoting innovative practices to reshape where, how, and to whom CTE is delivered;
- Expanding the reach and scope of career guidance and academic counseling; and
- Shifting responsibility to States to determine their performance measures, including new program quality measures, and related levels of performance to optimize outcomes for students.

As you embark on the development of new plans for CTE, it is our hope that you will use the opportunity afforded by the new law as a tool to "rethink" CTE in your State. You might consider asking:

- What is the right "split of funds" between secondary and postsecondary programs given today's environment?
- How can "reserve" funds be used to incentivize "high-quality" CTE programs?
- How do you define and approve high-quality CTE programs?
- How can work-based learning, including "earn and learn programs" such as apprenticeships, be the rule and not the exception?
- How can you build the pipeline of teachers necessary to develop the pathways local communities need?
- What is the best role for employers in the development and delivery of CTE programs?

We hope you will arrive at big and bold goals for CTE in your State under this newly-authorized Perkins V statute. And, we look forward to working with you and helping you along the way.

Sincerely,

Scott Stump
Assistant Secretary for Career, Technical, and Adult Education

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TABLES:

INTRODUCTION AND SUBMISSION REQUIREMENTS

On July 31, 2018, the President signed into law the *Strengthening Career and Technical Education for the 21st Century Act* (Public Law 115-224) (Perkins V, the Act, or statute), which reauthorized and amended the *Carl D. Perkins Career and Technical Education Act of 2006*. The U. S. Department of Education's (Department) Office of Career, Technical, and Adult Education (OCTAE) developed this guide to assist each eligible agency in preparing and submitting a new State Plan under Perkins V and applicable Federal regulations.

The Department recognizes that it will take time for eligible agencies to update their career and technical education (CTE) systems, policies, and programs to align with the requirements of Perkins V. In particular, eligible agencies may not be ready to fully implement the new accountability provisions when Perkins V goes into effect at the beginning of the 2019-2020 school year. To provide for the orderly transition to Perkins V, consistent with Section 4 of the Act, the Secretary is delaying the implementation of certain new provisions until the start of Fiscal Year (FY) 2020. Eligible agencies will not be required to submit, among other things, State determined levels of performance until FY 2020 and may use FY 2019 to gather baseline data. In addition, eligible agencies that submit a 1-Year Transition Plan in FY 2019 will not be required to have their eligible recipients conduct and describe the results of a comprehensive needs assessment in their local applications for FY 2019. Although the Department is providing States with the flexibility to delay implementation of certain provisions in 2019, States are welcome begin implementing Perkins V during the 2019-2020 school year.

Options for the Submission of State Plans in FY 2019

Section 122(a)(1) of Perkins V requires each eligible agency desiring assistance for any fiscal year under the Act to prepare and submit a State plan to the Secretary. Each eligible agency must develop its State plan in consultation with key stakeholders, the Governor, and other State agencies with authority for CTE, consistent with section 122(c) of the Act.

To fulfill the obligation for a State plan, each eligible agency has the following options for how and when it will submit its Perkins V State Plan. It may submit—

- Option 1 – a 1-Year Transition Plan for FY 2019, which is the first fiscal year following the enactment of the law. Under this option, the eligible agency would submit its Perkins V State Plan in FY 2020 covering FY 2020-23.

- Option 2 – a Perkins V State Plan that covers 5 years, which includes a transition year in FY 2019 and then a 4-year period covering FY 2020-23.

Under either option, the eligible agency may choose to submit its State Plan as part of its Workforce Innovation and Opportunity Act (WIOA) Combined State Plan pursuant to section 122(b)(1) of the Act.

Tables 5 and 6, located at the end of this section, provide additional information on the implementation timelines for eligible agencies that submit a 1-Year Transition Plan versus a Perkins V State Plan in FY 2019.

Contents of Perkins V State Plans

State Plans under Perkins V must include the following items—

- A cover page, including a letter providing joint signature authority from the Governor;
- Narrative descriptions required by statute;
- Assurances, certifications, and other forms required by statute and/or applicable Federal regulations, including the Education Department General Administrative Regulations (EDGAR) at 34 CFR Part 76;
- A budget for the upcoming year;
- State determined levels of performance (SDPLs).

Table 1 below provides a comparison of the required items to be submitted for the 1-Year Transition Plan (Option 1) versus the Perkins V State Plan (Option 2) in FY 2019. Table 2 provides a comparison of the required items to be submitted for FY 2020 depending on whether the eligible agency chose Option 1 or Option 2 in FY 2019. As noted above, under both options, eligible agencies will not be required to submit, or held accountable to, State determined performance levels in FY 2019.

As noted with an asterisk on Table 1 below (Option 2, D. Accountability for Results), eligible agencies that submit a Perkins V State plan in FY 2019 will submit their narrative accountability information and SDPL Form, along with any other State plan revisions, and a cover page in FY 2020. Please note that eligible agencies that submit a Perkins V State Plan in FY 2019 will have to complete the hearing, consultation, and public comment procedures identified in section 122(a) and (c) of Perkins V prior to submission of the plan in FY 2019. In addition, those eligible agencies must complete the consultation and public comment procedures required for the accountability system prior to submission to the "Accountability for Results" section of the State Plan in FY 2020. See section 113(b)(3)(B) of Perkins V and section D questions 3 and 4 in the Narrative Descriptions below.

As noted with an asterisk on Table 2 below (Submitted a 1-Year Transition Plan in 2019, A. Plan Development and Coordination), eligible agencies that submit a one-year transition plan in FY2019 must ensure that their full Perkins V State Plan to be submitted in FY 2020, including the sections that were addressed during the transition year, go through the hearing, consultation and public comment procedures identified in section 122(a) and (c) of Perkins V prior to submission in FY 2020.

Table 1: Checklist of Items Required to be Submitted in FY 2019

State Plan Items	OPTION 1: 1-Year Transition Plan (FY 2019 only)	OPTION 2: Perkins V State Plan (FY 2019-2023)
I. Cover Page	Required	Required
II. Narrative Descriptions		
A. Plan Development and Coordination	Not required	Required
B. Program Administration and Implementation	Only Items B.2.a-e, and B.3.a	Required
C. Fiscal Responsibility	Required	Required
D. Accountability for Results	Not required	Not required*
III. Assurances, Certifications, and Other Forms	Required	Required
IV. Budget	Required	Required
V. State Determined Performance Levels (SDPL)	Not required	Not required

Table 2: Checklist of Items Required to be Submitted in FY 2020

State Plan Items	Submitted a 1-Year Transition Plan in 2019 (Option 1 from Table 1)	Submitted a Perkins V State Plan in 2019 (Option 2 from Table 1)
I. Cover Page	Required	Required
II. Narrative Descriptions		
A. Plan Development and Coordination	Required*	Revisions, if any
B. Program Administration and Implementation	Required in full	Revisions, if any
C. Fiscal Responsibility	Revisions, if any	Revisions, if any
D. Accountability for Results	Required	Required
III. Assurances, Certifications, and Other Forms	Revisions, if any	Revisions, if any
IV. Budget	Required	Required
V. State Determined Performance Levels (SDPL)	Required	Required

State Plans and Revisions in Subsequent Years

In subsequent years, each eligible agency must submit State plan revisions, if any, and a budget for the upcoming fiscal year. Consistent with the requirements in section 113(b)(3)(A)(ii) and (iii) of Perkins V, an eligible agency may revise its SDPLs for the subsequent years covered by its Perkins V State Plan.

Timeline for the Issuance of Perkins V Grant Awards

Table 3 below provides the annual timeline for the Department to issue Perkins V grant awards. Congress appropriates funding for Perkins V State grants in two installments, one of which becomes available on July 1 and a second which becomes available on October 1. In each fiscal year, the Secretary will issue program memoranda with State plan requirements and estimated State allocations, respectively, for the upcoming fiscal year.

Table 3: Timeline for the Issuance of Perkins V Grant Awards

Timeline	Actions
January 2019	Department issues *Carl D. Perkins Career and Technical Education Act of 2006*, as amended by the *Strengthening Career and Technical Education for the 21st Century* (*Perkins V): Guide for the Submission of State Plans in 2019*
No later than March[1]	Department issues State's Perkins V grant estimated allocations
April	Eligible agencies submit their Perkins V State Plans to the Department
April – June	Department reviews and makes determinations regarding Perkins V State Plans and any annual revisions
July 1	Department issues 1st installment of State's Perkins V grants for the program year to eligible agencies
October 1	Department issues supplemental (and final) installment of State's Perkins V grants for the program year to eligible agencies

[1] The Department will publish estimated State allocations no later than March provided that an appropriation for the next fiscal year has been enacted into law by this time.

Submission Instructions

Each eligible agency must submit its Perkins V State Plan and any annual revisions, including budgets and SDPLs, no later than close of business (5:00 pm EST) of each submission year on the date established by the Secretary in accordance with EDGAR 76.703(b)(3)(ii). Submissions must be entered into the Perkins V State Plan Portal at perkins.ed.gov/pims.[2] As in years past, the Department will provide eligible agencies with on-line training and technical assistance before and throughout the Perkins V State Plan submission process.

Approval of State Plans in 2019

Section 122(f)(1) of Perkins V requires the Secretary, not less than 120 days after the eligible agency submits its State Plan to approve such State Plan, or a revision of the plan under section 122(a)(2), including a revision of State determined performance levels in accordance with section 113(b)(3)(A)(ii), if the Secretary determines that the State has submitted State determined performance levels that meet the criteria established in section 113(b)(3), including the minimum requirements described in section 113(b)(3)(A)(i)(III). The Secretary shall not
disapprove such plan unless the Secretary determines it does not meet the requirements of the Act pursuant to section 122(f)(1) and takes the disapproval actions described in section 122(f)(2) of the Act.

Publication Information

The Department plans to publish Perkins V State Plans, including State determined performance levels (SDPLs), in whole or in part, on its Web site or through other means available.

For Further Information

For questions regarding the Perkins V State Plan submission requirements or process, an eligible agency should contact its Perkins Regional Coordinator (PRC) as provided in Table 4 below.

[2] Hard copy submissions will not be accepted as the Department met the requirement of 2 CFR 76.720(b)(3) for the transition from hard copy to electronic submission of State plans and revisions during implementation of the *Carl D. Perkins Career and Technical Education Act of 2006* (Perkins IV).

Table 4: Perkins Regional Coordinators

Region	States	Coordinator
1 - Northwestern	Alaska, California, Hawaii, Idaho, Montana, Nevada, North Dakota, Oregon, South Dakota, Washington, Wyoming	Jose Figueroa (202) 245-6054 Jose.figueroa@ed.gov
2 – Southwestern	Arizona, Colorado, Kansas, Nebraska, New Mexico, Oklahoma, Texas, Utah	Andrew (Andy) Johnson (202) 245-7786 Andrew.johnson@ed.gov
3 – Mid-Northern	Illinois, Indiana, Iowa, Michigan, Minnesota, Missouri, Ohio, Wisconsin	Jamelah Murrell (202) 245-6981 Jamelah.murrell@ed.gov
4 – Southern	Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, Puerto Rico, South Carolina, Tennessee	Marilyn Fountain (202) 245-7346 Marilyn.fountain@ed.gov
5 – Northeastern	Connecticut, Maine, Massachusetts, New Hampshire, New York, Rhode Island, Vermont, Virgin Islands	Sharon Head (202) 245-6131 Sharon.Head@ed.gov
6 – Mid-Atlantic	Delaware, District of Columbia, Maryland, New Jersey, Palau, Pennsylvania, Virginia, West Virginia	Allison Hill (202) 245-7775 Allison.hill@ed.gov

Table 5: Timeline for Eligible Agencies Submitting 1-Year Transition Plans Covering FY 2019

Action	FY 2019 (July 1, 2019 – June 30, 2020)	FY 2020 (July 1, 2020 – June 30, 2021)	FY 2021 (July 1, 2021 – June 30, 2022)	FY 2022 (July 1, 2022 – June 30, 2023)	FY 2023 (July 1, 2023 – June 30, 2024)
Submission of State Plan and Performance Levels	Spring 2019 - Agency submits transition plan covering FY 2019	Spring 2020 – Agency submits 4-Year Plan covering FY 2020-23	Spring 2021 – Agency submits revisions, if any	Spring 2022 – Agency submits revisions, if any	Spring 2023 – Agency submits revisions any
Submission/Revision of Performance Levels (as part of State Plan Submission)	N/A	Agency submits SDPLs for FY 20-23, including baseline levels	N/A	Agency revises, as appropriate, SDPLs for FY 2022-23	N/A
Receipt of Grant Award	July 1, 2019 – Agency receives first installment of FY 2019 grant award	July 1, 2020 – Agency receives first installment of FY 2020 grant award	July 1, 2021 – Agency receives first installment of FY 2020 grant award	July 1, 2022 – Agency receives first installment of FY 2020 grant award	July 1, 2023 – Agency receives first installment of FY 2020 gr award
	October 1, 2019 – Agency receives final installment of FY 2019 grant award	October 1, 2020 – Agency receives final installment of FY 2020 grant award	October 1, 2021 – Agency receives final installment of FY 2021 grant award	October 1, 2022 – Agency receives final installment of FY 2022 grant award	October 1, 2023 – Agency receives final installment of FY 2023 gr award

Table 6: Timeline for Eligible Agencies Submitting Perkins V State Plans Covering FY 2019-23

Action	FY 2019 (July 1, 2019 – June 30, 2020)	FY 2020 (July 1, 2020 – June 30, 2021)	FY 2021 (July 1, 2021 – June 30, 2022)	FY 2022 (July 1, 2022 – June 30, 2023)	FY 2023 (July 1, 2023 – June 30, 2024)
Submission of State Plan	Spring 2019 - Agency submits State plan covering FY 2019-23	Spring 2020 – Agency submits revisions, if any	Spring 2021 – Agency submits revisions, if any	Spring 2022 – Agency submits revisions, if any	Spring 2023 – Agency submits revisi if any
Submission/Revision of Performance Levels (as part of State Plan Submission)	N/A	Agency submits SDPLs for FY 20-23, including baseline levels	N/A	Agency revises, as appropriate, SDPLs for FY 2022-23	N/A
Receipt of Grant Award	July 1, 2019 – Agency receives first installment of FY 2019 grant award	July 1, 2020 – Agency receives first installment of FY 2020 grant award	July 1, 2021 – Agency receives first installment of FY 2020 grant award	July 1, 2022 – Agency receives first installment of FY 2020 grant award	July 1, 2023 – Agency receives firs installment of FY 20 grant award
	October 1, 2019 – Agency receives final installment of FY 2019 grant award	October 1, 2020 – Agency receives final installment of FY 2020 grant award	October 1, 2021 – Agency receives final installment of FY 2021 grant award	October 1, 2022 – Agency receives final installment of FY 2022 grant award	October 1, 2023 – Agency receives fin installment of FY 20 grant award

U. S. Department of Education
Office of Career, Technical, and Adult Education

Strengthening Career and Technical Education for the 21st Century Act
(Perkins V) State Plan

I. COVER PAGE

A. State Name: Wyoming

B. Eligible Agency (State Board) Submitting Plan on Behalf of State: Wyoming State Board of Vocational Education

C. Person at, or officially designated by, the eligible agency, identified in Item B above, who is responsible for answering questions regarding this plan. This is also the person designated as the "authorized representative" for the agency.

1. Name: Michelle Aldrich, PhD
2. Official Position Title: State Director for Career and Technical Education
3. Agency: Wyoming Department of Education
4. Telephone: (307) 777-3655
5. Email: michelle.aldrich@wyo.gov

D. Individual serving as the State Director for Career and Technical Education (CTE):

- Check here if this individual is the same person identified in Item C above and then proceed to Item E below. ✓

1. Name: _____
2. Official Position Title: _____
3. Agency: _____
4. Telephone: (_____) _____ 5. Email: _____

E. Type of Perkins V State Plan Submission - FY 2019 (*Check one*):

- 1-Year Transition Plan (FY2019 only) ✓
- State Plan (FY 2019-23)

F. Type of Perkins V State Plan Submission - Subsequent Years (C*heck one*):

- State Plan (FY 2020-23) ✓
- State Plan Revisions, FY 2020
- State Plan Revisions, FY 2021
- State Plan Revisions, FY 2022
- State Plan Revisions, FY 2023

G. Special Features of State Plan Submission (*Check one*):

- WIOA Combined State Plan - *Secondary and Postsecondary*
- WIOA Combined State Plan - *Postsecondary Only*

H. Governor's Joint Approval of the Perkins V State Plan (*Fill in text box and then check one box below):*

Date Governor was sent State Plan for signature:

The Governor has provided a letter that he or she is jointly approving the State plan for submission to the Department.

✓ The Governor has not provided a letter that he or she is jointly approving the State plan for submission to the Department.

I. By signing this document, the eligible entity, through its authorized representative, agrees:

1. To the assurances, certifications, and other forms enclosed in its State plan submission; and
2. That, to the best of my knowledge and belief, all information and data included in this State plan submission are true and correct.

Authorized Representative Identified in Item C Above (Printed Name)	Telephone:
Signature of Authorized Representative	Date:

II. NARRATIVE DESCRIPTIONS

A. Plan Development and Consultation

1. Describe how the State plan was developed in consultation with the stakeholders and in accordance with the procedures in section 122(c)(2) of Perkins V and as provided in Text Box 1 on the following page.

   Not applicable during the transition year

2. Consistent with section 122(e)(1) of Perkins V, each eligible agency must develop the portion of the State plan relating to the amount and uses of any funds proposed to be reserved for adult career and technical education, postsecondary career and technical education, and secondary career and technical education after consultation with the State agencies identified in section 122(e)(1)(A)-(C) of the Act. If a State agency, other than the eligible agency, finds a portion of the final State plan objectionable, the eligible agency must provide a copy of such objections and a description of its response in the final plan submitted to the Secretary. (Section 122(e)(2) of Perkins V)

   Not applicable during the transition year

3. Describe opportunities for the public to comment in person and in writing on the State plan. (Section 122(d)(14) of Perkins V)

   Not applicable during the transition year

B. Program Administration and Implementation

1. State's Vision for Education and Workforce Development

a. Provide a summary of State-supported workforce development activities (including education and training) in the State, including the degree to which the State's career and technical education programs and programs of study are aligned with and address the education and skill needs of the employers in the State identified by the State workforce development board. (Section 122(d)(1) of Perkins V)

   Not applicable during the transition year

b. Describe the State's strategic vision and set of goals for preparing an educated and skilled workforce (including special populations) and for meeting the skilled workforce needs of employers, including in existing and emerging in-demand industry sectors and occupations as identified by the State, and how the State's career and technical education programs will help to meet these goals. (Section 122(d)(2) of Perkins V)

   Not applicable during the transition year

Text Box 1: State Plan Development

(c) PLAN DEVELOPMENT.—

(1) IN GENERAL.—The eligible agency shall—

(A) develop the State plan in consultation with—

(i) representatives of secondary and postsecondary career and technical education programs, including eligible recipients and representatives of 2-year minority serving institutions and historically Black colleges and universities and tribally controlled colleges or universities in States where such institutions are in existence, adult career and technical education providers, and charter school representatives in States where such schools are in existence, which shall include teachers, faculty, school leaders, specialized instructional support personnel, career and academic guidance counselors, and paraprofessionals;

(ii) interested community representatives, including parents, students, and community organizations;

(iii) representatives of the State workforce development board established under section 101 of the Workforce Innovation and Opportunity Act (29 U.S.C. 3111) (referred to in this section as the ‘‘State board’’);

(iv) members and representatives of special populations;

(v) representatives of business and industry (including representatives of small business), which shall include representatives of industry and sector partnerships in the State, as appropriate, and representatives of labor organizations in the State;

(vi) representatives of agencies serving out-of-school youth, homeless children and youth, and at-risk youth, including the State Coordinator for Education of Homeless Children and Youths established or designated under section 722(d)(3) of the McKinney-Vento Homeless Assistance Act (42 U.S.C. 11432(d)(3));

(vii) representatives of Indian Tribes and Tribal organizations located in, or providing services in, the State; and

(viii) individuals with disabilities; and

(B) consult the Governor of the State, and the heads of other State agencies with authority for career and technical education programs that are not the eligible agency, with respect to the development of the State plan.

(2) ACTIVITIES AND PROCEDURES.—The eligible agency shall develop effective activities and procedures, including access to information needed to use such procedures, to allow the individuals and entities described in paragraph (1) to participate in State and local decisions that relate to development of the State plan.

(3) CONSULTATION WITH THE GOVERNOR.—The consultation described in paragraph (1)(B) shall include meetings of officials from the eligible agency and the Governor’s office and shall occur—

(A) during the development of such plan; and

(B) prior to submission of the plan to the Secretary.

c. Describe the State's strategy for any joint planning, alignment, coordination, and leveraging of funds between the State's career and technical education programs and programs of study with the State's workforce development system, to achieve the strategic vision and goals described in section 122(d)(2) of Perkins V, including the core programs defined in section 3 of the Workforce Innovation and Opportunity Act (29 U.S.C. 3102) and the elements related to system alignment under section 102(b)(2)(B) of such Act (29 U.S.C. 3112(b)(2)(B)); and for programs carried out under this title with other Federal programs, which may include programs funded under the Elementary and Secondary Education Act of 1965 and the Higher Education Act of 1965. (Section 122(d)(3) of Perkins V)

Not applicable during the transition year

d. Describe how the eligible agency will use State leadership funds made available under section 112(a)(2) of the Act for purposes under section 124 of the Act. (Section 122(d)(7) of Perkins V)

Not applicable during the transition year

2. Implementing Career and Technical Education Programs and Programs of Study

a. Describe the career and technical education programs or programs of study that will be supported, developed, or improved at the State level, including descriptions of the programs of study to be developed at the State level and made available for adoption by eligible recipients. (Section 122(d)(4)(A) of Perkins V)

Response: Wyoming will continue to support and expand the adopted Career Clusters as defined by the National Association of State Directors of CTE and the United States Department of Education. Thus, the following Career Clusters are the CTE Programs of Study for Wyoming:

- Agriculture, Food & Natural Resources
- Architecture & Construction
- Arts, A/V Technology & Communications
- Business Management & Administration
- Education & Training
- Finance
- Government & Public Administration
- Health Science
- Hospitality & Tourism
- Human Services
- Information Technology
- Law, Public Safety, Corrections & Security
- Manufacturing
- Marketing
- Science, Technology, Engineering & Mathematics
- Transportation, Distribution & Logistics

These Programs of Study were developed by the Wyoming Department of Education in a format that can be modified by the local district and post-secondary institutions to include their specific courses and options.

b. Describe the process and criteria to be used for approving locally developed programs of study or career pathways, including how such programs address State workforce development and education needs and the criteria to assess the extent to which the local application under section 132 will—
   i. promote continuous improvement in academic achievement and technical skill attainment;
   ii. expand access to career and technical education for special populations; and
   iii. support the inclusion of employability skills in programs of study and career pathways. (Section 122(d)(4)(B) of Perkins V)

Response: Strengthening integration between Career and Technical Education and traditional academic core areas, particularly those emphasized within ESSA, enhances the academic attainment of all students including those from special populations. Data from the Wyoming Test of Proficiency and Progress (WY-TOPP) will continue to impact program improvement goals at the secondary eligible recipient level.

Access to career and technical education for special populations will be supported through professional development and technical assistance to secondary and post-secondary faculty and staff. Wyoming CTE programs will be provided in the least restrictive environment with courses for secondary students aligned with the IEP requirements. Career guidance and counseling services will include provisions to ensure that students from special populations are made aware of opportunities available through CTE programs in the same manner or alternative format if required and at the same time as all students.

Individuals who are members of special populations will be provided equal access as all CTE programs comply with Office for Civil Rights regulations. Compliance will be assured through the Wyoming Department of Education monitoring processes. High quality instruction and intervention will be provided through Wyoming's Response to Intervention (RTI) process.

Using the Wyoming CTE (WyCTE) Collection, special population results will be reported in disaggregated form. The Wyoming Department of Education reviews WyCTE results and the local annual report for each district and institution. Each recipient also receives assessment results for their district or institution for use in conducting an annual evaluation to determine to what degree performance measures and standards are being met. The information provided by the assessment data will be used by the Wyoming Department of Education and grant recipients for development of CTE programs for students from special populations.

With input from business and stakeholders, the Wyoming Department of Education developed technical skill assessments to ensure a degree of comparability and consistency of learning across regions of the state within each career cluster. The technical skill competencies will include those needed for current and emerging employment opportunities as well as entrepreneurship. To every extent possible Career Technical Student Organization (CTSO) guidelines will be used in the development of these skill competencies to increase industry relevance and to provide congruency and instruction with those skills needed for state and national competitions.

These technical skill competencies and related skill assessments will be based on the occupations identified as high skill, high wage, or in-demand occupations within the Career Cluster Guide publications.

After defining the technical skill competencies, emphasis will be placed on professional development for secondary and post-secondary Career Technical and Academic instructors to facilitate improved instruction aligned with the competencies within the programs of study.

c. Describe how the eligible agency will—

i. make information on approved programs of study and career pathways (including career exploration, work-based learning opportunities, early college high schools, and dual or concurrent enrollment program opportunities) and guidance and advisement resources, available to students (and parents, as appropriate), representatives of secondary and postsecondary education, and special populations, and to the extent practicable, provide that information and those resources in a language students, parents, and educators can understand;

Response: Through student orientations that take place in the 7th - 9th grade level, all students in Wyoming are made aware of the Career Technical Programs of Study. The Wyoming Department of Education, conducts annual training for school district personnel statewide to acquaint them with the use of the career clusters and programs of study. Efforts are in place to increase career development awareness through the state's Facilitating Career Development Course. Alignment between WyoLearn and programs of study make up-to-date, student-driven data available to all stakeholders.

ii. facilitate collaboration among eligible recipients in the development and coordination of career and technical education programs and programs of study and career pathways that include multiple entry and exit points.

Response: Through a collaborative effort among offices within the Wyoming Department of Education and local education agency staff members responsible for career and technical education and college, military, and career readiness facilitation in the development and coordination of education programs and programs of study and career pathways will include a number of entry and exit points described below.

Entry Points:

(1) Grades 5-8 Students will participate in the following events including, but not limited to the following:

(a) Career Fairs
(b) Business/Industry tours and guest speakers
(c) Tours of high school CTE programs [academies]
(d) Makerspace labs, fabrication labs, Science Technology Engineering Arts and Mathematics labs (etc)
(e) Student professional development days
(f) Project based learning
(g) Career Technical Student Organization(s) participation
(h) Project Lead the Way
(i) Job Shadow
(j) Interest and Career Inventories

(2) Grades 9-12 At the secondary level as they prepare for the postsecondary component of a chosen career. Secondary school guidance counselors will help each student choose the classes that will give him

or her the background to meet the entrance requirements for a particular occupation or postsecondary education, and students will participate in the following events including, but not limited to the following:

(a) Career Fairs
(b) Business/Industry tours and guest speakers
(c) Makerspace labs, fabrication labs, Science Technology Engineering Arts and Mathematics labs, (etc)
(d) Student professional development days
(e) Work Based Learning
(f) Project based learning
(g) Career Technical Student Organization(s) participation
(h) Project Lead the Way
(i) WorkKeys
(j) Interest and Career Inventories

(3) Post- Secondary: Post-secondary academic advisors will help each student choose the classes that will give him or her the background to meet the entrance requirements for a particular occupation or postsecondary education, and students will participate in the following events including, but not limited to the following:

(a) Career Fairs
(b) Business/Industry tours and guest speakers
(c) Makerspace labs, fabrication labs, Science Technology Engineering Arts and Mathematics labs, (etc)
(d) Student professional development days
(e) Work Based Learning
(f) Project Based Learning
(g) Career Technical Student Organization(s) participation
(h)Project Lead the Way
(i) WorkKeys
(j) Interest and Career Inventories

Exit Points:

(a) Grades 5-8 - Selecting a CTE Cluster
(b) Grades 9-12
    (i) Participating or completing a pathway and earning an industry recognized credential, or passing a career readiness assessment in the aligned pathway
    (ii) Graduation

(c) Post-Secondary
    (i) Earning an Associate of Applied Science or an Associate of Science
    (ii) Earning an Associate's of Arts
    (iii) Earned an Associate of Nursing
    (iv) Earned an industry certification or credential

iii. use State, regional, or local labor market data to determine alignment of eligible recipients' programs of study to the needs of the State, regional, or local economy,

including in-demand industry sectors and occupations identified by the State board, and to align career and technical education with such needs, as appropriate;

Response: The Wyoming Department of Workforce Services in conjunction with the Wyoming Community College Commission facilitate discussions among member agencies, coordinate among agencies and colleges those workforce initiatives with a statewide impact, and share workforce-related information with each other and the colleges, including information about high-skill, high-wage, high-demand, and non-traditional occupations. Through involvement of representatives from business and industry in the design and implementation of new courses that lead to an industry recognized credential or degree, courses will be developed that meet these occupational needs.

iv. ensure equal access to approved career and technical education programs of study and activities assisted under this Act for special populations;

Response: Wyoming does not differentiate between CTE students and other students as far as high school graduation requirements. All students have the same Carnegie Unit requirements established by statute and by additional district requirements, and all students must meet the common core of knowledge and skills dictated by statute. Thus, CTE students will graduate with a set of knowledge and skills that is equivalent to the general population. Increased emphasis on academic integration, a tenet of high school or secondary school reform, is to increase the graduation rates of CTE students as they see the relevance of academic instruction with the context of the Career Clusters.

Special population students must also meet the same standards, but they may graduate with differing expectations according to their Individual Education Plans (IEPs). All students, but particularly special population students, will benefit from the increased emphasis on academic integration because learning will become more relevant. Both CTE teachers and core academic teachers will be involved in class design. Increased emphasis on reaching students with various learning styles and effective use of project based instruction has been an emphasis of professional development.

v. coordinate with the State board to support the local development of career pathways and articulate processes by which career pathways will be developed by local workforce development boards, as appropriate;

Response: The local needs assessment will drive this process for each eligible recipient.

vi. support effective and meaningful collaboration between secondary schools, postsecondary institutions, and employers to provide students with experience in, and understanding of, all aspects of an industry, which may include work-based learning such as internships, mentorships, simulated work environments, and other hands-on or inquiry-based learning activities; and

Response: CTE programs in Wyoming will be required to have local advisory committees that oversee the planning and implementation of quality programs. These advisory committees will be made up of parents, academic and career and technical education secondary and post-secondary teachers, administrators and faculty, career guidance and academic counselors, local business (including small businesses), and labor organizations. The existence of such an advisory committee will be reported on the annual Perkins' application.

vii. improve outcomes and reduce performance gaps for CTE concentrators, including those who are members of special populations. (Section 122(d)(4)(C) of Perkins V)

Response: Efforts are being made to continuously monitor CTE program areas and technical skill assessments. Through the monitoring process, the WDE will continue to identify CTE program areas focused upon in the state – these are the program areas technical skill assessments are given. Identification of CTE programs of study are based on several considerations, including but not limited to:1) historical enrollment and course-taking patterns; and 2) the degree to which program(s) are preparing students for high-skill, high-wage and/or high-demand occupations. Second, within these identified CTE program areas, syllabi will be articulated which clearly state the competencies that students including students from special population groups are expected to attain upon completion of the CTE program. These syllabi will provide guidance for selecting technical skill assessment(s) that are aligned to these competencies and measure the articulated competencies with sufficient coverage and depth. Third, technical skill assessments are reviewed on a continuous basis in order to determine whether the existing assessments will meet the needs of Wyoming.

d. Describe how the eligible agency, if it chooses to do so, will include the opportunity for secondary school students to participate in dual or concurrent enrollment programs, early college high school, or competency-based education. (Section 122(d)(4)(D) of Perkins V)

Response: Articulation agreements currently exist in Wyoming. The Career Programs of Study, as well as the state course reporting process encourage and track articulated courses. The Secondary Classification for Exchange of Data (SCED) system from the National Center for Education Statistics (NCES) has been implemented to improve the articulation process.

Career Programs of Study include transitions to postsecondary institutions through improvement of the articulation agreement process, and development of common criteria for adjunct faculty.

All Career Technical Programs of Study lead to industry certification, or an associate or baccalaureate degree. The Wyoming Department of Education will continue to encourage offering of credentials and certificates by secondary and postsecondary institutions as well through industry groups and organizations. The Wyoming Community College Commission maintains a listing of certification and credentialing programs by Career Cluster for Wyoming.

e. Describe how the eligible agency will involve parents, academic and career and technical education teachers, administrators, faculty, career guidance and academic counselors, local businesses (including small businesses), labor organizations, and representatives of Indian Tribes and Tribal organizations, as appropriate, in the planning, development, implementation, and evaluation of its career and technical education programs. (Section 122(d)(12) of Perkins V)

Response: CTE programs in Wyoming are expected to hold local advisory board meetings twice during the program year that oversee the planning and implementation of quality programs. These advisory boards will be made up of parents, academic and career and technical education teachers, administrators, faculty, career guidance and academic counselors, local business, labor organizations, and members of Indian Tribes and Tribal Organizations. The existence of such advisory boards will be reported on the annual Perkins' application.

In addition, all CTE programs in Wyoming are aligned to the state Career Technical Standards. These standards are reviewed and updated on a five-year cycle. The makeup of the standards review group is of similar makeup to the required list of advisory board members.

f. Include a copy of the local application template that the eligible agency will require eligible recipients to submit pursuant to section 134(b) of Perkins V.

Not applicable during the transition year

g. Include a copy of the local needs assessment template that the eligible agency will require eligible recipients to submit pursuant to section 134(c) of Perkins V.

Not applicable during the transition year

h. Provide the definition for "size, scope, and quality" that the eligible agency will use to make funds available to eligible recipients pursuant to section 135(B) of Perkins V.

Not applicable during the transition year

3. Meeting the Needs of Special Populations

a. Describe its program strategies for special populations, including a description of how individuals who are members of special populations—

i. will be provided with equal access to activities assisted under this Act;

Response: Wyoming CTE programs will be provided in the least restrictive environment with courses for identified secondary students aligned with their IEP requirements. Career guidance and counseling services will include provisions to ensure that students from special populations are made aware of opportunities available through CTE programs in the same manner or alternative format if required and at the same time as all students.

ii. will not be discriminated against on the basis of status as a member of a special population;

Response: Individuals who are members of special populations will be provided equal access as all CTE programs comply with Office for Civil Rights regulations. Compliance will be assured through the Wyoming Department of Education monitoring processes. High quality instruction and intervention will be provided through Wyoming's Response to Intervention (RTI) process.

The U.S. Department of Education, Office for Civil Rights (OCR), requires the Wyoming Department of Education to conduct site visits as part of its Vocational Education Methods of Administration civil rights compliance of districts that receive federal funding. On-site reviews are based on U.S. Department of Education regulations implementing Title VI (34 CFR, Part 100), Title IX (34 CFR, Part 106), Section 504 (34 CFR, Part 104), and the Department of Justice regulations implementing Title II of the Americans with Disabilities Act (ADA) (28 CFR, Part 35), as well as the Guidelines for Eliminating Discrimination and Denial of Services on the Basis of Race, Color, National Origin, Sex and Disability in Vocational Education Programs (34 CFR, Part 100, Appendix B).

The purpose of onsite reviews is to conduct a comprehensive assessment of the selected districts' CTE programs, as well as all facilities housing CTE programs or used by CTE-enrolled students to ensure compliance with the following Federal Civil Rights authorities and regulations. Federal law requires that all school districts receiving funding support from the U.S. Education Department, and providing CTE programs shall comply with:

- Title VI of the Civil Rights Act of 1964 (prohibiting discrimination based on race, color, and national origin) 34 CFR Part 100
- Title IX of the Education Amendments of 1972 (prohibiting discrimination based on gender) 34 CFR Part 106
- Section 504 of the Rehabilitation Act of 1973 (prohibiting discrimination based on disability) 34 CFR Part 104
- Education Program Guidelines for Eliminating Discrimination and Denial of Services on the Basis of Race, Color, National Origin, Sex and Handicap, published in the Federal Register March 21, 1979 (Guidelines).
- U.S. Department of Justice regulations implementing:
  Title II of the Americans with Disabilities Act of 1990 (Title II), 28 CFR Part 35

iii. will be provided with programs designed to enable individuals who are members of special populations to meet or exceed State determined levels of performance described in section 113, and prepare special populations for further learning and for high-skill, high-wage, or in-demand industry sectors or occupations;

Response: The Wyoming CTE (WyCTE) results are reported in disaggregated form by gender, students with disabilities, disadvantaged, limited English proficient, non-traditional, corrections, single parents, and displaced homemakers in the WyCTE Collection Database. The Wyoming Department of Education reviews results and the local annual report for each district and community college. Each recipient also receives assessment results for their district or institution for use in conducting an annual evaluation to determine to what degree performance measures and standards are being met. The information provided by the assessment data will be used by the Wyoming Department of Education and grant recipients for development of CTE programs for students from special populations.

Wyoming does not differentiate between CTE students and other students as far as high school graduation requirements. CTE students will graduate with a set of knowledge and skills that is equivalent to the general population. Increased emphasis on academic integration, a tenet of high school or secondary school reform, is to increase the graduation rates of CTE students as they see the relevance of academic instruction with the context of the Career Clusters.

All students have the same Carnegie Unit requirements established by statute and by additional district requirements, and must meet the common core of knowledge and skills dictated by statute. Special population students must also meet the same standards, but they may graduate with differing expectations according to their Individual Education Plans (IEPs). All students, but particularly special population students, will benefit from the increased emphasis on academic integration because learning will become more relevant. Both CTE teachers and core academic teachers will be involved in class design, incorporating an increased emphasis on reaching students with various learning styles and effective use of project based instruction.

iv. will be provided with appropriate accommodations; and

Response: Wyoming CTE programs will be provided in the least restrictive environment with courses for identified secondary students aligned with their IEP requirements. Career guidance and counseling services will include provisions to ensure that students from special populations are made aware of opportunities available through CTE programs in the same manner or an alternative format if required and at the same time as all students. Individuals who are members of special populations will be provided equal access as all CTE programs comply with Office for Civil Rights regulations. Compliance will be assured through the Wyoming Department of Education monitoring processes. High quality instruction and intervention will be provided through Wyoming's Response to Intervention (RTI) process.

v. will be provided instruction and work-based learning opportunities in integrated settings that support competitive, integrated employment. (Section 122(d)(9) of Perkins V)

Response: Wyoming does not discriminate between CTE students and other students as far as work-based learning opportunities in integrated settings that support competitive, integrated employment. Students enrolled in CTE programs, including those of special populations, will be given the opportunity to interact with industry or community professionals in real workplace settings or simulated environments at an educational institution that foster in-depth, firsthand engagement with the tasks required in a given career field. These work-based learning opportunities will be aligned to curriculum and instruction meeting state standards. Special population students must also meet the same standards in the workplace setting, but they may graduate with differing expectations according to their Individual Education Plans (IEPs).

4. Preparing Teachers and Faculty

a. Describe how the eligible agency will support the recruitment and preparation of teachers, including special education teachers, faculty, school principals, administrators, specialized instructional support personnel, and paraprofessionals to provide career and technical education instruction, leadership, and support, including professional development that provides the knowledge and skills needed to work with and improve instruction for special populations. (Section 122(d)(6) of Perkins V)

Not applicable during the transition year

C. <u>Fiscal Responsibility</u>

1. Describe the criteria and process for how the eligible agency will approve eligible recipients for funds under this Act, including how—

a. each eligible recipient will promote academic achievement;

Response: Criteria for approval of funds is guided by Wyoming Statute 21-9-101: "Educational programs for schools; standards; core of knowledge and skills; special needs programs; class size requirements; co-curricular activities." Under this provision, career technical content in all courses must be aligned to, and all students must meet state mandated content standards for both CTE and academic content. Thus, academic requirements for career technical students are identical to all students that graduate from Wyoming schools. Strengthening integration between CTE and core areas, particularly those emphasized within ESSA, will enhance the academic attainment of all students. Clearly, data from the Wyoming Test of Proficiency and Progress (WY-TOPP) will continue to impact program improvement goals at the secondary eligible recipient level.

b. each eligible recipient will promote skill attainment, including skill attainment that leads to a recognized postsecondary credential; and

Response: With input from business and stakeholders, the Wyoming Department of Education will develop technical skill assessments to assure a degree of comparability and consistency of learning across regions of the state within each career cluster. The technical skill competencies will include those needed for current and emerging employment opportunities as well as entrepreneurship. To every extent possible, Career Technical Student Organization guidelines will be used in the development of these skill competencies to increase industry relevance and to provide congruence in instruction with those skills needed for state and national competition. These technical skill competencies and related skill assessments will be based on the occupations identified as high-skill, high demand or high wage within the Career Clusters. After defining the technical skill competencies, emphasis will be placed on professional development for secondary and postsecondary Career Technical and Academic instructors to facilitate improved instruction aligned with the competencies within each program of study.

c. each eligible recipient will ensure the local needs assessment under section 134 takes into consideration local economic and education needs, including, where appropriate, in-demand industry sectors and occupations. (Section 122(d)(5) of Perkins V)

Response: The local needs assessment will incorporate economic and education needs through the required annual Perkins' application within the E-Grants Management System.

2. Describe how funds received by the eligible agency through the allotment made under section 111 of the Act will be distributed—

a. among career and technical education at the secondary level, or career and technical education at the postsecondary and adult level, or both, including how such distribution will most effectively provide students with the skills needed to succeed in the workplace; and

Response - The Wyoming Department of Education (WDE) under the Perkins V; *Strengthening Career and Technical Education for the 21st Century Act* will do a split of 60% for Local Education Agencies (LEAs) and 40% for Postsecondary (Community Colleges).

b. among any consortia that may be formed among secondary schools and eligible institutions, and how funds will be distributed among the members of the consortia, including the rationale for such distribution and how it will most effectively provide

students with the skills needed to succeed in the workplace. (Section 122(d)(8) of Perkins V)

Response - The award amount for postsecondary education institutions is $1,595,646. Wyoming received $4,693,077 in basic state grant award for 2018-2019. Wyoming does take $250,000 for state administration. State leadership funds are 9.67301%. Using the award amount, this equals $453,962 ($93,861 allocation for individuals in State institutions and $80,000 for nontraditional training and employment). Additional funding is awarded from the leadership category for corrections and nontraditional programs through the competitive grant process. Wyoming is using the reserve option. Local funds amount to 85%. The distribution of funds will be 40% for postsecondary and 60% for secondary.

3. Provide the specific dollar allocations made available by the eligible agency for career and technical education programs and programs of study under section 131(a)-(e) of the Act and describe how these allocations are distributed to local educational agencies, areas career and technical education schools and educational service agencies within the State. (Section 131(g) of Perkins V)

Response - The Wyoming Department of Education (WDE) under the Perkins V; *Strengthening Career and Technical Education for the 21st Century Act* will do a split of 60% for Local Education Agencies (LEAs) and 40% for Postsecondary (Community Colleges). The 2019 FY funding for Wyoming was $4,693,077. The amount for local funds (Secondary and Post-Secondary) career and technical education is $3,989,115. Breaking down the 60/40 split there is $2,393,469 for Secondary (60%) and $1,595,646 for Post-Secondary (40%). The allocations are dispersed into the WDEs Grant Management System (GMS) where LEAs apply for their funding annually.

4. Provide the specific dollar allocations made available by the eligible agency for career and technical education programs and programs of study under section 132(a) of the Act and describe how these allocations are distributed to eligible institutions and consortia of eligible institutions within the State.

Response - The Wyoming Department of Education (WDE) under the Perkins V; *Strengthening Career and Technical Education for the 21st Century Act* will do a split of 60% for Local Education Agencies (LEAs) and 40% for Postsecondary (Community Colleges). The 2019 FY funding for Wyoming was $4,693,077. The amount for local funds (Secondary and Post-Secondary) career and technical education is $3,989,115. Breaking down the 60/40 split there is $2,393,469 for Secondary (60%) and $1,595,646 for Post-Secondary (40%). The allocations are dispersed into the WDEs Grant Management System (GMS) where Community Colleges apply for their funding annually.

5. Describe how the eligible agency will adjust the data used to make the allocations to reflect any changes in school district boundaries that may have occurred since the population and/or enrollment data was collected, and include local education agencies without geographical boundaries, such as charter schools and secondary schools funded by the Bureau of Indian Education (BIE). (Section 131(a)(3) of Perkins V)

Response - Wyoming will provide every charter school and BIE level secondary school the opportunity to participate in funding. Technical assistance will be provided in every capacity necessary to satisfy the federal and state requirements for service. By state statutes [Wyoming Statute W.S. 21-3-301-314], charter schools are recognized as schools within a school district in Wyoming, thereby qualifying them as eligible

recipients for funding.

6. If the eligible agency will submit an application for a waiver to the secondary allocation formula described in section 131(a)—
   a. include a proposal for such an alternative formula; and
   b. describe how the waiver demonstrates that a proposed alternative formula more effectively targets funds on the basis of poverty (as defined by the Office of Management and Budget and revised annually in accordance with section 673(2) of the Community Services Block Grant Act (42 U.S.C. 9902(2)) to local educational agencies with the State. (Section 131(b) of Perkins V)

   Also indicate if this is a waiver request for which you received approval under the prior Carl D. Perkins Career and Technical Education Act of 2006 (Perkins IV).

Response - No waiver request will be submitted. Under Perkins IV a waiver request was not submitted.

7. If the eligible agency will submit an application for a waiver to the postsecondary allocation formula described in section 132(a)—
   a. include a proposal for such an alternative formula; and
   b. describe how the formula does not result in a distribution of funds to the eligible institutions or consortia with the State that have the highest numbers of economically disadvantaged individuals and that an alternative formula will result in such a distribution. (Section 132(b) of Perkins V)

Also indicate if this is a waiver request for which you received approval under the prior Carl D. Perkins Career and Technical Education Act of 2006 (Perkins IV).

Response - No waiver request will be submitted. Under Perkins IV a waiver request was not submitted.

8. If the eligible agency will award reserve funds to eligible recipients under section 112(c) of Perkins V, describe the process and criteria for awarding those funds.

Response - Perkins State Reserve – Workforce Discovery Grants

Section 112(c) of the Strengthening Career and Technical Education for the 21st Century Act 2018 (Perkins V) allows a state to reserve up to 10% of the minimum 85% of funds that must flow to the local level to distribute to local eligible recipients for local uses of funds.

From the amounts made available under subsection (a)(1) to carry out this subsection, an eligible agency may award grants to eligible recipients for career and technical education activities described in section 135 in -

(1) in ---

(A) rural areas;
(B) areas with high percentages of CTE concentrators or CTE participants;
(C) areas with high numbers of CTE concentrators or CTE participants; and
(D) areas with disparities or gaps in performance as described in section 113(b)(3)(C)(ii)(II); and

(2) *in order to ---*

(A) foster innovation through the identification and promotion of promising and proven career and technical education programs, practices, and strategies, which may include programs, practices, and strategies that prepare individuals for nontraditional fields; or

(B) promote the development, implementation, and adoption of programs of study or career pathways aligned with State-identified high-skill, high-wage, or in-demand occupations or industries.

If any Basic Perkins Grant funds are not expended at the local level within the program year (July 1 to September 30 of the following year) for which they are provided, these funds must be returned to the state. Starting in the 2017-18 program year, these returned funds will no longer be re-allocated to eligible subrecipients using the allocation formula from previous years. Returned funds ($35,767.23 from this program year 2016-2017) will be placed in a state reserve fund, and re-distributed to eligible sub-recipients utilizing a competitive Workforce Discovery Grant application process.

This competitive grant may be used to support innovative CTE initiatives at the secondary and post-secondary levels, specifically those that do the following: 1) develop more comprehensive and robust career pathways leading to viable career or post-secondary training options for students; 2) provide work-based learning experiences for students that are in industries closely related to CTE pathways; 3) develop meaningful partnerships between schools/institutions and business/industry representatives. In order to be eligible for the grant, both secondary and post-secondary applicants must have at least one formal partnership established with business or industry (this may include a registered apprenticeship). The grant may not be used to pay for food and/or beverages or any other unallowable uses of funds under the Perkins V. Applications will be reviewed and scored by a grant review committee at the WDE, and amounts awarded will be equal to or less than $12,000.00 each.

The grant application will be open for submission between mid-October and mid-December of each program year. Funds will be awarded in early January.

9. Provide the State's fiscal effort per student, or aggregate expenditures for the State, that will establish the baseline for the Secretary's annual determination on whether the State has maintained its fiscal effort, and indicate whether the baseline is a continuing level or new level. If the baseline is new, please provide the fiscal effort per student, or aggregate expenditures for the State, for the preceding fiscal year. (Section 211(b)(1)(D) of Perkins V)

Response - The reduced estimate of aggregate budget totals for federal FY19 (with the WDE exercising the '95% option') is the $$397,260 amount. Please note, this is half of the current MOE biennial appropriation and not 95% of the $417,670 total.

	2016-2017 (7/1/16-6/30/17)	2017-2018 (7/1/17-6/30/18)
Concentrator Count Total by Program Year	7,532	9,432
Participant Count Total by Program Year	31,742	33,960
Aggregate MOE	$416,731.93	$417,670.28
TOTAL MOE by Concentrators	**$55.33**	**$44.28**
TOTAL MOE by Participants	**$13.13**	**$12.30**
Perkins Leadership	382,238.00	382,238.00
Perkins Administration	250,000.00	250,000.00
TOTAL Federal Expenditures	$632,238.00	$632,238.00

D. Accountability for Results

1. Identify and include at least one (1) of the following indicators of career and technical education program quality—
   a. the percentage of CTE concentrators (see Text Box 2 on the following page) graduating from high school having attained a recognized postsecondary credential;
   b. the percentage of CTE concentrators graduating high school having attained post-secondary credits in relevant career and technical education programs and programs of study earned through a dual or concurrent enrollment program or another credit transfer agreement; and/or
   c. the percentage of CTE concentrators graduating from high school having participated in work-based learning. (Section 113(b)(2)(A)(iv)(I) of Perkins V)

   Include any other measure of student success in career and technical education that is statewide, valid, and reliable, and comparable across the State. (Section 113(b)(2)(A)(iv)(II) of Perkins IV)

   Provide the eligible agency's measurement definition with a numerator and denominator for each of the quality indicator(s) the eligible agency selects to use.

   Not applicable during the transition year

2. Provide on the form in Section V.B, for each year covered by the State plan beginning in FY 2020, State determined levels of performance for each of the secondary and postsecondary core indicators, with the levels of performance being the same for all CTE concentrators in the State. (Section 113(b)(3)(A)(i)(I) of Perkins V)

   Not applicable during the transition year

3. Provide a written response to the comments provided during the public comment period described in section 113(b)(3)(B) of the Act. (Section 113(b)(3)(B)(iii) of Perkins V)

Not applicable during the transition year

Text Box 2: Definition of CTE Concentrator

The term 'CTE concentrator' means—

(A) at the secondary school level, a student served by an eligible recipient who has completed at least 2 courses* in a single career and technical education program or program of study; and

(B) at the postsecondary level, a student enrolled in an eligible recipient who has—

(i) earned at least 12 credits within a career and technical education program or program of study; or

(ii) completed such a program if the program encompasses fewer than 12 credits or the equivalent in total. (Section 3(12) of Perkins V)

* This means that once a student completes 2 courses in a single CTE program or program of study, he or she is counted as a CTE concentrator.

4. Describe the procedure the eligible agency adopted for determining State determined levels of performance described in section 113 of the Act, which at a minimum shall include—
   a. a description of the process for public comment under section 113(b)(3)(B) of Perkins V as part of the development of the State determined levels of performance under that section as provided in the text box on the following page;
   b. an explanation for the State determined levels of performance; and
   c. a description of how the state determined levels of performance set by the eligible agency align with the levels, goals and objectives other Federal and State laws, (Section 122(d)(10) of Perkins V); and
   d. As part of the procedures for determining State determined levels of performance, describe the process that will be used to establish a baseline for those levels.

Not applicable during the transition year

5. Describe how the eligible agency will address disparities or gaps in performance as described in section 113(b)(3)(C)(ii)(II) of Perkins V in each of the plan years, and if no meaningful progress has been achieved prior to the third program year, a description of the additional actions the eligible agency will take to eliminate these disparities or gaps. (Section 122(d)(11) of Perkins V)

Not applicable during the transition year

Text Box 3:

(B) PUBLIC COMMENT.—

(i) IN GENERAL.—Each eligible agency shall develop the levels of performance under subparagraph (A) in consultation with the stakeholders identified in section 122(c)(1)(A).

(ii) WRITTEN COMMENTS.—Not less than 60 days prior to submission of the State plan, the eligible agency shall provide such stakeholders with the opportunity to provide written comments to the eligible agency, which shall be included in the State plan, regarding how the levels of performance described under subparagraph (A)—

(I) meet the requirements of the law;

(II) support the improvement of performance of all CTE concentrators, including subgroups of students, as described in section 1111(h)(1)(C)(ii) of the Elementary and Secondary Education Act of 1965, and special populations, as described in section 3(48); and

(III) support the needs of the local education and business community.

(iii) ELIGIBLE AGENCY RESPONSE.—Each eligible agency shall provide, in the State plan, a written response to the comments provided by stakeholders under clause (ii).

III. ASSURANCES, CERTIFICATIONS, AND OTHER FORMS

A. Statutory Assurances

✓ The eligible agency assures that:

1. It made the State plan publicly available for public comment[3] for a period of not less than 30 days, by electronic means and in an easily accessible format, prior to submission to the Secretary for approval and such public comments were taken into account in the development of this State plan. (Section 122(a)(4) of Perkins V)

2. It will use the funds to promote preparation for high-skill, high-wage, or in-demand industry sectors or occupations and non-traditional fields, as identified by the State. (Section 122(d)(13)(C) of Perkins V)

3. It will provide local educational agencies, area career and technical education schools, and eligible institutions in the State with technical assistance, including technical assistance on how to close gaps in student participation and performance in career and technical education programs. (section 122(d)(13)(E) of Perkins V)

4. It will comply with the requirements of this Act and the provisions of the State plan, including the provision of a financial audit of funds received under this Act, which may be included as part of an audit of other Federal or State programs. (Section 122(d)(13)(A) of Perkins V)

5. None of the funds expended under this Act will be used to acquire equipment (including computer software) in any instance in which such acquisition results in a direct financial benefit to any organization representing the interests of the acquiring entity or the employees of the acquiring entity, or any affiliate of such an organization. (Section 122(d)(13)(B) of Perkins V)

6. It will use the funds provided under this Act to implement career and technical education programs and programs of study for individuals in State correctional institutions, including juvenile justice facilities. (Section 122 (d)(13)(D) of Perkins V)

[3] An eligible agency that submits a 1-Year Transition Plan in FY 2019 is not required to hold a public comment period on the 1-Year Transition Plan. Such agency must assure that it meets this public comment requirement prior to submitting its Perkins V State Plan in FY 2020.

B. EDGAR Certifications

✓ By submitting a Perkins V State Plan, consistent with 34 CFR 76.104, the eligible agency certifies that:

1. It is eligible to submit the Perkins State plan.
2. It has authority under State law to perform the functions of the State under the Perkins program(s).
3. It legally may carry out each provision of the plan.
4. All provisions of the plan are consistent with State law.
5. A State officer, specified by title in Item C on the Cover Page, has authority under State law to receive, hold, and disburse Federal funds made available under the plan.
6. The State officer who submits the plan, specified by title in Item C on the Cover Page, has authority to submit the plan.
7. The entity has adopted or otherwise formally approved the plan.
8. The plan is the basis for State operation and administration of the Perkins program.

C. Other Forms

✓ The eligible agency certifies and assures compliance with the following enclosed forms:

1. Assurances for Non-Construction Programs (SF 424B) Form (OMB Control No. 0348-0040) - https://www2.ed.gov/fund/grant/apply/appforms/sf424b.pdf
2. Disclosure of Lobbying Activities (SF LLL) (OMB Control No. 4040-0013): https://apply07.grants.gov/apply/forms/sample/SFLLL_1_2-V1.2.pdf
3. Certification Regarding Lobbying (ED 80-0013 Form): https://www2.ed.gov/fund/grant/apply/appforms/ed80-013.pdf
4. General Education Provisions Act (GEPA) 427 Form (OMB Control No. 1894-0005): https://www2.ed.gov/fund/grant/apply/appforms/gepa427.pdf

IV. BUDGET

A. Instructions

1. On the form in Item IV.B below, provide a budget for the upcoming fiscal year. As you prepare your budget, refer to the statutory descriptions and assurances in Section II.C and Section III.A, respectively, of this guide.

2. In completing the budget form, provide--

   Line 1: The total amount of funds allocated to the eligible agency under section 112(a) of Perkins V. *This amount should correspond to the amount of funds noted in the Department's program memorandum with estimated State allocations for the fiscal year.*

   Line 2: The amount of funds made available to carry out the administration of the State plan under section 112(a)(3). *The percent should equal not more than 5 percent of the funds allocated to the eligible agency as noted on Line 1, or $250,000, whichever is greater.*

   Line 3: The amount of funds made available to carry out State leadership activities under section 112(a)(2) of Perkins V. *The percent should equal not more than 10 percent of the funds allocated to the eligible agency as noted on Line 1.*

   Line 4: The percent and amount of funds made available to serve individuals in State institutions, such as: (a) correctional institutions; (b) juvenile justice facilities; and (c) educational institutions that serve individuals with disabilities pursuant to section 112(a)(2)(A) of Perkins V. *The percent of funds should equal not more than 2 percent of the funds allocated to the eligible agency as noted on Line 1.*

   Line 5: The amount of funds to be made available for services that prepare individuals for non-traditional fields pursuant to section 112(a)(2)(B) of Perkins V. *The amount of funds should be not less than $60,000 and not more than $150,000.*

   Line 6: The amount of funds to be made available for the recruitment of special populations to enroll in career and technical education programs pursuant to section 112 (a)(2)(C) of Perkins V. *The percent of funds should equal 0.1 percent of the funds allocated to the eligible agency, or $50,000, whichever is lesser.*

   Line 7: The percent and amount of funds to be made available to eligible recipients [local education agencies (secondary recipients) and institutions of higher education (postsecondary recipients)] pursuant to section 112(a)(1) of Perkins V. *The percent of funds should be not less than 85 percent of the funds allocated to the eligible agency as noted on Line 1.*

   Line 8: The percent and amount, if any, of funds to be reserved and made available to eligible recipients under section 112(c) of Perkins V. *The percent of funds should be not more than 15 percent of the 85 percent of funds noted on Line 7.*

   Line 9: The percent and amount, if any, of funds to be reserved and made available to secondary recipients under section 112(c) of Perkins V.

Line 10: The percentage and amount, if any, of funds to be reserved and made available to postsecondary recipients under section 112(c) of Perkins V.

Line 11: The percent and amount of funds to be made available to eligible recipients under section 112(a)(1) of Perkins V. *The percent and amount of funds should represent the funds remaining after subtracting any reserve as noted on Line 8.*

Line 12: The percent and amount of funds to be distributed to secondary recipients under the allocation formula described in section 131 of Perkins V.

Line 13: The percent and amount of funds to be distributed to postsecondary recipients under the allocation formula described in section 132 of Perkins V.

Line 14: The amount of funds to be made available for the State administration match requirement under section 112(b) of Perkins. *The amount of funds shall be provided from non-Federal sources and on a dollar-for-dollar basis.*

B: Budget Form

State Name: Wyoming

Fiscal Year (FY): 2020

Line Number	Budget Item	Percent of Funds	Amount of Funds
1	**Total Perkins V Allocation**	**Not applicable**	**$ 5,037,372.00**
2	**State Administration**	%	**$ 251,868.00**
3	**State Leadership**	7.7%	**$ 388,326.00**
4	● Individuals in State Institutions	1.0%	**$ 50,374.00**
4a	- Correctional Institutions	**Not required**	**$ 30,224.00**
4b	- Juvenile Justice Facilities	**Not required**	**$ 10,075.00**
4c	- Institutions that Serve Individuals with Disabilities	**Not required**	**$ 10,075.00**
5	● Nontraditional Training and Employment	**Not applicable**	**$ 60,000.00**
6	● Special Populations Recruitment	0.10%	**$ 5,037.00**
7	**Local Formula Distribution**	%	**$**
8	● Reserve	%	**$0**
9	- Secondary Recipients	%	**$0**
10	- Postsecondary Recipients	%	**$0**
11	● Allocation to Eligible Recipients	85%	**$ 4,281.767.00**
12	- Secondary Recipients	60%	**$ 2,569,060.00**
13	- Postsecondary Recipients	40%	**$ 1,712,707.00**
14	**State Match *(from non-federal funds)***	**Not applicable**	**$ 251,868.00**

V. STATE DETERMINED PERFORMANCE LEVELS (SDPL)

A. <u>Instructions</u>

1. On the form in Item V.B below, provide State determined performance levels (SDPLs), covering FY 2020-23, for each of the secondary and postsecondary core indicators of performance for all CTE concentrators in the State described in section 113(b) of Perkins V. See Table 7 below. In preparing your SDPLs, refer to your narrative descriptions in Section II.D of this guide.

2. In completing the SDPL form, provide—

   Column 2: Baseline level
   Columns 3-6: State determined levels of performance for each year covered by the State plan, beginning for FY 2020, expressed in percentage or numeric form and that meets the requirements of section 113(b)(3)(A)(III) of Perkins V as provided in the text box on the following page.

3. Revise, as applicable, the State determined levels of performance for any of the core indicators of performance—

   i. Prior to the third program year covered by the state plan for the subsequent program years covered by the State plan pursuant to section 113(b)(3)(A)(ii).
   ii. Should unanticipated circumstances arise in a State or changes occur related to improvement in data or measurement approaches pursuant to section 113(b)(3)(A)(iii).
   iii. An eligible agency shall not be eligible to adjust performance levels while executing an improvement plan under this section pursuant to section 123(a)(5).

Text Box 4: State Determined Performance Levels (SDPLs)

(III) REQUIREMENTS.—Such State determined levels of performance shall, at a minimum—

(aa) be expressed in a percentage or numerical form, so as to be objective, quantifiable, and measurable;

(bb) require the State to continually make meaningful progress toward improving the performance of all career and technical education students, including the subgroups of students described in section 1111(h)(1)(C)(ii) of the Elementary and Secondary Education Act of 1965, and special populations, as described in section 3(48); and

(cc) have been subject to the public comment process described in subparagraph (B), and the eligible agency has provided a written response;

(dd) when being adjusted pursuant to clause (ii), take into account how the levels of performance involved compare with the State levels of performance established for other States, considering factors including the characteristics of actual (as opposed to anticipated) CTE concentrators when the CTE concentrators entered the program, and the services or instruction to be provided;

(ee) when being adjusted pursuant to clause (ii), be higher than the average actual performance of the 2 most recently completed program years, except in the case of unanticipated circumstances that require revisions in accordance with clause (iii); and

(ff) take into account the extent to which the State determined levels of performance advance the eligible agency's goals, as set forth in the State plan.

(Section 113(b)(3)(A)(III) of Perkins V)

Table 7: Section 113(b) Core Indicators of Performance

Indicator Descriptions	Indicator Codes	
Secondary Level		
The percentage of CTE concentrators who graduate high school, as measured by the four-year adjusted cohort graduation rate (defined in section 8101 of the Elementary and Secondary Education Act of 1965).	1S1	F
(At the State's discretion) The percentage of CTE concentrators who graduate high school, as measured by extended-year adjusted cohort graduation rate defined in such section 8101.	1S2	F
CTE concentrator proficiency in the challenging State academic standards adopted by the State under section1111(b)(1) of the Elementary and Secondary Education Act of 1965, as measured by the academic assessments in reading/language arts as described in section 1111(b)(2) of such Act.	2S1	
CTE concentrator proficiency in the challenging State academic standards adopted by the State under section1111(b)(1) of the Elementary and Secondary Education Act of 1965, as measured by the academic assessments in mathematics as described in section 1111(b)(2) of such Act.	2S2	
CTE concentrator proficiency in the challenging State academic standards adopted by the State under section1111(b)(1) of the Elementary and Secondary Education Act of 1965, as measured by the academic assessments in science as described in section 1111(b)(2) of such Act.	2S3	
The percentage of CTE concentrators who, in the second quarter after exiting from secondary education, are in postsecondary education or advanced training, military service or a service program that receives assistance under title I of the National and Community Service Act of 1990 (42 U.S.C. 12511 et seq.), are volunteers as described in section 5(a) of the Peace Corps Act (22 U.S.C. 2504(a)), or are employed.	3S1	

Indicator Descriptions	Indicator Codes	
Secondary Level (continued)		
The percentage of CTE concentrators in career and technical education programs and programs of study that lead to non-traditional fields.	4S1	No
The eligible agency must include at least one program quality indicator—5S1, 5S2, or 5S3—and may include any o is statewide, valid, reliable, and comparable across the State, 5S4.		
The percentage of CTE concentrators graduating from high school having attained a recognized postsecondary credential.	5S1;y	Progran Recogn Credent
The percentage of CTE concentrators graduating from high school having attained postsecondary credits in the relevant career and technical education program or program of study earned through a dual or concurrent enrollment or another credit transfer agreement	5S2	Progran Postsec
The percentage of CTE concentrators graduating from high school having participated in work-based learning.	5S3	Progran Work-E
The percentage of CTE concentrators achieving on any other measure of student success in career and technical education that is statewide, valid, and reliable, and comparable across the State. Please identify.	5S4	Progran

Indicator Descriptions	Indicator Codes	
Postsecondary Level		
The percentage of CTE concentrators who, during the second quarter after program completion, remain enrolled in postsecondary education, are in advanced training, military service, or a service program that receives assistance under title I of the National and Community Service Act of 1990 (42 U.S.C. 12511 et seq.), are volunteers as described in section 5(a) of the Peace Corps Act (22 U.S.C. 2504(a)), or are placed or retained in employment.	1P1	P a
The percentage of CTE concentrators who receive a recognized postsecondary credential during participation in or within 1 year of program completion.*	2P1	E P
The percentage of CTE concentrators in career and technical education programs and programs of study that lead to non-traditional fields.	3P1	N E

***** This means that a student gets counted under this indicator whether the student obtains the credential during participation or within 1 year of completion. The Department interprets “within 1 year of completion” to have the plain meaning of those words: that the student would be counted if the student obtains the credential in the 1 year following that student’s completion of the program.

B: State Determined Performance Levels (SDPL) Form

State Name: _____

Column 1	Column 2	Column 3	Column 4	Column 5	Column 6
Indicators	**Baseline Level**	**Performance Levels**			
		FY 2020	**FY 2021**	**FY 2022**	**FY 2023**
Secondary Indicators					
1S1: Four-Year Graduation Rate					
1S2: Extended Graduation Rate					
2S1: Academic Proficiency in Reading Language Arts					
2S2: Academic Proficiency in Mathematics					
2S3: Academic Proficiency in Science					
3S1: Postsecondary Placement					
4S1: Non-traditional Program Enrollment					
5S1: Program Quality – Attained Recognized Postsecondary Credential					
5S2: Program Quality – Attained Postsecondary Credits					
5S3: Program Quality – Participated in Work-Based Learning					
5S4: Program Quality – Other					

Column 1	Column 2	Column 3	Column 4	Column 5	Column 6
Indicators	**Baseline Level**	**Performance Levels**			
		FY 2020	**FY 2021**	**FY 2022**	**FY 2023**
Postsecondary Indicators					
1P1: Postsecondary Retention and Placement					
2P1: Earned Recognized Postsecondary Credential					
3P1: Nontraditional Program Enrollment					

Provide any additional information regarding SDPLs, as necessary:

WYOMING STATE BOARD OF EDUCATION

Date: April 12, 2019

To: State Board of Education

From: Tom Sachse

Subject: Administrative Procedures—Parts 2 and 3

Issue: Having completed a review and revision of the board's Policies of Governance, the state board is now undertaking the development of a new document tentatively entitled administrative procedures manual. This manual will be a handy compilation of the board's standard operating procedures along with reference materials that may be of use to board members on a fairly routine basis.

Background: At the last two administrative committee meetings, parts two and three of the emergent Administrative Procedures Manual were reviewed and approved.

Status: Parts two and three of the manual are now ready for information by the full board, with the expectation that these will be approved as an action item at the board's May meeting.

WYOMING STATE BOARD OF EDUCATION

Date: April 12, 2019

To: State Board of Education

From: Tom Sachse

Subject: Interim Topics

Issue: The state board often reports during the interim to legislators relative to topics within the board's purview, especially statutory mandates. The coordinator, board chair, or the chair's designee typically make the reports within parameters set by the full board.

Background: The day after the board's last meeting, management council announced the assigned interim topics (this link goes to the right page, but then one has to click on Interim Topics and scroll down to number five) for the standing committees of the state legislature, including education. Interim topic five requires the Joint Education Interim Committee (JEIC) to study the issue of the size and scope of the "basket of goods and services" for grades K-3. It also stipulates that the joint education committee should discuss issues surrounding past legislation in the areas of civics and CPR.

Status: Matt Wilmarth from the Legislative Services Office contacted the JEIC co-chairs to ask whether the state board could convene the committee to make recommendations to state policy makers, including JEIC, and they were appreciative of the board's leadership on this topic.

WYOMING STATE BOARD OF EDUCATION

Date: April 12, 2019

To: State Board of Education

From: Tom Sachse

Subject: Committee of Practitioners

Issue: The state board began an inquiry into how stakeholders view the size and scope of the "basket of goods and services" in Fall 2018. Following a large-scale survey, the board has had several discussions about the issues and directed the coordinator to convene a committee of practitioners to have deeper discussions and to make recommendations to state policy makers. At issue is whether the basket is getting too full for uniform, high quality implementation.

Background: On April 10th I invited a number of volunteers to participate on a committee to discuss implications of the board's survey on the size and scope of standards that comprise the "basket of goods and services." These individuals volunteered to meet three times over the next three months to discuss large issues, like whether the entirety of the current state standards are overwhelming at the elementary grades. This committee will also take up smaller issues, like how the legislature might address concerns in targeted areas like civics and CPR. The committee may make recommendations to state policy makers that might include the Joint Education Interim Committee, as well as the State Board of Education. I also invited staff representation from the Wyoming Department of Education and the Attorney General's office.

Status: At your April board meeting, I'll make the first of several reports on the progress of the committee deliberations.

WYOMING DEPARTMENT OF EDUCATION

SUMMARY REPORT

State Board of Education

FY19 Budget

01 July 2018 thru 15 April 2019

DESCRIPTION - General Fund Appropriation [Appr Unit 001)	BUDGETED	EXPENDED	ENCUMBERED	REMAINING BALANCE	Percentage
Personal Services (0100 series)	30,000.00	17, 681.51		12, 318.49	41.06%
Supportive Services (0200 series)	157,275.00	62, 184.96		95,090.04	60.46%
Data Processing Charges (0400 series)	5,401.00	1, 337.95		4, 063.05	75.23%
Professional Services (0900 series)	50,794.00	1,500.00		49,294.00	97.05%
	243,470.00	82,704.42	0.00	160,765.58	66.03%

DESCRIPTION - School Foundation Appropriation [Appr Unit 009]	BUDGETED	EXPENDED	ENCUMBERED	REMAINING BALANCE	Percentage
Personal Services (0100 series)	248,428.00	87,251.63	0.00	161,176.37	64.88%
Supportive Services (0200 series)	23,422.00	0.00	8,100.00	15,322.00	65.42%
Professional Services (0900 series)	145,848.00	0.00	0.00	145,848.00	100.00%
	417,698.00	87,251.63	8,100.00	322,346.37	77.17%
TOTAL	661,168.00	169,956.05	8,100.00	483,111.95	

WYOMING STATE BOARD OF EDUCATION

Biennium Expenditure Options: Discussion Draft (4/15/19)

The State Board of Education paid for most of the October 2018 expenditures relative to the Professional Judgment Panel with the encumbrances from the previous biennium budget. With the $25,000 that was allocated for reimbursing expenses of the computer science review committee last month, the state board still has approximately $250,000 that could be spent this biennium (that is, prior to June 2020). Of course, there is no need to expend all of these funds, but having a discussion about State Board of Education expenditures is warranted as the state board takes a more active approach to budget planning in the Joint Appropriations Committee review process. The following list could be discussed by the state board as a whole or this could be referred to the administrative committee of the state board, recognizing that recommendations from that committee would come back to the full board for action. The board would likely combine or select one or two options from the list below for further consideration.

Studies: The state board has statutory responsibilities for a number of state policy matters, some of which might benefit from having a rigorous and external research and/or evaluation study. Any of these studies would require the state board to create a Request For Proposals (RFPs) that would go through the same process used in the selection of the Professional Judgment Panel facilitator. It takes approximately 3 to 6 months to write and approve an RFP.

Wyoming Accountability in Education Act (WAEA): The state board has major responsibility for setting interim and long-term targets for the state accountability system. The state board could conduct a study of the validity, reliability, and fairness of the state accountability system. A validity study could answer the question as to whether the "right" schools are identified for improvement. A reliability study could answer the question as to whether the schools are dependably or consistently identified as needing improvement. A fairness study could answer the question as to whether schools in certain categories (e.g., small, high English Learner population, high poverty schools) are judged equitably with other school types.

State System of Support (SSoS): The State System of Support is an array of options for schools undergoing the journey toward academic improvement. In the fall of 2018, the state board adopted rigorous recommendations from the Professional Judgment Panel that increased the load on the State System of Support by a factor of seven. The board could contract for a study of how these new schools are responding to the system and how the system is responding to so many schools.

District assessment systems: Every five years as schools go through the accreditation process, the Department of Education reviews their district assessment system. The department also has the opportunity to review the district assessment system for those schools not meeting expectations under WAEA and for those schools where the leader is not meeting expectations. The board could commission a study of the district assessment system review process and examine whether the impact of that review has the potential to inform school improvement.

Accreditation: The board has significant responsibility for approving the accreditation status of school districts on a five-year cycle. The 2018-19 school year is the first year for school districts to participate in a new WDE-led process replacing the AdvancEd accreditation process of previous years. The state board could have a study conducted of the new accreditation process to see its impacts on schools and districts.

School calendar: The state board has responsibility for approving alternatives to the school year and the school day. The board could commission a study looking at the alternative calendar options relative to academic improvement. Such a study might review the literature nationally and also conduct site visits to Wyoming schools that propose alternatives to the traditional calendar and day.

Content development and advice: Last month's state board decision to partner with the Department of Education to refine the computer science standards was significant. In the interim topics selected by the management council, three topics were identified that make it clear the state legislature is looking for leadership in areas where the standards established under the rule making authority of the state board.

Civics: The state legislature has recently and consistently raised issues relative to the civic engagement of Wyoming's young voters. The state board could commission a study of civic engagement and make recommendations for improving or expanding civics instruction, especially at the high school grades.

CPR: The state legislature has also raised concerns about whether the health standards have been explicit enough about the need for instruction in cardiopulmonary resuscitation. The board could request proposals for a study of the need for CPR instruction at the high school level.

Language immersion programs: The Joint Education Interim Committee (JEIC) is considering a diploma or transcript sticker for students that have participated successfully in a dual language immersion program for schools in Wyoming that offer such programs. The state board could commission a study of the success of those programs, including the language proficiency of their graduates.

Regardless of whether any of these studies are undertaken during this biennium, the discussion of alternative possibilities as a predicate for submitting the next state board budget proposal would be productive.

Administrative Committee Summary

April 3, 2019

Members: Walt Wilcox, Robin Schamber, Ryan Fuhrman, Max Mickelson, Sue Belish, Tom Sachse, Julie Magee, Michelle Panos, Laurie Hernandez, Mackenzie Williams, Randall Lockyear

1. April 25, Review of Draft Meeting Agenda and Logistics
    a. The State System of Support (SSOS) topic was removed from this meeting and scheduled for the May meeting. At that time, it is anticipated that the Board will hear a report from the WDE and Tom on the origins, funding, opportunities, ties to accreditation, and results of the SSOS over the past few years. The discussion on SSOS may lead to the Board taking formal approval at a future meeting.
    b. Tom and Julie will work together to present a recommendation for identifying specific items that can be presented to and approved by the Board at one meeting. We currently ask that an item be presented as a report or discussion at one meeting, with any action for that item occurring at the next scheduled meeting. Adhering to this process requires that presenters and districts be given enough time to be able to comply. We believe that there may be instances when some "routine" items can be handled for both discussion and action during the same meeting. This is slated to be presented in May.
    c. Max agreed to do a budget presentation including recommendations for the budget narrative and proposals for the biennium budget.
    d. Julie is the Administrative Rules liaison for the department and has volunteered to collaborate with Tom to develop a work plan for proceeding with administrative rules. The committee agreed that Chapter 3: Practice and Procedures for Contested Case Proceedings, Chapter 29: Leader and Teacher Evaluation Systems, and Chapter ?? (New chapter) – Accountability are the focal areas. We also know that there will be work done on Chapter 10- Wyoming Uniform Content and Performance Standards (Computer Science, Health, Physical Education, and Fine and Performing Arts).
    e. Since the Computer Science Standards will once again be a major focus of the meeting, the public comment section for that topic will be handled much like it was during the March meeting. Those members of the public wishing to comment will be asked to sign up and depending on numbers, may be limited in the amount of time allowed per presenter. Written comments can also be submitted for the minutes.
    f. The committee moved the location of the meeting from Gillette to Riverton. This was suggested for several reasons: originally the meeting was scheduled as a teleconference and therefore travel was not anticipated so there was an effort to make the location more convenient for board members, moving to a more centrally located venue aligns better to the parameters we established for board meetings), and the central location will hopefully allow greater public participation. Tom has arranged a meeting location and will work on catering details so the meeting can progress with a relatively short intermission for lunch.
    g. The meeting is scheduled to begin at 8:00 and projected to adjourn at 4:00.
2. SBE Items
    a. Coordinator's Report

i. Tom shared a new administrative procedures section pertaining to planning of state board meetings. The committee liked the section and it will be brought to the full board in April, slated for approval in May.

ii. Tom shared information about efforts to continue with the Basket of Goods conversation. He has tentatively set three meeting dates, located a facilitator, and begun planning for the meetings. We also reviewed the interim topics for the Joint Education Interim Committee (JEIC). Priority #5 for the JEIC is titled K-12 Education Program. It requires the WDE and the SBE to provide information on 1) Civic education and civics proficiency exam 2) K-3 reading and early childhood education, 3) monitoring of the SBE's implementation of computer science standards. The Management Council requested that the JEIC convene a task force of school board trustees, superintendents, parents, teachers, curriculum directors, principals to report on K-3 requirements and educational focus by October 1, 2021. It appears that there is some overlap on topics. The committee asked Tom to talk to LSO to determine if the SBE should continue with the Basket of Goods Committee or wait to see what the JEIC decides. We need more information before we proceed.

b. Computer Science Standards Review Committee Considerations

i. Walt presented a memo that he asked to have shared with the Computer Science Standards Review Committee that will be meeting the week of April 8th. The memo summarizes four areas for the committee to consider as they review the proposed standards. These areas include Outcomes, Standards and Benchmarks, Utility, and Deployment. The ideas stem from the comments that were presented to the SBE during public testimony. Laurie Hernandez indicated that she would send the memo to the committee members later in the week when she sends a meeting reminder. (A copy of the memo is included below).

c. The Committee expressed an interest in a report on the results of this "pilot year" for accreditation and information about what districts are required to submit for the accreditation process. This item is scheduled for presentation in May with the Board being asked to take action on district accreditation recommendations in June.

d. Walt will make committee and chairmanship assignments once he receives the recommendation about which WDE staff will sit on each of the SBE committees.

3. The May meeting is scheduled for May 23-24 with the location to be determined.

WYOMING STATE BOARD OF EDUCATION

Date: April 2, 2019

To: Committee Members

From: Walt Wilcox, Chairman

Wyoming State Board of Education

Subject: Computer Science Standards Revision Priorities

At its March 21 meeting in Casper, the Wyoming State Board of Education took testimony from over 50 individuals regarding the draft Computer Science standards. While many in the audience praised the rigor and comprehensiveness of the draft standards, many others asked the State Board of Education to "tap the brakes" on the approval process and refine the draft standards to make them more accessible, especially at the elementary grade levels.

On further reflection, I'd like to attempt to capture the major ideas suggested by those testifying. If the computer science standards review committee undertakes serious discussion of the issues raised below with recommended changes to the proposed standards, the state board is likely to approve them at their April meeting. The state board supports the addition of new computer science standards and recognizes its legislative mandate to promulgate rules that adds this 10th Content area to the Common Core of Knowledge. The sooner these standards are adopted, the more time districts will have to plan for their deployment and implementation.

Outcomes: There was considerable concern among those testifying, that the standards and benchmarks appeared as though they were not based on an intentional analysis of the overall outcomes expected of students by grade level span. Perhaps by reconsidering whether all the domains are the focus areas for the standards or whether some can begin in the secondary grades, the total load can be reduced at the elementary grades. The standards as proposed were all defined as spanning grades kindergarten through grade 12. If the committee can identify the overall outcomes in terms of what students most need to know and be able to do by grade level

span, it is likely that some of the domains may not require benchmarks at the elementary grades.

Standards and benchmarks: In presenting an overview of how standards and benchmarks are deployed by grade level span, department of education staff reported that benchmarks at the elementary grades were mandatory, while benchmarks at the secondary grades, just have to be offered. Based on this assertion, it is much more important for the standards and benchmarks at the elementary grades to be only those that are absolutely necessary for the outcomes proposed above. Benchmarks of the elementary grades should be at the same "grain size" or level of importance. Many of the benchmarks were determined to be suitably integrated with other subject areas. Those integrated benchmarks can appear elsewhere in those content areas and don't need to be repeated in the computer science standards. By eliminating benchmarks at elementary grades that don't conform to major outcomes and by eliminating those that can be integrated in other subjects, the total number of benchmarks in the elementary grades can be reduced significantly.

Utility: The issue of presentation is not a matter of simply formatting, rather it's a matter of utility. Indeed, the state board received numerous comments about the fact that the first draft of the computer science standards was rendered in language that made it difficult for teachers to understand and assimilate. (For example, authentication can be identified by its more common synonym, log-in.) Equally as important is that these standards are arrayed (labelled) in a way that would make it difficult for committees of district faculty to "unpack" the standards. References to domains and practices are confusing rather than helpful. The identification of standards and the references to related or complimentary standards requires going back and forth numerous times to fully appreciate how related standards might be clustered into "power" or "priority" standards for designing instruction.

Deployment: Normally, the State Board does not concern itself very much with the issues related to deployment. But the area of computer science is different primarily because it is a brand-new subject area that is being added to the Common Core of Knowledge. The board also learned during testimony and from the department's October report to the joint education interim committee that computer science has very different levels of implementation from district to district. Some districts have robust programs that have been operating successfully for some time, while other districts offer no computer science at all. For these reasons, the board would like a deeper understanding of the various facets of deployment planning.

Fortunately, two members of the State Board of Education representing community colleges and the University of Wyoming have made it clear that they support new computer science standards. It would be useful to have specific deployment plans regarding professional development opportunities and preservice enrollments along with projections for newly certified computer science teachers between now and the fall of 2022. Similarly, the state board would like to know what funding will be made available by the state legislature to support the implementation of computer science standards at all grades. The department's estimate of

$12.25 million annual funding for computer science implementation is primarily directed toward secondary grades.

It may well be that department of education staff can address issues related to utility and deployment, so that the committee can focus on the more compelling work of defining outcomes and refining the standards and benchmarks. I hope this summary will be useful in helping the department staff and the standards review committee refine these standards, so they are understandable to our faculty and accessible to our students. I look forward to receiving revised standards at our April board meeting.

CREATING OPPORTUNITIES FOR STUDENTS TO KEEP WYOMING STRONG

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Superintendent of Public Instruction

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Chief of Staff

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WYOMING DEPARTMENT OF EDUCATION

MEMORANDUM

To: State Board of Education
From: Laurel Ballard, Supervisor, Student and Teacher Resources Team
Date: April 16, 2019
Subject: Chapter 29 Revisions

Meeting Date: April 25, 2019

Item Type: Action: ____ Informational: __X__

Background
During the 2019 legislative session, House Bill 22/Enrolled Act 84 passed making changes to W.S. § 21-2-304(b)(xv) to the teacher evaluation systems. The State Board of Education (SBE) has a requirement to promulgate rules and regulations for implementation and administration of a comprehensive performance evaluation system for teachers. The SBE will also establish general criteria for school district teacher performance evaluation systems that provide school districts flexibility in designing teacher evaluations to improve classroom instruction. The new statutes will go into effect July 1, 2019.

Chapter 29 Revisions
With the statutory requirement to work with local school districts, the Wyoming Department of Education (WDE) has facilitated the Certified Personnel Evaluation System Advisory Committee – Teacher Evaluations to develop the revisions to Chapter 29. This committee includes representation from teachers, instructional facilitators, principals, curriculum directors, special education directors, personnel directors, and superintendents.

The advisory committee has worked to balance the SBE's desire to leave as much local flexibility as possible for districts while ensuring the statutory requirements are being met. These rules were vetted with superintendents, personnel directors, and the Wyoming Education Association. Those recommended changes were considered for incorporation by the advisory committee before being brought to the SBE for consideration.

With the repeal of W.S. § 21-3-110(b), minor changes were made to leader evaluation system. Several references to this statute have been removed. There was also a change in terminology from rating system to classification system, although there was no change in the definition.

The teacher evaluation system portion of Chapter 29, was reorganized into two sections. Section 6 provides the general criteria for school district comprehensive teacher performance evaluation systems. Section 7 contains information on the submission and approval of the evaluation systems. Section 2 contains the definitions found throughout the Chapter 29 Rules. Several definitions have been added, revised, or removed based on the changes made in Sections 6 and 7.

Chapter 29 Rules Promulgation

Based on conversations with various districts, there are districts wanting to change their teacher evaluation system, but have been waiting to move forward until the statutes and rules have been put into place. The Chapter 29 Rules provide a timeline for districts who want to change their teacher evaluation system. It given them the ability to decide which teacher evaluation instrument they want to use and then work with the SBE for approval of the new system. For this reason, the advisory committee is requesting the SBE consider adopting emergency rules at the same time as they begin promulgating regular rules.

At this time, the CPES Advisory Committee is requesting feedback on the Chapter 29 Rules from the SBE. During the May 2019 meeting, the CPES Advisory Committee will be requesting the SBE vote on promulgating both the emergency and regular rules.

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Chapter 29 Revisions

TEACHER EVALUATION SYSTEMS

STATE BOARD OF EDUCATION MEETING

APRIL 25, 2019

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DEPARTMENT OF EDUCATION

Statutory Revisions

- Current rules on teacher evaluations systems are based on the 2010 version of W.S. 21-2-304(a)(xv) statute

- Legislature made significant changes to the statute between 2011-2017 that were never incorporated into Chapter 29.

- Legislature revised W.S. 21-2-304(a)(xvi) this year which took the statute to a place that was much closer the pre-2011 statutes

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W.S. 21-2-304(b)(xv)

2010:

Promulgate rules and regulations for the **development, assessment and approval** of school district **teacher** performance evaluation systems. Rules and regulations adopted under this paragraph shall allow each district **flexibility** in developing an evaluation system which **meets the individual needs of the district**;

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W.S. 21-2-304(b)(xv)

2019:

Promulgate rules and regulations for the **submission and approval** of a **comprehensive** school district **teacher** performance evaluation systems. The state board shall, in consultation with local school districts, establish **general criteria** for school district teacher performance evaluation systems that provide school districts **flexibility** in designing teacher evaluations **to improve classroom instruction**;

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District Statutes

W.S. 21-3-110(a)(xvii)

Require the performance of each **initial contract teacher** to be **evaluated once a year** against the school **district's standards for performance**, as submitted and **approved** pursuant to W.S. 21-2-304(b)(xv). The evaluation shall be in writing and an opportunity for feedback to improve performance shall be provided. The teacher shall receive a copy of each evaluation of his performance;

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District Statutes

W.S. 21-3-110(a)(xviii)

Establish a teacher performance evaluation system and require the performance of each **continuing contract teacher** to be evaluated against the school **district's standards for performance**, as **submitted and approved** pursuant to W.S. 21-2-304(b)(xv), **once a year until the teacher has been classified as effective** under the performance evaluation system utilized by the school district for two (2) consecutive years. Upon a **classification of effective for two (2) consecutive years, evaluation shall occur at minimum once every three (3) years**. The teacher shall receive a copy of each evaluation of his performance;

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District Statutes

W.S. 21-3-110(a)(xix)

Performance evaluations required under paragraphs (a)(xvii) and (xviii) of this section shall serve as a basis for **improvement of instruction, enhancement of curriculum program implementation, measurement of both individual teacher performance** and **professional growth and development and the performance level of all teachers** within the school district, and as **documentation for unsatisfactory performance that may lead to dismissal, suspension and termination** proceedings under W.S. 21-7-110;

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Repealed Statutes

W.S. 21-3-110(b)

Required reporting to school board on ineffective leaders and educators

W.S. 21-7-110(a)(vii)

Beginning school year 2019-2020 and each school year thereafter, inadequate performance as determined through performance evaluation tied to student academic growth for at least two (2) consecutive years completed in accordance with W.S. 21-3-110(a)(xvii) through (xix);

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Timelines

- Legislature removed any implementation timelines
- Statute effective July 1, 2019
- Districts have expressed desire to change systems
  - Coordinate with Chapter 29 revisions

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Timelines

- Promulgate emergency rules and regular rules
- April - SBE provide feedback on rules
- May - SBE approves both sets of rules for promulgation

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Advisory Committee

- 4 Superintendents
- 1 Curriculum Director
- 2 Personnel Directors
- 1 WEA Representative
- 1 Instructional Facilitator
- 4 Teachers - Elementary, Middle, High, Alternative School
- 1 Special Educator Director
- 3 Principals - K-12 and High School
- SBE Coordinator
- WDE Title IIA Director

Committee Support

- REL Central
- North Central Comprehensive Center
- Foresight Law & Policy
- Joe Simpson
- WDE

Technical Assistance Received

- Center on Great Teachers and Leaders
- Rhode Island
- Massachusetts

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Considerations

- SBE previous direction to return teacher evaluation systems completely to districts.
- Legislative intent from committee and floor discussions
- Realities of statutory changes

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Input

- Committee member feedback from field
- Meeting with elementary and secondary principal associations
- Meeting with superintendents and personnel directors

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Ch. 29 Revisions

Versions of Chapter 29 provided

1. Clean version with annotations
2. Clean version without annotations
3. Strike and underline version

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Ch. 29 Structure

- Title
- Section 1 - Authority
- Section 2 - Definitions
- Sections 3-5 - Leader Evaluation Systems
- Section 6-7 - Teacher Evaluation Systems
- Section 8 - Technical Assistance

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Review Revisions

- Title
- Section 2 - Definitions
- Sections 3-5 - Changes to leader evaluation system
- Section 6-7 - Changes to teacher evaluation systems

Chapter 29

EVALUATION SYSTEMS FOR DISTRICT AND SCHOOL LEADERS AND TEACHERS

Section 1. Authority. These rules and regulations are promulgated pursuant to Wyoming Statutes 21-2-304(b)(xv) and (xvi).

Section 2. Definitions.

(a) "Best practice" means practices that have produced positive, documented results in a similar situation and could be replicated.

(b) "Classification system" means a system of classification by which information is provided regarding the professional practice of persons being evaluated as measured against professional standards.

(c) "District leader" means a person employed as superintendent of schools by any district board of trustees or other district leader serving in a similar capacity, as determined by the local board of trustees.

(d) "Evaluation cycle" means the timelines under which the various components of an evaluation process occurs.

(e) "Formative feedback" means information communicated to a person being evaluated that is intended to modify thinking or behavior.

(f) "Locally designed district and school leader evaluation system" means a locally designed district and school leader evaluation system comprising the standards and comprehensive system components described in sections 3 and 4 of this rule, which must be evaluated and approved by the State Board of Education, prior to adoption by a board of trustees.

(g) "Multiple sources of evidence" means using more than one method or source of data to determine a person's level of performance in an area of practice or outcomes.

(h) "Performance level descriptor" means a description of the classification used to summarize the knowledge and skills associated with each performance level used in a classification system.

(i) "Professional practice" means the knowledge and skills expected of persons being evaluated, as defined in standards and associated benchmarks.

(j) "Professional standards" means the standards that define the knowledge, skills, and professionalism expected of persons who will be evaluated.

(k) "Research-based" means basic or applied research that:

(i) Has been published in a peer-reviewed journal or approved by a panel of experts;

(ii) Has been replicated by other researchers; and

(iii) Has a consensus in the research community that the study's findings are supported by a critical mass of additional studies.

(l) "School leader" means a school principal or other school leader serving in a similar capacity, as determined by the local board of trustees.

(m) "Significantly amended" means a change to an evaluation system that replaces an existing system or materially changes any required component of an existing system.

(n) "Stakeholder" means an individual who is or will be directly impacted by the evaluation system.

(o) "State-defined district and school leader evaluation system" means a district and school leader evaluation system comprising the standards and comprehensive system components described in sections 3 and 4 of this rule.

(p) "Student performance growth data" means data that shows outcomes for students, including student achievement test scores and other academic and non-academic measures of student outcomes.

(q) "Teacher" means a person who is licensed by the Wyoming Professional Teaching Standards Board (PTSB) and is responsible for providing instruction to students.

(r) "Teacher evaluation system" means a standard structure and set of procedures by which a school district initiates, designs, implements, and uses evaluations of its teachers for the purposes of professional growth and continued employment.

Section 3. District and School Leader Evaluation System Design.

(a) Every board of trustees shall adopt policies and procedures for the administration of a district and school leader evaluation system designed and implemented in accordance with this chapter. Such policies shall define the purpose and goals of the system.

(b) A district and school leader evaluation system, hereinafter referred to as a leader evaluation system, shall be one of the following:

(i) A system based on all seven (7) of the Wyoming standards for district and school leaders or standard 1 and any five (5) of the remaining six (6) standards so long as a majority of the benchmarks of each such standard are represented, which, for purposes of this

chapter, is referred to as a state-defined district and school leader evaluation system or a state-defined system; or

(ii) A system based on professional standards prescribed by the board of trustees, so long as standard 1 of the Wyoming standards for district and school leaders (prescribed in section 4) is included in the board's standard, which, for purposes of this chapter, is referred to as a locally designed district and school leader evaluation system, a locally designed system, or an alternative leader evaluation system in accordance with W.S. 21-2-304(b)(xvi).

(c) Any leader evaluation system adopted by a board of trustees, whether a state-defined system or locally designed system, shall be a comprehensive system in that, in addition to being based on professional standards, as prescribed in paragraph (b) of this section, the system's design incorporates the following comprehensive system components:

(i) **Multiple Sources of Evidence -** The leader evaluation system shall utilize multiple sources of evidence.

(A) Leader performance on each standard shall be evaluated using more than one source of evidence in order to provide a more comprehensive and accurate assessment.

(ii) **Evaluation Cycle** - The leader evaluation system shall be administered in accordance with an evaluation cycle which provides for, at a minimum:

(A) Each leader shall be evaluated at least annually; however, not every standard is required to be used for any leader's evaluation in a given year, except that standard 1 shall be used with every evaluation and all of the standards adopted by the board of trustees must be used for each leader's evaluations at least once during every five (5) year period;

(B) Each evaluation shall be carried out on a timeline established by the board of trustees, in consultation with the district superintendent, to ensure that evaluators and any person being evaluated have sufficient time to consider and complete all aspects of the evaluation cycle;

(C) The board of trustees shall evaluate any person employed as superintendent of schools in accordance with the district's evaluation policies and procedures;

(D) The district superintendent shall ensure that the evaluation of all other district leaders, principals, and other school leaders is carried out in accordance with the district's evaluation policies and procedures;

(E) Each evaluation shall be carried out in accordance with a process clearly defined by the district and which includes collaborative goal-setting, self-analysis, and information and data analysis to identify areas for professional growth; formative feedback; and

a planning process during which appropriate growth opportunities and supports are identified; and

(F) Each evaluation shall conclude with a written summary of annual evaluation findings and recommendations for improvement.

(iii) **Classification System -** The leader evaluation system shall include a classification system designed so that there is a performance level descriptor for each professional standard that is the focus of the evaluation.

(iv) **Training and Guidance Documents -** The leader evaluation system shall include training on the use of the system, as well as guidance documents and training materials to support implementation and administration.

(A) Every employee of the district who is an evaluator or a person being evaluated shall be trained on using the system and any related tools and receive all guidance documents; and

(B) Training and guidance documents shall be made available to all members of the board of trustees and other employees.

(v) **Quality Controls -** The leader evaluation system shall include quality controls to ensure that the system is implemented and administered with fidelity.

(A) Each district shall establish procedures for the collection and appropriate use of all data; and

(B) Each district shall establish a timeline and procedures for evaluating the district's implementation of the leader evaluation system which includes a review of training, guidance documents, and other tools.

(vi) **Supports -** The leader evaluation system shall include supports for persons being evaluated to foster professional learning and growth, and to aid in building capacity.

(A) Every district shall establish a timeline and procedures for supporting professional learning, growth, and improvement in response to the performance of each leader.

Section 4. Wyoming Standards for District and School Leaders.

(a) Subject to the exceptions provided for in this chapter, every board of trustees shall adopt the following professional standards and associated benchmarks for the annual evaluation of district and school leaders pursuant to W.S. 21-3-110(a)(xxx).

(i) **Standard 1 –** Clear and consistent focus on maximizing the learning and growth of all students:

(A) In collaboration with others and in alignment with district strategic priorities, use appropriate data to establish rigorous, concrete goals in the context of student achievement and instructional programming.

(B) Ensure the alignment of the assessments to district identified prioritized standards used to track student growth and achievement over time.

(C) Use multiple data measures appropriately within the technical limitations to monitor students' progress toward learning objectives to improve instruction.

(D) Ensure a system of accountability for students' academic success and career readiness.

(E) Develop and maintain longitudinal data and communication systems to deliver actionable information for district, school, and classroom improvement.

(F) Lead the implementation of a high-quality student support and assessment system.

(G) Ensure high expectations for achievement, growth, and equity in opportunities for all students.

(H) Work with staff to evaluate and use data to improve student achievement.

(ii) **Standard 2 –** Instructional and assessment leadership:

(A) Focus on student learning by leading the implementation of a rigorous, relevant, and prioritized curriculum and assessment system.

(B) Work collaboratively to implement a common instructional framework that aligns curriculum with teaching, assessment, and learning and guides teacher conversation, practice, observation, evaluation, and feedback.

(C) Recognize a full range of pedagogy and monitor the impact of instruction.

(D) Ensure that there is differentiation, personalization, intellectual stimulation, collaboration, authenticity, and recognition of student strengths in instructional practice.

(E) Promote the effective uses of technology to support teaching and learning.

(F) Ensure the use of formative assessment data to inform instruction.

(iii) **Standard 3 –** Developing and supporting a learning organization:

(A) Effectively lead the implementation of a high-quality educator support and evaluation system that advances the professional growth of their staff.

(B) Have a solid understanding of adult learning and ensure that all adults have the knowledge, skills, and dispositions necessary to promote student success.

(C) Create and/or support collaborative learning organizations to foster improvements in teacher practices and student learning.

(D) Guide implementation of improvement initiatives and provide the time and support for these initiatives to achieve desired outcomes.

(E) Lead the evaluation of new and existing programs as part of a continuous improvement process.

(F) Cultivate the ability of teachers and other members of the community to become leaders by providing assistance and leadership opportunities.

(G) Facilitate high functioning groups of faculty and staff.

(iv) **Standard 4 –** Vision, mission, and culture:

(A) Use relevant data and collaborate with members of the school, district, and community to create and endorse a vision for the achievement of every student.

(B) Articulate, advocate, and cultivate core values that define the school's and district's culture.

(C) Create and maintain a positive climate with a trusting, safe environment that promotes effective student learning and adult practice.

(D) Collaboratively evaluate the mission and vision, modifying them based on changing intentions, opportunities, demands, and positions of students, staff, and community.

(v) **Standard 5 –** Efficient and effective management:

(A) Recruit, hire, support, develop, and retain effective teachers and other professional staff and form them into an effective team.

(B) Facilitate the adaptation and monitoring of operational systems and processes to ensure a high-performing organization that includes clear expectations, structures, rules, and procedures for effective and efficient operations focused on high-quality teaching and learning.

(C) Limit the number of initiatives and ensure that whatever programs and strategies are implemented in their school and district are supported by the best research available and are aligned to school and district plans.

(D) Use appropriate strategies to guide their organizations through change (e.g., first- and second-order change strategies).

(E) Support the learning of all students by appropriating and regulating monetary, human and material supplies, time, equipment, technology, and alliances with school and district goals.

(F) Ensure the expectation that students, staff, and the school and district operate within the guidelines of federal, state, and local laws, policies, regulations, and statutory requirements.

(vi) **Standard 6** – Ethics and professionalism:

(A) Lead with integrity.

(B) Establish a culture in which ethical behavior is expected and practiced by all faculty, staff, students, and volunteers.

(C) Contribute to district and state initiatives.

(D) Evaluate the potential ethical, legal, and precedent-setting consequences of decision-making.

(vii) **Standard 7** – Communication and community engagement:

(A) Advocate and effectively communicate with a range of stakeholders, from students and teachers to parents and members of the larger community, including media, to advance the organization's vision and mission.

(B) Implement and maintain policies to establish working relationships with the community and media to garner support and build consensus for school and district goals.

(C) Use community engagement efforts to identify and share successes and to address challenges for the benefit of students.

(D) Are easily approached, available, and inviting to students, staff, and community.

(E) Are intentional about considering improvement ideas from outside the school system.

Section 5. District and School Leader Evaluation System Implementation and Administration.

(a) On or before February 1, 2019, the board of trustees shall notify the State Board of Education of its election to implement and administer either a state-defined district and school leader evaluation system or a locally designed district and school leader evaluation system for the evaluation of district and school leaders during the 2018-2019 school year as required by W.S. 21-3-110(a)(xxx).

(i) With such notice, a board of trustees that elects to adopt a state-defined system shall provide an assurance that district and school leader evaluations will be based on standards that meet the requirements of section 3(b)(i) of this chapter.

(ii) A board of trustees that elects to adopt a locally designed system shall receive conditional approval from the State Board prior to adoption by submitting to the Department, on behalf of the State Board, the following:

(A) The board's leader professional standards and associated benchmarks, developed in accordance with section 3(b)(ii) of this Chapter, which, upon approval shall be deemed performance standards identified or established by the State Board of Education pursuant to W.S. 21-2-304(b)(xvi);

(B) A description of the extent to which those standards are the same as or similar to the standards that are part of the state-defined system; and

(C) An assurance that the board will submit additional information on its leader evaluation system for full approval, as described in paragraph (b) of this section, by June 1, 2019.

(b) On or before June 1, 2019, a board that is implementing a locally designed system that has been conditionally approved by the State Board, shall submit the following for State Board review and full approval prior to administration during the 2019-2020 school year and subsequent school years:

(i) The purpose and goals of the evaluation system;

(ii) Evidence that the district's standards reflect best practice; and

(iii) Evidence of system quality as demonstrated by adherence with the comprehensive system component requirements of section 3(c) of this chapter, which may

include leader evaluation system policies adopted by the board and procedures developed for administration of the system.

The State Board of Education will approve any locally designed system that it determines to be of sufficient quality on the basis of the strength of the evidence submitted. If the State Board finds the evidence submitted to be insufficient for approval, additional information may be requested for consideration.

(c) On or before November 1, 2019, and by the same date each year thereafter, the board of trustees shall provide the Department, on behalf of the State Board, with an assurance that the board has adopted and implemented, and is continuing to administer during the current school year, a leader evaluation system that is a state-defined system or an approved locally designed system and that meets all of the requirements for such a system as prescribed by section 3 of this chapter.

(d) Following any revision of the Wyoming district and school leader standards prescribed by section 4 of this chapter, the assurance required by paragraph (c) shall include an assurance that the district has modified its system as necessary to ensure continued alignment with any of the Wyoming district and school leader standards that are included in the board's leader evaluation system.

(e) Any board of trustees that elects to adopt a locally designed system after June 1, 2019, shall submit its system for State Board review and approval prior to adoption in accordance with the requirements established by paragraphs (a)(2)(A) and (B) and paragraph (b) of this section.

Section 6. Teacher Evaluation System Design and Documentation.

(a) Each board of trustees shall adopt, implement, and administer, subject to State Board approval as described in section 7, a comprehensive teacher evaluation system designed to measure the effectiveness with which teachers perform their roles. The comprehensive teacher evaluation system shall serve as a basis for:

(i) Improvement of instruction;

(ii) Enhancement of curriculum program implementation;

(iii) Individual teacher performance and professional growth; and

(iv) Determining the performance level of all teachers.

Such measures shall be used to determine unsatisfactory teacher performance that may lead to dismissal, suspension, and termination proceedings.

(b) Each district teacher evaluation system shall meet the following requirements:

(i) District adopted professional standards are considered best practice.

(ii) Teacher performance is evaluated using more than one source of evidence relevant to the nature of each teacher's position, in order to provide a more comprehensive and accurate assessment.

(iii) The district's professional standards and multiple sources of evidence as described in subsections (b)(i) and (b)(ii) above, as well as any other instruments and processes the district has developed, are used to determine the evaluation classification.

(iv) The classification system must include criteria by which a teacher is classified as effective.

(v) Teacher evaluations are carried out in accordance with the district's evaluation cycle for both initial and continuing contract teachers and in accordance with W.S. 21-3-110(a)(xvii) and 21-3-110(a)(xvii).

(vi) Stakeholders are involved in the development of the teacher evaluation system and any subsequent revision.

(vii) The district takes steps to ensure the system is reliable and equitable and is implemented with fidelity, including:

(A) There are procedures for the collection of data providing for, at a minimum, data security, privacy, and the appropriate use of all data;

(B) Data and other evidence are collect and analyzed; and

(C) Evaluators and those being evaluated are trained on the use of the teacher evaluation system and provided with guidance documents and training materials to support implementation and administration.

(viii) There are procedures for supporting professional learning, growth, and improvement in response to the performance evaluation of each teacher.

Section 7. Teacher Evaluation System Submission, Review, and Approval.

(a) On or before July 1, 2020, each district shall either:

(i) Notify the Department of intent to implement or continue administration of a comprehensive teacher evaluation system that meets the requirements described in section 6, and submit documentation described in subsection (d) for review; or

(ii) Notify the Department of intent to redesign the district's teacher evaluation system to meet the comprehensive teacher evaluation system requirements described in section 6.

(b) On or before July 1, 2021, a district that elects to undertake a teacher evaluation system redesign pursuant to subsection (a)(ii), shall submit documentation described in subsection (d) for Department review and State Board approval.

(c) A district shall continue to administer its previously approved system until the school year immediately following receipt of approval by the State Board of the district's submission of documentation described in subsection (d). Unless otherwise indicated by the State Board, a system approved pursuant to subsection (e) is to be implemented in the school year immediately following approval.

(d) A district's teacher evaluation system submission must include the following, in addition to any information and data requested by the Department that is needed to clarify submission information:

(i) Professional standards on which the district evaluates teachers, described with specificity sufficient for a layperson to understand the district's expectations for teacher performance.

(ii) Evidence that each professional standard is research-based or reflects best practice.

(iii) A list or examples of evidence to be used for each professional standard.

(iv) A description of how the evaluation process is designed to support individual and collective professional growth and to identify areas for improvement.

(v) A description of the evaluation cycle, including information on the timing and frequency of observations, types of assistance or remediation provided.

(vi) A description of the classification system for identifying teachers whose performance meets the district's definition of effective teaching and those at other levels of performance.

(vii) A description of the training provided to evaluators and those being evaluated.

(viii) A list of the stakeholders involved in the development of the teacher evaluation system and any subsequent revisions, as well as a description of stakeholder involvement.

(ix) A description of the data and procedures the district uses to collect and analyze evidence to ensure that the system is reliable and equitable and is implemented and administered with fidelity.

(e) After the complete submission by any district of all of the documentation described in subsection (d), the Department shall conclude its review of the submission and the State Board shall make a determination regarding the extent to which the submission meets the comprehensive teacher evaluation system requirements established in section 6. The State Board will issue a decision that the teacher evaluation system has received:

(i) Full approval;

(ii) Conditional approval with conditions noted for remediation; or

(iii) Disapproval with deficiencies noted.

With any decision of conditional approval or disapproval, the State Board will inform the district of the timeline and any other requirements for remediation or resubmission.

(f) If, at any point, a district subsequently significantly amends its teacher evaluation system, the district shall then resubmit all of the documentation described in subsection (d) for approval by the State Board.

Section 8. Technical Assistance. Technical assistance will be made available to school districts by the Department and other partners to help them develop and implement evaluation systems that comply with the requirements of this chapter and to support districts with the ongoing evaluation system improvement.

Chapter 29

EVALUATION SYSTEMS FOR DISTRICT AND SCHOOL LEADERS AND ~~OTHER CERTIFIED PERSONNEL~~ TEACHERS

Section 1. Authority. These rules and regulations are promulgated pursuant to Wyoming Statutes 21-2-304(b)(xv) and (xvi).

Section 2. Definitions.

(a) "Best practice" means practices that have produced positive, documented results in a similar situation and could be replicated.

~~(b) "Certified personnel" means all personnel, including classroom teachers and others who are required by the State of Wyoming to hold licensure through the Wyoming Professional Teaching Standards Board or a Wyoming professional licensing agency, exclusive of extra-duty positions.~~

(b) ~~(c) "Ratings~~ "Classification system" means a system of classification by which information is provided regarding the professional practice of persons being evaluated as measured against ~~evaluation system~~ professional standards.

(c) ~~(d)~~ "District leader" means a person employed as superintendent of schools by any district board of trustees or other district leader serving in a similar capacity, as determined by the local board of trustees.

~~(e) "Equitable" means dealing fairly and equally with all concerned.~~

(d) ~~(f)~~ "Evaluation cycle" means the timelines under which the various components of an evaluation process occurs.

~~(h) "Evaluator" means the person primarily responsible for administering an evaluation.~~

(e) ~~(i)~~ "Formative feedback" means information communicated to a person being evaluated that is intended to modify thinking or behavior.

(f) ~~(j)~~ "Locally designed district and school leader evaluation system" means a locally designed district and school leader evaluation system comprising the standards and comprehensive system components described in sections 3 and 4 of this rule, which must be evaluated and approved by the State Board of Education, prior to adoption by a board of trustees.

(g) ~~(k)~~ "Multiple sources of evidence" means using more than one method or source of data to determine a person's level of performance in an area of practice or outcomes.

~~(l) "Performance criteria" means the areas on which a person is evaluated.~~

(h) ~~(m)~~ "Performance level descriptor" means a description of the ~~rating~~ classification used to summarize the knowledge and skills associated with each performance level used in a ~~ratings~~ classification system.

(i) ~~(n)~~ "Professional practice" means the knowledge and skills expected of persons being evaluated, as defined in standards and associated benchmarks.

(j) ~~(g) "Evaluation system~~ "Professional standards" means the standards ~~identified or approved, as part of a proposed locally designed district and school leader evaluation system, by the State Board of Education~~ that define the knowledge, ~~and~~ skills, and professionalism expected of persons who will be evaluated.

~~(p) "Reliable" means dependable; obtaining the same results with repeated use or application.~~

(k) ~~(q)~~ "Research-based" means basic or applied research that:

(i) Has been published in a peer-reviewed journal or approved by a panel of experts;

(ii) Has been replicated by other researchers; and

(iii) Has a consensus in the research community that the study's findings are supported by a critical mass of additional studies.

(l) ~~(r)~~ "School leader" means a school principal or other school leader serving in a similar capacity, as determined by the local board of trustees.

(m) ~~(s)~~ "Significantly amended" means a change to an evaluation system that replaces an existing system or materially changes any required component of an existing system.

(n) ~~(t)~~ "Stakeholder" means an individual who is or will be directly impacted by the evaluation system.

(o) ~~(u)~~ "State-defined district and school leader evaluation system" means a district and school leader evaluation system comprising the standards and comprehensive system components described in sections 3 and 4 of this rule.

(p) ~~(v)~~ "Student performance growth data" means data that shows outcomes for students, including student achievement test scores and other academic and non-academic measures of student outcomes.

~~(w) "Summative evaluation" means a written summary of performance based on data collected during the evaluation cycle.~~

~~(x) "Summative rating" means the overall rating, as provided for in a ratings system, assigned to a person being evaluated at the conclusion of an evaluation cycle.~~

(q) "Teacher" means a person who is licensed by the Wyoming Professional Teaching Standards Board (PTSB) and is responsible for providing instruction to students.

(r) ~~(c) "Certified personnel~~ "Teacher evaluation system" means a standard structure and set of procedures by which a school district initiates, designs, implements, and uses evaluations of its ~~certified personnel~~ teachers for the purposes of professional growth and continued employment.

Section 3. District and School Leader Evaluation System Design.

(a) Every board of trustees shall adopt policies and procedures for the administration of a district and school leader evaluation system designed and implemented in accordance with this chapter. Such policies shall define the purpose and goals of the system.

(b) A district and school leader evaluation system, hereinafter referred to as a leader evaluation system, shall be one of the following:

(i) A system based on all seven (7) of the Wyoming standards for district and school leaders or standard 1 and any five (5) of the remaining six (6) standards so long as a majority of the benchmarks of each such standard are represented, which, for purposes of this chapter, is referred to as a state-defined district and school leader evaluation system or a state-defined system; or

(ii) A system based on professional standards prescribed by the board of trustees, so long as standard 1 of the Wyoming standards for district and school leaders (prescribed in section 4) is included in the board's standard, which, for purposes of this chapter, is referred to as a locally designed district and school leader evaluation system, a locally designed system, or an alternative leader evaluation system in accordance with W.S. 21-2-304(b)(xvi).

(c) Any leader evaluation system adopted by a board of trustees, whether a state-defined system or locally designed system, shall be a comprehensive system in that, in addition to being based on professional standards, as prescribed in paragraph (b) of this section, the system's design incorporates the following comprehensive system components:

(i) **Multiple Sources of Evidence -** The leader evaluation system shall utilize multiple sources of evidence.

(A) Leader performance on each standard shall be evaluated using more than one source of evidence in order to provide a more comprehensive and accurate assessment.

(ii) **Evaluation Cycle** - The leader evaluation system shall be administered in accordance with an evaluation cycle which provides for, at a minimum:

(A) Each leader shall be evaluated at least annually; however, not every standard is required to be used for any leader's evaluation in a given year, except that standard 1 shall be used with every evaluation and all of the standards adopted by the board of trustees must be used for each leader's evaluations at least once during every five (5) year period;

(B) Each evaluation shall be carried out on a timeline established by the board of trustees, in consultation with the district superintendent, to ensure that evaluators and any person being evaluated have sufficient time to consider and complete all aspects of the evaluation cycle;

(C) The board of trustees shall evaluate any person employed as superintendent of schools in accordance with the district's evaluation policies and procedures;

(D) The district superintendent shall ensure that the evaluation of all other district leaders, principals, and other school leaders is carried out in accordance with the district's evaluation policies and procedures;

(E) Each evaluation shall be carried out in accordance with a process clearly defined by the district and which includes collaborative goal-setting, self-analysis, and information and data analysis to identify areas for professional growth; formative feedback; and a planning process during which appropriate growth opportunities and supports are identified; and

(F) Each evaluation shall conclude with a written summary of annual evaluation findings and recommendations for improvement.

(iii) **~~Ratings~~ Classification System** - The leader evaluation system shall include a ~~ratings~~ classification system designed so that there is a performance level descriptor for each ~~evaluation system~~ professional standard that is the focus of the evaluation~~ and in a manner that enables compliance with W.S. 21-3-110(b)~~.

(iv) **Training and Guidance Documents** - The leader evaluation system shall include training on the use of the system, as well as guidance documents and training materials to support implementation and administration.

(A) Every employee of the district who is an evaluator or a person being evaluated shall be trained on using the system and any related tools and receive all guidance documents; and

(B) Training and guidance documents shall be made available to all members of the board of trustees and other employees.

(v) **Quality Controls -** The leader evaluation system shall include quality controls to ensure that the system is implemented and administered with fidelity.

(A) Each district shall establish procedures for the collection and appropriate use of all data; and

(B) Each district shall establish a timeline and procedures for evaluating the district's implementation of the leader evaluation system which includes a review of training, guidance documents, and other tools.

(vi) **Supports -** The leader evaluation system shall include supports for persons being evaluated to foster professional learning and growth, and to aid in building capacity.

(A) Every district shall establish a timeline and procedures for supporting professional learning, growth, and improvement in response to the performance of each leader ~~and in a manner that enables compliance with W.S. 21-3-110(b)~~.

Section 4. Wyoming Standards for District and School Leaders.

(a) Subject to the exceptions provided for in this chapter, every board of trustees shall adopt the following professional standards and associated benchmarks for the annual evaluation of district and school leaders pursuant to W.S. 21-3-110(a)(xxx).

(i) **Standard 1** – Clear and consistent focus on maximizing the learning and growth of all students:

(A) In collaboration with others and in alignment with district strategic priorities, use appropriate data to establish rigorous, concrete goals in the context of student achievement and instructional programming.

(B) Ensure the alignment of the assessments to district identified prioritized standards used to track student growth and achievement over time.

(C) Use multiple data measures appropriately within the technical limitations to monitor students' progress toward learning objectives to improve instruction.

(D) Ensure a system of accountability for students' academic success and career readiness.

(E) Develop and maintain longitudinal data and communication systems to deliver actionable information for district, school, and classroom improvement.

(F) Lead the implementation of a high-quality student support and assessment system.

(G) Ensure high expectations for achievement, growth, and equity in opportunities for all students.

(H) Work with staff to evaluate and use data to improve student achievement.

(ii) **Standard 2** – Instructional and assessment leadership:

(A) Focus on student learning by leading the implementation of a rigorous, relevant, and prioritized curriculum and assessment system.

(B) Work collaboratively to implement a common instructional framework that aligns curriculum with teaching, assessment, and learning and guides teacher conversation, practice, observation, evaluation, and feedback.

(C) Recognize a full range of pedagogy and monitor the impact of instruction.

(D) Ensure that there is differentiation, personalization, intellectual stimulation, collaboration, authenticity, and recognition of student strengths in instructional practice.

(E) Promote the effective uses of technology to support teaching and learning.

(F) Ensure the use of formative assessment data to inform instruction.

(iii) **Standard 3** – Developing and supporting a learning organization:

(A) Effectively lead the implementation of a high-quality educator support and evaluation system that advances the professional growth of their staff.

(B) Have a solid understanding of adult learning and ensure that all adults have the knowledge, skills, and dispositions necessary to promote student success.

(C) Create and/or support collaborative learning organizations to foster improvements in teacher practices and student learning.

(D) Guide implementation of improvement initiatives and provide the time and support for these initiatives to achieve desired outcomes.

(E) Lead the evaluation of new and existing programs as part of a continuous improvement process.

(F) Cultivate the ability of teachers and other members of the community to become leaders by providing assistance and leadership opportunities.

(G) Facilitate high functioning groups of faculty and staff.

(iv) **Standard 4 –** Vision, mission, and culture:

(A) Use relevant data and collaborate with members of the school, district, and community to create and endorse a vision for the achievement of every student.

(B) Articulate, advocate, and cultivate core values that define the school's and district's culture.

(C) Create and maintain a positive climate with a trusting, safe environment that promotes effective student learning and adult practice.

(D) Collaboratively evaluate the mission and vision, modifying them based on changing intentions, opportunities, demands, and positions of students, staff, and community.

(v) **Standard 5 –** Efficient and effective management:

(A) Recruit, hire, support, develop, and retain effective teachers and other professional staff and form them into an effective team.

(B) Facilitate the adaptation and monitoring of operational systems and processes to ensure a high-performing organization that includes clear expectations, structures, rules, and procedures for effective and efficient operations focused on high-quality teaching and learning.

(C) Limit the number of initiatives and ensure that whatever programs and strategies are implemented in their school and district are supported by the best research available and are aligned to school and district plans.

(D) Use appropriate strategies to guide their organizations through change (e.g., first- and second-order change strategies).

(E) Support the learning of all students by appropriating and regulating monetary, human and material supplies, time, equipment, technology, and alliances with school and district goals.

(F) Ensure the expectation that students, staff, and the school and district operate within the guidelines of federal, state, and local laws, policies, regulations, and statutory requirements.

(vi) **Standard 6 –** Ethics and professionalism:

(A) Lead with integrity.

(B) Establish a culture in which ethical behavior is expected and practiced by all faculty, staff, students, and volunteers.

(C) Contribute to district and state initiatives.

(D) Evaluate the potential ethical, legal, and precedent-setting consequences of decision-making.

(vii) **Standard 7** – Communication and community engagement:

(A) Advocate and effectively communicate with a range of stakeholders, from students and teachers to parents and members of the larger community, including media, to advance the organization's vision and mission.

(B) Implement and maintain policies to establish working relationships with the community and media to garner support and build consensus for school and district goals.

(C) Use community engagement efforts to identify and share successes and to address challenges for the benefit of students.

(D) Are easily approached, available, and inviting to students, staff, and community.

(E) Are intentional about considering improvement ideas from outside the school system.

Section 5. District and School Leader Evaluation System Implementation and Administration.

(a) On or before February 1, 2019, the board of trustees shall notify the State Board of Education of its election to implement and administer either a state-defined district and school leader evaluation system or a locally designed district and school leader evaluation system for the evaluation of district and school leaders during the 2018-2019 school year as required by W.S. 21-3-110(a)(xxx).

(i) With such notice, a board of trustees that elects to adopt a state-defined system shall provide an assurance that district and school leader evaluations will be based on standards that meet the requirements of section 3(b)(i) of this chapter.

(ii) A board of trustees that elects to adopt a locally designed system shall receive conditional approval from the State Board prior to adoption by submitting to the Department, on behalf of the State Board, the following:

(A) The board's leader ~~evaluation system~~ professional standards and associated benchmarks, developed in accordance with section 3(b)(ii) of this Chapter, which, upon approval shall be deemed performance standards identified or established by the State Board of Education pursuant to W.S. 21-2-304(b)(xvi);

(B) A description of the extent to which those standards are the same as or similar to the standards that are part of the state-defined system; and

(C) An assurance that the board will submit additional information on its leader evaluation system for full approval, as described in paragraph (b) of this section, by June 1, 2019.

(b) On or before June 1, 2019, a board that is implementing a locally designed system that has been conditionally approved by the State Board, shall submit the following for State Board review and full approval prior to administration during the 2019-2020 school year and subsequent school years:

(i) The purpose and goals of the evaluation system;

(ii) Evidence that the district's standards reflect best practice; and

(iii) Evidence of system quality as demonstrated by adherence with the comprehensive system component requirements of section 3(c) of this chapter, which may include leader evaluation system policies adopted by the board and procedures developed for administration of the system.

The State Board of Education will approve any locally designed system that it determines to be of sufficient quality on the basis of the strength of the evidence submitted. If the State Board finds the evidence submitted to be insufficient for approval, additional information may be requested for consideration.

(c) On or before November 1, 2019, and by the same date each year thereafter, the board of trustees shall provide the Department, on behalf of the State Board, with an assurance that the board has adopted and implemented, and is continuing to administer during the current school year, a leader evaluation system that is a state-defined system or an approved locally designed system and that meets all of the requirements for such a system as prescribed by section 3 of this chapter.

(d) Following any revision of the Wyoming district and school leader standards prescribed by section 4 of this chapter, the assurance required by paragraph (c) shall include an assurance that the district has modified its system as necessary to ensure continued alignment with any of the Wyoming district and school leader standards that are included in the board's leader evaluation system.

(e) Any board of trustees that elects to adopt a locally designed system after June 1, 2019, shall submit its system for State Board review and approval prior to adoption in

accordance with the requirements established by paragraphs (a)(2)(A) and (B) and paragraph (b) of this section.

Section 6. ~~Certified Personnel~~ Teacher Evaluation System Design and Documentation. ~~Approval Criteria.~~ ~~The evaluation systems for each of the major certified job categories shall be designed to measure the effectiveness with which certified personnel in those categories perform their roles. Criteria on which these positions are evaluated shall reflect the nature of these positions. The Department, on behalf of the State Board, shall review each evaluation system on the criteria identified below:~~

~~(a) Appropriate stakeholder involvement in the development of the certified personnel evaluation system;~~

~~(b) Clear performance criteria that are considered best practice and on which certified personnel are evaluated;~~

~~(c) Strength as a tool for facilitating professional growth and continuous improvement;~~

~~(d) Evidence the system is reliable and equitable;~~

~~(e) Whether the district includes evaluation instruments and processes that support the ability to generate the required documentation to make employment decisions;~~

~~(f) Effectiveness of evaluation procedures including how data will be collected to complete the summative evaluation. This may include, but is not limited to, analysis of observations of job performance, use of various types of data, and employee-produced artifacts;~~

~~(g) Including student performance growth data relevant to the nature of each certified personnel's position and indicating how it is used by the certified personnel to improve teaching and learning; and~~

~~(h) A description of the district's complete evaluation cycle that shall include frequency of evaluations for initial and continuing contract teachers and other certified personnel and may include cycles of clinical supervision, action research, intensive assistance, and any other cycles used by the district.~~

(a) Each board of trustees shall adopt, implement, and administer, subject to State Board approval as described in section 7, a comprehensive teacher evaluation system designed to measure the effectiveness with which teachers perform their roles. The comprehensive teacher evaluation system shall serve as a basis for:

(i) Improvement of instruction;

(ii) Enhancement of curriculum program implementation;

(iii) Individual teacher performance and professional growth; and

(iv) Determining the performance level of all teachers.

Such measures shall be used to determine unsatisfactory teacher performance that may lead to dismissal, suspension, and termination proceedings.

(b) Each district teacher evaluation system shall meet the following requirements:

(i) District adopted professional standards are considered best practice.

(ii) Teacher performance is evaluated using more than one source of evidence relevant to the nature of each teacher's position, in order to provide a more comprehensive and accurate assessment.

(iii) The district's professional standards and multiple sources of evidence as described in subsections (b)(i) and (b)(ii) above, as well as any other instruments and processes the district has developed, are used to determine the evaluation classification.

(iv) The classification system must include criteria by which a teacher is classified as effective.

(v) Teacher evaluations are carried out in accordance with the district's evaluation cycle for both initial and continuing contract teachers and in accordance with W.S. 21-3-110(a)(xvii) and 21-3-110(a)(xvii).

(vi) Stakeholders are involved in the development of the teacher evaluation system and any subsequent revision.

(vii) The district takes steps to ensure the system is reliable and equitable and is implemented with fidelity, including:

(A) There are procedures for the collection of data providing for, at a minimum, data security, privacy, and the appropriate use of all data;

(B) Data and other evidence are collect and analyzed; and

(C) Evaluators and those being evaluated are trained on the use of the teacher evaluation system and provided with guidance documents and training materials to support implementation and administration.

(viii) There are procedures for supporting professional learning, growth, and improvement in response to the performance evaluation of each teacher.

Section 7. ~~Submission of Certified Personnel~~ Teacher Evaluation Systems~~s~~ Submission, Review, and Approval.

~~(a) Each board of trustees shall submit a copy of its evaluation systems for certified personnel to the Department. Once filed with the Department, the evaluation system will stand unless it is changed or significantly amended, at which time the board of trustees shall resubmit the new or significantly amended system.~~

~~(b) Each board of trustees shall include in its submission the following documentation:~~

~~(i) A list of members of the committee that was used to develop and adopt the certified personnel evaluation system. The list contains appropriate stakeholder representation;~~

~~(ii) A list of performance criteria on which the district evaluates certified personnel. The district shall define the criteria sufficiently so that an outside reader will clearly understand each criterion. The district shall provide evidence that each criterion is research-based or reflects best practice;~~

~~(iii) A description of how the evaluation process is linked to individual and collective professional growth. The description must also include how and when the system provides feedback to each certified personnel member and provide opportunities to identify areas for improvement and suggestions for how improvement can occur;~~

~~(iv) Evidence that evaluators are trained on the evaluation process and trained to view criteria similarly so that certified personnel across the district are evaluated with consistency;~~

~~(v) A description of how the evaluation system collects data used in making employment decisions. The evaluation instruments and types and amount of data to be collected must be sufficient to provide the required documentation;~~

~~(vi) A list that details the types of data collected and how it will be collected in order to make decisions about the summative evaluations;~~

~~(vii) Identification of the types of student performance growth data, specific to each certified personnel's position used in the evaluation process. The summative evaluations will identify the purpose of reviewing student performance growth data, such as identification of a professional development goal, modifying instructional practice, or identifying groups of students that need remediation or enrichment; and~~

~~(viii) Differentiation in evaluations between initial-contract and continuing-contract teachers; the frequency of observations during evaluation cycles; any type of assistance or remediation that is provided; and any other requirements of the evaluation cycles used by the district, such as action research or portfolios.~~

(a) On or before July 1, 2020, each district shall either:

(i) Notify the Department of intent to implement or continue administration of a comprehensive teacher evaluation system that meets the requirements described in section 6, and submit documentation described in subsection (d) for review; or

(ii) Notify the Department of intent to redesign the district's teacher evaluation system to meet the comprehensive teacher evaluation system requirements described in section 6.

(b) On or before July 1, 2021, a district that elects to undertake a teacher evaluation system redesign pursuant to subsection (a)(ii), shall submit documentation described in subsection (d) for Department review and State Board approval.

(c) A district shall continue to administer its previously approved system until the school year immediately following receipt of approval by the State Board of the district's submission of documentation described in subsection (d). Unless otherwise indicated by the State Board, a system approved pursuant to subsection (e) is to be implemented in the school year immediately following approval.

(d) A district's teacher evaluation system submission must include the following, in addition to any information and data requested by the Department that is needed to clarify submission information:

(i) Professional standards on which the district evaluates teachers, described with specificity sufficient for a layperson to understand the district's expectations for teacher performance.

(ii) Evidence that each professional standard is research-based or reflects best practice.

(iii) A list or examples of evidence to be used for each professional standard.

(iv) A description of how the evaluation process is designed to support individual and collective professional growth and to identify areas for improvement.

(v) A description of the evaluation cycle, including information on the timing and frequency of observations, types of assistance or remediation provided.

(vi) A description of the classification system for identifying teachers whose performance meets the district's definition of effective teaching and those at other levels of performance.

(vii) A description of the training provided to evaluators and those being evaluated.

(viii) A list of the stakeholders involved in the development of the teacher evaluation system and any subsequent revisions, as well as a description of stakeholder involvement.

(ix) A description of the data and procedures the district uses to collect and analyze evidence to ensure that the system is reliable and equitable and is implemented and administered with fidelity.

(e) After the complete submission by any district of all of the documentation described in subsection (d), the Department shall conclude its review of the submission and the State Board shall make a determination regarding the extent to which the submission meets the comprehensive teacher evaluation system requirements established in section 6. The State Board will issue a decision that the teacher evaluation system has received:

(i) Full approval;

(ii) Conditional approval with conditions noted for remediation; or

(iii) Disapproval with deficiencies noted.

With any decision of conditional approval or disapproval, the State Board will inform the district of the timeline and any other requirements for remediation or resubmission.

(f) If, at any point, a district subsequently significantly amends its teacher evaluation system, the district shall then resubmit all of the documentation described in subsection (d) for approval by the State Board.

~~**Section 8. Certified Personnel Evaluation System Approval.** The State Board of Education shall approve or deny each district's certified personnel evaluation system based upon the previous stated criteria. Approval shall be at one of the following levels and any determination other than full approval shall be accompanied with feedback describing the conditions or deficiencies that the district shall address before reconsideration by the State Board of Education:~~

~~(a) Full approval;~~

~~(b) Conditional approval with conditions noted for remediation;~~

~~(c) Disapproval with deficiencies noted; and~~

~~(d) Non Compliance.~~

Section ~~9~~8. Technical Assistance. Technical assistance will be made available to school districts by the Department and other partners to help them develop and implement

evaluation systems that comply with the requirements of this chapter and to support districts with the ongoing evaluation system improvement.

Chapter 29

EVALUATION SYSTEMS FOR DISTRICT AND SCHOOL LEADERS AND TEACHERS

[In sections 2, 6, and 7 of this draft, red text is used for explanatory notes.]

Section 1. Authority. These rules and regulations are promulgated pursuant to Wyoming Statutes 21-2-304(b)(xv) and (xvi).

Section 2. Definitions.

(a) "Best practice" means practices that have produced positive, documented results in a similar situation and could be replicated. [Applicable to leader and teacher evaluation systems]

(b) "Classification system" means a system of classification by which information is provided regarding the professional practice of persons being evaluated as measured against professional standards. [Applicable to leader and teacher evaluation systems]

(c) "District leader" means a person employed as superintendent of schools by any district board of trustees or other district leader serving in a similar capacity, as determined by the local board of trustees. [Applicable to leader evaluation systems]

(d) "Evaluation cycle" means the timelines under which the various components of an evaluation process occurs. [Applicable to leader and teacher evaluation systems]

(e) "Formative feedback" means information communicated to a person being evaluated that is intended to modify thinking or behavior. [Applicable to leader evaluation systems]

(f) "Locally designed district and school leader evaluation system" means a locally designed district and school leader evaluation system comprising the standards and comprehensive system components described in sections 3 and 4 of this rule, which must be evaluated and approved by the State Board of Education, prior to adoption by a board of trustees. [Applicable to leader evaluation systems]

(g) "Multiple sources of evidence" means using more than one method or source of data to determine a person's level of performance in an area of practice or outcomes. [Applicable to leader and teacher evaluation systems]

(h) "Performance level descriptor" means a description of the classification used to summarize the knowledge and skills associated with each performance level used in a classification system. [Applicable to teacher evaluation systems]

(i) "Professional practice" means the knowledge and skills expected of persons being evaluated, as defined in standards and associated benchmarks. [Applicable to leader and teacher evaluation systems]

(j) "Professional standards" means the standards that define the knowledge, skills, and professionalism expected of persons who will be evaluated. [Applicable to leader and teacher evaluation systems]

(k) "Research-based" means basic or applied research that:

(i) Has been published in a peer-reviewed journal or approved by a panel of experts;

(ii) Has been replicated by other researchers; and

(iii) Has a consensus in the research community that the study's findings are supported by a critical mass of additional studies. [Applicable to teacher evaluation systems]

(l) "School leader" means a school principal or other school leader serving in a similar capacity, as determined by the local board of trustees. [Applicable to leader evaluation systems]

(m) "Significantly amended" means a change to an evaluation system that replaces an existing system or materially changes any required component of an existing system. [Applicable to leader and teacher evaluation systems]

(n) "Stakeholder" means an individual who is or will be directly impacted by the evaluation system. [Applicable to leader and teacher evaluation systems]

(o) "State-defined district and school leader evaluation system" means a district and school leader evaluation system comprising the standards and comprehensive system components described in sections 3 and 4 of this rule. [Applicable to leader evaluation systems]

(p) "Student performance growth data" means data that shows outcomes for students, including student achievement test scores and other academic and non-academic measures of student outcomes. [Applicable to teacher evaluation systems]

(q) "Teacher" means a person who is licensed by the Wyoming Professional Teaching Standards Board (PTSB) and is responsible for providing instruction to students. [Applicable to teacher evaluation systems]

(r) "Teacher evaluation system" means a standard structure and set of procedures by which a school district initiates, designs, implements, and uses evaluations of its teachers for the purposes of professional growth and continued employment. [Applicable to teacher evaluation systems]

Section 3. District and School Leader Evaluation System Design.

(a) Every board of trustees shall adopt policies and procedures for the administration of a district and school leader evaluation system designed and implemented in accordance with this chapter. Such policies shall define the purpose and goals of the system.

(b) A district and school leader evaluation system, hereinafter referred to as a leader evaluation system, shall be one of the following:

(i) A system based on all seven (7) of the Wyoming standards for district and school leaders or standard 1 and any five (5) of the remaining six (6) standards so long as a majority of the benchmarks of each such standard are represented, which, for purposes of this chapter, is referred to as a state-defined district and school leader evaluation system or a state-defined system; or

(ii) A system based on professional standards prescribed by the board of trustees, so long as standard 1 of the Wyoming standards for district and school leaders (prescribed in section 4) is included in the board's standard, which, for purposes of this chapter, is referred to as a locally designed district and school leader evaluation system, a locally designed system, or an alternative leader evaluation system in accordance with W.S. 21-2-304(b)(xvi).

(c) Any leader evaluation system adopted by a board of trustees, whether a state-defined system or locally designed system, shall be a comprehensive system in that, in addition to being based on professional standards, as prescribed in paragraph (b) of this section, the system's design incorporates the following comprehensive system components:

(i) **Multiple Sources of Evidence -** The leader evaluation system shall utilize multiple sources of evidence.

(A) Leader performance on each standard shall be evaluated using more than one source of evidence in order to provide a more comprehensive and accurate assessment.

(ii) **Evaluation Cycle -** The leader evaluation system shall be administered in accordance with an evaluation cycle which provides for, at a minimum:

(A) Each leader shall be evaluated at least annually; however, not every standard is required to be used for any leader's evaluation in a given year, except that standard 1 shall be used with every evaluation and all of the standards adopted by the board of trustees must be used for each leader's evaluations at least once during every five (5) year period;

(B) Each evaluation shall be carried out on a timeline established by the board of trustees, in consultation with the district superintendent, to ensure that evaluators

and any person being evaluated have sufficient time to consider and complete all aspects of the evaluation cycle;

(C) The board of trustees shall evaluate any person employed as superintendent of schools in accordance with the district's evaluation policies and procedures;

(D) The district superintendent shall ensure that the evaluation of all other district leaders, principals, and other school leaders is carried out in accordance with the district's evaluation policies and procedures;

(E) Each evaluation shall be carried out in accordance with a process clearly defined by the district and which includes collaborative goal-setting, self-analysis, and information and data analysis to identify areas for professional growth; formative feedback; and a planning process during which appropriate growth opportunities and supports are identified; and

(F) Each evaluation shall conclude with a written summary of annual evaluation findings and recommendations for improvement.

(iii) **Classification System -** The leader evaluation system shall include a classification system designed so that there is a performance level descriptor for each professional standard that is the focus of the evaluation.

(iv) **Training and Guidance Documents -** The leader evaluation system shall include training on the use of the system, as well as guidance documents and training materials to support implementation and administration.

(A) Every employee of the district who is an evaluator or a person being evaluated shall be trained on using the system and any related tools and receive all guidance documents; and

(B) Training and guidance documents shall be made available to all members of the board of trustees and other employees.

(v) **Quality Controls -** The leader evaluation system shall include quality controls to ensure that the system is implemented and administered with fidelity.

(A) Each district shall establish procedures for the collection and appropriate use of all data; and

(B) Each district shall establish a timeline and procedures for evaluating the district's implementation of the leader evaluation system which includes a review of training, guidance documents, and other tools.

(vi) **Supports** - The leader evaluation system shall include supports for persons being evaluated to foster professional learning and growth, and to aid in building capacity.

(A) Every district shall establish a timeline and procedures for supporting professional learning, growth, and improvement in response to the performance of each leader.

Section 4. Wyoming Standards for District and School Leaders.

(a) Subject to the exceptions provided for in this chapter, every board of trustees shall adopt the following professional standards and associated benchmarks for the annual evaluation of district and school leaders pursuant to W.S. 21-3-110(a)(xxx).

(i) **Standard 1** – Clear and consistent focus on maximizing the learning and growth of all students:

(A) In collaboration with others and in alignment with district strategic priorities, use appropriate data to establish rigorous, concrete goals in the context of student achievement and instructional programming.

(B) Ensure the alignment of the assessments to district identified prioritized standards used to track student growth and achievement over time.

(C) Use multiple data measures appropriately within the technical limitations to monitor students' progress toward learning objectives to improve instruction.

(D) Ensure a system of accountability for students' academic success and career readiness.

(E) Develop and maintain longitudinal data and communication systems to deliver actionable information for district, school, and classroom improvement.

(F) Lead the implementation of a high-quality student support and assessment system.

(G) Ensure high expectations for achievement, growth, and equity in opportunities for all students.

(H) Work with staff to evaluate and use data to improve student achievement.

(ii) **Standard 2** – Instructional and assessment leadership:

(A) Focus on student learning by leading the implementation of a rigorous, relevant, and prioritized curriculum and assessment system.

(B) Work collaboratively to implement a common instructional framework that aligns curriculum with teaching, assessment, and learning and guides teacher conversation, practice, observation, evaluation, and feedback.

(C) Recognize a full range of pedagogy and monitor the impact of instruction.

(D) Ensure that there is differentiation, personalization, intellectual stimulation, collaboration, authenticity, and recognition of student strengths in instructional practice.

(E) Promote the effective uses of technology to support teaching and learning.

(F) Ensure the use of formative assessment data to inform instruction.

(iii) **Standard 3 –** Developing and supporting a learning organization:

(A) Effectively lead the implementation of a high-quality educator support and evaluation system that advances the professional growth of their staff.

(B) Have a solid understanding of adult learning and ensure that all adults have the knowledge, skills, and dispositions necessary to promote student success.

(C) Create and/or support collaborative learning organizations to foster improvements in teacher practices and student learning.

(D) Guide implementation of improvement initiatives and provide the time and support for these initiatives to achieve desired outcomes.

(E) Lead the evaluation of new and existing programs as part of a continuous improvement process.

(F) Cultivate the ability of teachers and other members of the community to become leaders by providing assistance and leadership opportunities.

(G) Facilitate high functioning groups of faculty and staff.

(iv) **Standard 4 –** Vision, mission, and culture:

(A) Use relevant data and collaborate with members of the school, district, and community to create and endorse a vision for the achievement of every student.

(B) Articulate, advocate, and cultivate core values that define the school’s and district’s culture.

(C) Create and maintain a positive climate with a trusting, safe environment that promotes effective student learning and adult practice.

(D) Collaboratively evaluate the mission and vision, modifying them based on changing intentions, opportunities, demands, and positions of students, staff, and community.

(v) **Standard 5 –** Efficient and effective management:

(A) Recruit, hire, support, develop, and retain effective teachers and other professional staff and form them into an effective team.

(B) Facilitate the adaptation and monitoring of operational systems and processes to ensure a high-performing organization that includes clear expectations, structures, rules, and procedures for effective and efficient operations focused on high-quality teaching and learning.

(C) Limit the number of initiatives and ensure that whatever programs and strategies are implemented in their school and district are supported by the best research available and are aligned to school and district plans.

(D) Use appropriate strategies to guide their organizations through change (e.g., first- and second-order change strategies).

(E) Support the learning of all students by appropriating and regulating monetary, human and material supplies, time, equipment, technology, and alliances with school and district goals.

(F) Ensure the expectation that students, staff, and the school and district operate within the guidelines of federal, state, and local laws, policies, regulations, and statutory requirements.

(vi) **Standard 6 –** Ethics and professionalism:

(A) Lead with integrity.

(B) Establish a culture in which ethical behavior is expected and practiced by all faculty, staff, students, and volunteers.

(C) Contribute to district and state initiatives.

(D) Evaluate the potential ethical, legal, and precedent-setting consequences of decision-making.

(vii) **Standard 7 –** Communication and community engagement:

(A) Advocate and effectively communicate with a range of stakeholders, from students and teachers to parents and members of the larger community, including media, to advance the organization's vision and mission.

(B) Implement and maintain policies to establish working relationships with the community and media to garner support and build consensus for school and district goals.

(C) Use community engagement efforts to identify and share successes and to address challenges for the benefit of students.

(D) Are easily approached, available, and inviting to students, staff, and community.

(E) Are intentional about considering improvement ideas from outside the school system.

Section 5. District and School Leader Evaluation System Implementation and Administration.

(a) On or before February 1, 2019, the board of trustees shall notify the State Board of Education of its election to implement and administer either a state-defined district and school leader evaluation system or a locally designed district and school leader evaluation system for the evaluation of district and school leaders during the 2018-2019 school year as required by W.S. 21-3-110(a)(xxx).

(i) With such notice, a board of trustees that elects to adopt a state-defined system shall provide an assurance that district and school leader evaluations will be based on standards that meet the requirements of section 3(b)(i) of this chapter.

(ii) A board of trustees that elects to adopt a locally designed system shall receive conditional approval from the State Board prior to adoption by submitting to the Department, on behalf of the State Board, the following:

(A) The board's leader professional standards and associated benchmarks, developed in accordance with section 3(b)(ii) of this Chapter, which, upon approval shall be deemed performance standards identified or established by the State Board of Education pursuant to W.S. 21-2-304(b)(xvi);

(B) A description of the extent to which those standards are the same as or similar to the standards that are part of the state-defined system; and

(C) An assurance that the board will submit additional information on its leader evaluation system for full approval, as described in paragraph (b) of this section, by June 1, 2019.

(b) On or before June 1, 2019, a board that is implementing a locally designed system that has been conditionally approved by the State Board, shall submit the following for State Board review and full approval prior to administration during the 2019-2020 school year and subsequent school years:

(i) The purpose and goals of the evaluation system;

(ii) Evidence that the district's standards reflect best practice; and

(iii) Evidence of system quality as demonstrated by adherence with the comprehensive system component requirements of section 3(c) of this chapter, which may include leader evaluation system policies adopted by the board and procedures developed for administration of the system.

The State Board of Education will approve any locally designed system that it determines to be of sufficient quality on the basis of the strength of the evidence submitted. If the State Board finds the evidence submitted to be insufficient for approval, additional information may be requested for consideration.

(c) On or before November 1, 2019, and by the same date each year thereafter, the board of trustees shall provide the Department, on behalf of the State Board, with an assurance that the board has adopted and implemented, and is continuing to administer during the current school year, a leader evaluation system that is a state-defined system or an approved locally designed system and that meets all of the requirements for such a system as prescribed by section 3 of this chapter.

(d) Following any revision of the Wyoming district and school leader standards prescribed by section 4 of this chapter, the assurance required by paragraph (c) shall include an assurance that the district has modified its system as necessary to ensure continued alignment with any of the Wyoming district and school leader standards that are included in the board's leader evaluation system.

(e) Any board of trustees that elects to adopt a locally designed system after June 1, 2019, shall submit its system for State Board review and approval prior to adoption in accordance with the requirements established by paragraphs (a)(2)(A) and (B) and paragraph (b) of this section.

Section 6. Teacher Evaluation System Design and Documentation.

[Recent amendments to *W.S. 21-2-304(b)(xv)* require the state board to, in consultation with local school districts, establish general criteria for school district teacher performance evaluation systems that provide school districts flexibility in designing teacher evaluations to improve classroom instruction. Such systems are to be "comprehensive teacher performance evaluation systems" and submitted to the state board for approval, as is described in Section 7. This section

establishes design parameters (many of which are already required under the *current Chapter 29*), organized under seven comprehensive system components.]

(a) Each board of trustees shall adopt, implement, and administer, subject to State Board approval as described in section 7, a comprehensive teacher evaluation system designed to measure the effectiveness with which teachers perform their roles. The comprehensive teacher evaluation system shall serve as a basis for:

(i) Improvement of instruction;

(ii) Enhancement of curriculum program implementation;

(iii) Individual teacher performance and professional growth; and

(iv) Determining the performance level of all teachers.

Such measures shall be used to determine unsatisfactory teacher performance that may lead to dismissal, suspension, and termination proceedings.

[Pursuant to *W.S. 21-2-304(b)(xv)*, systems are to be designed to improve classroom instruction. Pursuant to *W.S. 21-3-110(a)(xvii)*, evaluations are to be carried out at least annually for all teachers except for continuing contract teachers who have been classified as effective for two consecutive years. *(W.S. 21-3-110(a)(xviii))* The evaluations shall serve as a basis for improvement of instruction, enhancement of curriculum program implementation, measurement of both individual teacher performance and professional growth and development, etc. *(W.S. 21-3-110(a)(xix))* Under the *current Chapter 29*, certified personnel evaluation systems must be designed to measure the effectiveness of those being evaluated. *(Ch. 29, Section 6 Introduction)*]

(b) Each district teacher evaluation system shall meet the following requirements:

[Pursuant to *W.S. 21-2-304(b)(xv*) the state board is to establish general criteria for school district teacher performance evaluation systems that provide school districts flexibility in designing teacher evaluations to improve classroom instruction. Such systems are to be "comprehensive teacher performance evaluation systems". The seven comprehensive system components – (i) through (xvii) below – are closely aligned with the comprehensive system components that are required for school and district leader evaluation systems.]

(i) District adopted professional standards are considered best practice.

[Pursuant to *W.S. 21-3-110(a) ((xvii) for initial contract teachers and (xviii) for continuing contract teachers)*, the performance of all teachers is to be evaluated against the school district's standards for performance, as submitted and approved by the state board. Pursuant to *W.S. 21-2-304(b)(xv)* school districts have flexibility in designing a teacher evaluation system that includes professional standards.]

(ii) Teacher performance is evaluated using more than one source of evidence relevant to the nature of each teacher's position, in order to provide a more comprehensive and accurate assessment.

[Pursuant to *W.S. 21-2-304(b)(xv)* school districts have flexibility in designing a teacher evaluation system under which teacher performance is evaluated using multiple sources of evidence. *Current Chapter 29* requires the use of student performance growth data. *(Ch. 29 Section 6(g)*]

(iii) The district's professional standards and multiple sources of evidence as described in subsections (b)(i) and (b)(ii) above, as well as any other instruments and processes the district has developed, are used to determine the evaluation classification.

(iv) The classification system must include criteria by which a teacher is classified as effective.

[Pursuant to *W.S. 21-2-304(b)(xv)* school districts have flexibility in designing a classification system so long as it enables the district to distinguish between teachers classified as effective and those that are not, pursuant to *W.S. 21-3-110(a)(xviii)*.]

(v) Teacher evaluations are carried out in accordance with the district's evaluation cycle for both initial and continuing contract teachers and in accordance with W.S. 21-3-110(a)(xvii) and 21-3-110(a)(xvii).

[Pursuant to *W.S. 21-2-304(b)(xv)* school districts have flexibility in designing the evaluation cycle so long as the cycle enables the district to meet the statutory requirements regarding the frequency of evaluations. *Current Chapter 29* requires a district to submit a description of the district's complete evaluation cycle as one of the criteria for approval. *(Ch. 29, Section 6(h)*]

(vi) Stakeholders are involved in the development of the teacher evaluation system and any subsequent revision.

(vii) The district takes steps to ensure the system is reliable and equitable and is implemented with fidelity, including:

(A) There are procedures for the collection of data providing for, at a minimum, data security, privacy, and the appropriate use of all data;

(B) Data and other evidence are collect and analyzed; and

(C) Evaluators and those being evaluated are trained on the use of the teacher evaluation system and provided with guidance documents and training materials to support implementation and administration.

[Pursuant to *W.S. 21-2-304(b)(xv)* school districts have flexibility in designing a system with appropriate quality controls, subject to the requirements described above. *Current Chapter 29*

requires districts to submit a list of members of the committee that was used to develop and adopt the evaluation system *(Ch. 29, Section 7(b)(i))*; a list that details the types of data collected and how it will be collected *(Ch. 29, Section 7(b)(vi))*; and a description of how the evaluation system collects data used in making employment decisions. *(Ch. 29, Section 7(b)(v))*]

[Pursuant to *W.S. 21-2-304(b)(xv)* school districts have flexibility in designing a system that includes appropriate training and guidance which, in part, is focused on enhancing rater calibration. *Current Chapter 29* requires districts to submit evidence that evaluators are trained on the evaluation process and trained to view criteria similarly so that certified personnel across the district are evaluated with consistency. *(Ch. 29, Section 7(b)(iv)*]

(viii) There are procedures for supporting professional learning, growth, and improvement in response to the performance evaluation of each teacher.

[Pursuant to *W.S. 21-2-304(b)(xv)* school districts have flexibility designing a system that includes appropriate supports for teachers are responsive to the evaluation. *Current Chapter 29* requires districts to submit a description of how the evaluation process is linked to individual and collective professional growth, along with a description of how and when the system provides feedback and opportunities to identify areas for improvement and suggestions for how improvement can occur. *(Ch. 29, Section 7(b)(iii))*]

Section 7. Teacher Evaluation System Submission, Review, and Approval.

(a) On or before July 1, 2020, each district shall either:

(i) Notify the Department of intent to implement or continue administration of a comprehensive teacher evaluation system that meets the requirements described in section 6, and submit documentation described in subsection (d) for review; or

(ii) Notify the Department of intent to redesign the district's teacher evaluation system to meet the comprehensive teacher evaluation system requirements described in section 6.

(b) On or before July 1, 2021, a district that elects to undertake a teacher evaluation system redesign pursuant to subsection (a)(ii), shall submit documentation described in subsection (d) for Department review and State Board approval.

(c) A district shall continue to administer its previously approved system until the school year immediately following receipt of approval by the State Board of the district's submission of documentation described in subsection (d). Unless otherwise indicated by the State Board, a system approved pursuant to subsection (e) is to be implemented in the school year immediately following approval.

(d) A district's teacher evaluation system submission must include the following, in addition to any information and data requested by the Department that is needed to clarify submission information:

(i) Professional standards on which the district evaluates teachers, described with specificity sufficient for a layperson to understand the district's expectations for teacher performance. [*Current Chapter 29* requires districts to submit a list of performance criteria on which the district evaluates certified personnel, defined sufficiently so that an outside reader will clearly understand each criterion. *(Ch. 29, Section 7(b)(ii))*]

(ii) Evidence that each professional standard is research-based or reflects best practice. [*Current Chapter 29* requires districts to submit evidence that each criterion is research-based or reflects best practice. *(Ch. 29, Section 7(b)(ii))*]

(iii) A list or examples of evidence to be used for each professional standard. [*Current Chapter 29* requires districts to submit a list that details the types of data collected and how it will be collected in order to make decisions about the summative evaluations. *(Ch. 29, Section 7(b)(vi))*]

(iv) A description of how the evaluation process is designed to support individual and collective professional growth and to identify areas for improvement. [*Current Chapter 29* requires districts to submit a description of how the evaluation processes is linked to individual and collective professional growth. The description must also include how and when the system provides feedback and provides opportunities to identify areas for improvement and suggestions for how improvement can occur. *(Ch. 29, Section 7(b)(iii))*]

(v) A description of the evaluation cycle, including information on the timing and frequency of observations, types of assistance or remediation provided. [*Current Chapter 29* includes among state board approval criteria the district's description of a complete evaluation cycle that includes frequency of evaluations and other requirements of the evaluation cycle such as action research or portfolios. *(Ch. 29, Section 6(h))*]

(vi) A description of the classification system for identifying teachers whose performance meets the district's definition of effective teaching and those at other levels of performance. [In order to comply with *W.S. 21-3-110(a)(xviii),* districts' systems must lead to the identification of effective teacher performance.]

(vii) A description of the training provided to evaluators and those being evaluated. [*Current Chapter 29* requires districts to submit evidence that evaluators are trained on the evaluation process and trained to view criteria similarly so that certified personnel across the district are evaluated with consistency. *(Ch. 29, Section 7(b)(iv))*]

(viii) A list of the stakeholders involved in the development of the teacher evaluation system and any subsequent revisions, as well as a description of stakeholder involvement. [*Current Chapter 29* requires districts to submit a list of members of the committee that was used to develop and adopt the certified personnel evaluation system. The list must contain appropriate stakeholder representation. *(Ch. 29, Section 7(b)(i))*]

(ix) A description of the data and procedures the district uses to collect and analyze evidence to ensure that the system is reliable and equitable and is implemented and administered with fidelity. [*Current Chapter 29* requires districts to submit a description of how the evaluation system collects data used in making employment decisions and information on how data will be collected in order to make decisions about summative evaluations. *(Ch. 29, Section 7(b)(v) and (vi))* State Board approval criteria require evidence that the system is reliable and equitable. *(Ch. 29, Section 6(d))*]

(e) After the complete submission by any district of all of the documentation described in subsection (d), the Department shall conclude its review of the submission and the State Board shall make a determination regarding the extent to which the submission meets the comprehensive teacher evaluation system requirements established in section 6. The State Board will issue a decision that the teacher evaluation system has received:

(i) Full approval;

(ii) Conditional approval with conditions noted for remediation; or

(iii) Disapproval with deficiencies noted.

With any decision of conditional approval or disapproval, the State Board will inform the district of the timeline and any other requirements for remediation or resubmission.

(f) If, at any point, a district subsequently significantly amends its teacher evaluation system, the district shall then resubmit all of the documentation described in subsection (d) for approval by the State Board.

Section 8. Technical Assistance. Technical assistance will be made available to school districts by the Department and other partners to help them develop and implement evaluation systems that comply with the requirements of this chapter and to support districts with the ongoing evaluation system improvement.

Chapter 29 Statement of Reasons - Emergency Rules

The State Board of Education (SBE) is required by W.S. § 21-2-304(b)(xv) to promulgate teacher evaluation system rules and regulations. The SBE requests adoption of the emergency rules for Chapter 29 so school districts implementing teacher evaluation systems will be provided with clear guidelines, requirements, and processes along with a clear timeline detailing when approval and implementation are required. The SBE will also be moving forward with promulgating a set of identical regular rules at the same time to begin the process of collecting public comment on the chapter 29 Rules revisions.

During the 2019 legislative session, HB22/HEA 84 passed making changes to W.S. § 21-2-304(b)(xv) to the teacher evaluation systems. The SBE has a requirement to promulgate rules and regulations for implementation and administration of a comprehensive performance evaluation system for teachers. The new statutes will go into effect July 1, 2019. The SBE is promulgating rules and regulations for the submission and approval of comprehensive school district teacher performance evaluation systems. The SBE will also establish general criteria for school district teacher performance evaluation systems that provide school districts flexibility in designing teacher evaluations to improve classroom instruction.

There are two parts of Chapter 29, one focuses on leader evaluation systems and one for teacher evaluation systems. The SBE will only need to approve teacher evaluation systems for teachers who provide direct instruction to students. The portion of Chapter 29 Rules focusing on teacher evaluations has been split between sections. The first section, Section 6, describes what must be included in the evaluation system to be considered a comprehensive system. These system components align with the comprehensive evaluation system found in the leader evaluation system portion of Chapter 29. Section 6 also provides the general criteria for the school district teacher evaluation systems. These criteria were the same criteria currently defined in Chapter 29. Only the requirement to use student growth data measures has been removed.

Section 7 of Chapter 29 details the submission and approval requirements for districts to have their teacher evaluations systems approved by the SBE. A key part of this section provides a timeline for districts to submit their evaluation systems to the SBE. A phased-in timeline allows districts to assess whether their current teacher evaluation system meets the new statutory requirements. It also provides an additional year for districts who want to move to a new system as well as the ability to pilot the new system before asking the SBE for approval. To provide districts with this flexibility, it is critical for districts to be able to effectively meet all of the teacher evaluation system statutory requirements

Only minor changes have been made to the sections related to leader evaluation systems. Chapter 29 made references to W.S. § 21-3-110(b), which repealed in the 2019 legislative session. All references to this statute have been removed. Also, the references to a rating system have been replaced with the terminology “classification system.”

Chapter 29 Statement of Reasons - Regular Rules

The State Board of Education (SBE) is required by W.S. § 21-2-304(b)(xv) to promulgate teacher evaluation system rules and regulations. The SBE requests adoption of the regular rules for Chapter 29 to provide districts provide districts with information about submission and approval of comprehensive teacher evaluation systems.

During the 2019 legislative session, SF22/SEA 84 passed making changes to W.S. § 21-2-304(b)(xv) to the teacher evaluation systems. The SBE has a requirement to promulgate rules and regulations for implementation and administration of a comprehensive performance evaluation system for teachers. The new statutes will go into effect July 1, 2019. The SBE is promulgating rules and regulations for the submission and approval of comprehensive school district teacher performance evaluation systems. The SBE will also establish general criteria for school district teacher performance evaluation systems that provide school districts flexibility in designing teacher evaluations to improve classroom instruction.

There are two parts of Chapter 29, one focuses on leader evaluation systems and one for teacher evaluation systems. The SBE will only need to approve teacher evaluation systems for teachers who provide direct instruction to students. The portion of Chapter 29 Rules focusing on teacher evaluations has been split between sections. The first section, Section 6, describes what must be included in the evaluation system to be considered a comprehensive system. These system components align with the comprehensive evaluation system found in the leader evaluation system portion of Chapter 29. Section 6 also provides the general criteria for the school district teacher evaluation systems. These criteria were the same criteria currently defined in Chapter 29. Only the requirement to use student growth data measures has been removed.

Section 7 of Chapter 29 details the submission and approval requirements for districts to have their teacher evaluations systems approved by the SBE. A key part of this section provides a timeline for districts to submit their evaluation systems to the SBE. A phased-in timeline allows districts to assess whether their current teacher evaluation system meets the new statutory requirements. It also provides an additional year for districts who want to move to a new system as well as the ability to pilot the new system before asking the SBE for approval. To provide districts with this flexibility, it is critical for districts to be able to effectively meet all of the teacher evaluation system statutory requirements

Only minor changes have been made to the sections related to leader evaluation systems. Chapter 29 made references to W.S. § 21-3-110(b), which repealed in the 2019 legislative session. All references to this statute have been removed. Also, the references to a rating system have been replaced with the terminology “classification system.”

CREATING OPPORTUNITIES FOR STUDENTS TO KEEP WYOMING STRONG

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WYOMING DEPARTMENT OF EDUCATION

Memorandum

To: State Board of Education

From: Julie Magee, Director of Accountability

Date: April 16, 2019

Subject: SBE Rule Promulgation Timeline

Meeting Date: April 25, 2019

Item Type: Informational

The State Board of Education (SBE) is tasked with taking action on the following education rules:

- Chapter 3: Contested Case Proceedings
- Chapter 6: Accreditation
- Chapter 10: State Standards
- Chapter 21: Alternative Schedules
- Chapter 22: School Day
- Chapter 29: Teacher & Leader Evaluation System
- Chapter 31: Graduation Requirements
- New Chapter: Wyoming Accountability

During the April meeting, the SBE will review a proposed timeline for promulgating these chapters, as needed, between April 2019 and May 2020.

Statutory Reference(s):

- W.S. 21-2-304

	Apr 2019	May 2019	Jun 2019	Jul 2019	Aug 2019	Sept 2019	Oct 2019	Nov 2019	Dec 2019	Jan 2020	Feb 2020	Mar 2020	Apr 2020	May 2020
Chapter 3 (2016): Contested Case Proceedings	Draft Rules	WDE presents rules to SBE	SBE takes action to promulgate	Gov 10-day review 45-day public comment		SBE takes action to adopt	Gov 75-day review			Implemented	Implemented	Implemented	Implemented	Implemented
Chapter 3 (2016): Contested Case Proceedings (ER)	Draft Rules	WDE presents rules to SBE	SBE takes action to adopt	Gov review and approval			Implemented	Implemented	Implemented	Implemented	Implemented	Implemented	Implemented	Implemented
Chapter 6 (2018): State Accreditation	Implemented	Implemented	Implemented	Implemented	Implemented	Implemented	Implemented	Implemented	Implemented	Implemented	Implemented	Implemented	Implemented	Implemented
Chapter 10 (2018): State Standards	SBE takes action to promulgate	Gov 10-day review 45-day public comment		SBE takes action to adopt		Gov 75-day review			Implemented	Implemented	Implemented	Implemented	Implemented	Implemented
Chapter 21 (1991): Alternative Schedules			Draft Rules	Draft Rules	Draft Rules	WDE presents rules to SBE	SBE takes action to promulgate	Gov 10-day review 45-day public comment		SBE takes action to adopt	Gov 75-day review			Implemented
Chapter 22 (1994): School Day			Draft Rules	Draft Rules	Draft Rules	WDE presents rules to SBE	SBE takes action to promulgate	Gov 10-day review 45-day public comment		SBE takes action to adopt	Gov 75-day review			Implemented
Chapter 29 (2018): Teacher & Leader Evaluation System (ER)	WDE presents rules to SBE	SBE takes action to adopt	Gov review and approval			Implemented	Implemented	Implemented	Implemented	Implemented	Implemented	Implemented	Implemented	Implemented
Chapter 29 (2018): Teacher & Leader Evaluation System	WDE presents rules to SBE	SBE takes action to promulgate	Gov 10-day review 45-day public comment		SBE takes action to adopt	Gov 75-day review			Implemented	Implemented	Implemented	Implemented	Implemented	Implemented
Chapter 31 (2018): Wyoming Graduation Requirements	Implemented	Implemented	Implemented	Implemented	Implemented	Implemented	Implemented	Implemented	Implemented	Implemented	Implemented	Implemented	Implemented	Implemented
NEW CHAPTER: WY Accountability		Draft Rules	Draft Rules	Draft Rules	Draft Rules	WDE presents rules to SBE	SBE takes action to promulgate	Gov 10-day review 45-day public comment		SBE takes action to adopt	Gov 75-day review			Implemented

Rule Promulgation Timeline	
Gov Review - Permission to Proceed	10 business days
Public Comment	45-60 days
Board Vote to Adopt	w/in 30 days
Gov Review - Sign into law	75 days

CREATING OPPORTUNITIES FOR STUDENTS TO KEEP WYOMING STRONG

JILLIAN BALOW
Superintendent of Public Instruction

DICKY SHANOR
Chief of Staff

SHELLEY HAMEL
Chief Academic Officer

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Chief Policy Officer

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WYOMING DEPARTMENT OF EDUCATION

MEMORANDUM

To: State Board of Education
From: Laurel Ballard, Supervisor, Student and Teacher Resources Team
Date: April 16, 2019
Subject: Microsoft Grant for SCRIPT Program Training

Meeting Date: April 25, 2019

Item Type: Action: ____ Informational: __X__

Background

During the 2018 legislative session, Senate File 29/Enrolled Act added computer science and computational thinking to the common core of knowledge and skills. With the opportunity to visit all school districts, the WDE has able to find trends in concerns and supports needed by school districts. It became apparent school districts were overwhelmed with the requirement to add computer science education into their current education system. Very few school districts had begun developing a plan for how to implement computer science. They were narrowly focused on three areas: funding school districts believe they need to implement, teacher certification, and computer science standards.

Supporting School Districts

It became clear many school districts are missing a comprehensive plan for how to implement a high quality computer science education system within their district. As the State Board of Education (SBE) Chair Wilcox stated in an interview with the Cowboy State Daily on April 12, 2019, “No one is opposed to it (computer science standards), not the board or educators,” he said. “They are opposed to not having plans (in place) to do it.”

The Microsoft grant will assist school districts with doing exactly that. They will be develop a vision of how computer science education will fit within the vision school districts have already developed, and then develop a strategic plan for how they will move towards full implementation of the computer science education requirements.

Training Plan

The grant has funded three staff from the WDE and Western Wyoming Community College to provide the training. Additionally, four staff from the WDE and University of

Wyoming were trained as facilitators. There is space and funding for at least 30 school districts to attend the trainings. The grant will pay for all costs associated with delivering the training. The grant will cover costs for substitutes for two teachers to attend the initial two-day training. If the training occurs over the summer, the teachers will be paid their daily contract rate.

Districts will bring a team of at least four members but can bring up to six. Districts participants must include a district leader and school leader, and media/tech facilitators and teachers teaching computer science are highly encouraged to be on the team.

The training will occur over a year, starting with a two-day SCRIPT workshop. During the workshop, school district or charter school teams will be led through a series of self-assessment and goalsetting activities to develop a computer science education vision and roadmap on how to get there. Three months after the initial training, WDE staff will visit participating school districts to discuss plan implementation progress and provide support. Six months after the initial training, districts will come together as a group to report on their successes, challenges, and update/revise plans to better achieve goals. After one year, districts will come back together to plan for the second year of moving toward full implementation of computer science in all grades. Districts are required to apply to attend.

The training will occur in five locations.

Casper: May 14 & 15, 2019, Oct. 15, 2019 and May 20, 2020

Rock Springs: June 4 & 5, 2019, Nov. 14, 2019, and June 4, 2020

Cheyenne: June 11 & 12, 2019, Nov. 19, 2019, and June 11, 2020

Worland: Aug. 5 & 6, 2019, Jan. 7, 2020, and Aug. 6, 2020

Gillette: Sept. 24 & 25, 2019, Feb. 25, 2020, and Sept. 24, 2020

WYOMING
DEPARTMENT OF EDUCATION

SCRIPT Training

SCHOOL CSforALL RESOURCE AND IMPLEMENTATION PLANNING TOOL

STATE BOARD OF EDUCATION MEETING

APRIL 25, 2019

WYOMING
DEPARTMENT OF EDUCATION

Thank You

CSforAll - Designing the SCRIPT Program

Microsoft - Providing grant funds to assist both the WDE and districts to effectively implement high quality computer science education programs

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Lessons Learned

- Ground up planning for brand new content area
- Districts appeared overwhelmed
- Lack of clarity of what computer science is
- How computer science fit within their vision for education
- Teacher certification and professional development
- Districts were working in silos

Model for Managing Complex Change

Vision	Skills	Incentives	Resources	Action Plan	=	Success
Vision	Skills	Incentives	Resources	Missing	=	False Starts
Vision	Skills	Incentives	Missing	Action Plan	=	Frustration
Vision	Skills	Missing	Resources	Action Plan	=	Resistance
Vision	Missing	Incentives	Resources	Action Plan	=	Anxiety
Missing	Skills	Incentives	Resources	Action Plan	=	Confusion

Adapted from Knoster, T. (1991) Presentation in TASH Conference, Washington, D.C. Adapted by Knoster from Enterprise Group, Ltd.

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Training Outcomes

- Understand what computer science is
- Create an understanding of how computer science fits in district's vision of education
- Strategic plan with goal outcomes for 3 months, 6 months, and 1 year

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Training Structure

- Initial 2-day training:
  - Develop better understanding of computer science
  - Focus on how computer science education fits into the district's vision of education
  - Review the SCRIPT Rubric
  - Develop 3, 6, 12 month goals based on rubric

- 3-Month follow up visits to districts

- 6-Month training - Review progress and adjust plan

- 12-Month Training - Review progress and plan for next year

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Training Dates

Casper:
May 14 & 15, 2019
Oct. 15, 2019
May 20, 2020

Cheyenne:
June 11 & 12, 2019
Nov. 19, 2019
June 11, 2020

Gillette:
Sept. 24 & 25, 2019
Feb. 25, 2020
Sept. 24, 2020

Rock Springs:
June 4 & 5, 2019
Nov. 14, 2019
June 4, 2020

Worland:
Aug. 5 & 6, 2019
Jan. 7, 2020
Aug. 6, 2020

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Microsoft Support

Training of WDE/Western Wyoming Community College staff to deliver training. Additionally staff from the University of Wyoming has been trained.

Funds to cover all costs associated with trainings

Half of district costs associated with substitute teacher/out-of-contract teacher pay

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SCRIPT Program

The SCRIPT Program supports systems-level change by addressing five key areas:

1. Leadership
2. Teacher Capacity and Development
3. Curriculum and Materials Selection and Refinement
4. Partners
5. Community

WYOMING
DEPARTMENT OF EDUCATION

SCRIPT Rubric

Link to SCRIPT Rubric

CREATING OPPORTUNITIES FOR STUDENTS TO KEEP WYOMING STRONG

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WYOMING DEPARTMENT OF EDUCATION

Memorandum

To:	State Board of Education
From:	Kari Eakins, Chief Policy Officer Laurie Hernandez, Director of Standards and Assessment Division
Date:	April 16, 2019
Subject:	Proposed 2019 Computer Science Standards Review
Meeting Date:	April 25, 2019
Item Type:	Action

At the March 21, 2019 State Board of Education (SBE) meeting, the Board requested the Wyoming Department of Education (WDE) to reconvene the Computer Science Standards Review Committee (CSSRC), which met on April 8-9, 2019. Of the 40 CSSRC members, 36 responded to their availability to meet and 18 were in attendance. Additionally, 7 members called in for a mid-morning update on April 8, which lasted an hour. Prior to the meeting, all committee members received the raw comments which focused on the standards document from all three events: the public input survey, the educator survey, and the public testimony at the March SBE meeting.

The April 8 meeting began with a virtual address from State Superintendent Jillian Balow. Board Member Ryan Fuhrman was then invited to share his perspective on the rationale for reconvening the committee.

The committee meeting then started with an open forum whereby they discussed the following:

- PTSB certification
- Creating a resource list to assist in implementation
- How Wyoming's proposed standards are similar to the national standards, as well as standards within other states
- What is the expectation after the standards are adopted?
- Specific issues if the standards are rolled-out?
  - Legislative mandate to teach computer science

- Vocabulary (CS literacy)
- Structure
- Removal of foundational skills
- Implementation for large and small districts

A revised format to the original draft document was shared with the committee. The rationale for revisions from the original document include addressing the concerns about the length, complexity, and overwhelming feeling of the original document. The revised standards document included domains, standards, end of grade-band benchmarks, and CS practices. The committee wanted the original CS Standards version, which was presented at the January SBE meeting, to become a resource for teachers since it includes progressions and cross-disciplinary connections. This can be available on the WDE website at edu.wyoming.gov/standards.

After approximately a two-hour discussion, the committee went into their K-2, 3-5, Middle School (MS) / High School (HS) subgroups to plan the best way to approach the concerns from the public input collected. Each sub-group focused on the K-5 standards trying to determine the best method to refine the standards.

When the whole group met again, they agreed to reconvene in the subgroups and consider the following:

- Revise/rearrange/remove sections of the document
- Determine which standards and benchmarks are the “big rocks” (what students must know and be able to do by the end of the grade-band)
- Discuss the possibility of merging benchmarks
- Decide what benchmarks should be foundational, priority, and (+)beyond

During sub group conversations, an attempt was made to utilize all the suggestions; some standards were selected to be removed, potentially merged, or identified as “big rocks” or priority benchmarks. The sub-committees spent approximately three hours looking at each domain-standard-benchmark for the K-2 and 3-5 sections labeled within the document. By mid-afternoon, the whole committee discussed their possible solutions. After much discussion, the committee agreed that merging or removing standards would create a lesser quality document and decided to level the benchmarks. Each subgroup reconvened to identify the standards they wanted to be foundational, priority, or (+)beyond.

Consensus was reached for all benchmarks in the grade-band subgroups, but it was noted that each sub-group had a different opinion on the foundational vs the priority vs the (+)beyond. The next step in the process was to merge the K-2 subgroup with the 3-5 subgroup, and the MS subgroup with the HS subgroup to review, revise, and reach consensus on the label for each benchmark. After this exercise, members explained rationales and looked through different lenses in order to meet small group consensus. The final step was for the whole group to review, revise, and reach consensus on every benchmark. Again, there was a lot of discussion and consideration that took place. This

process took over 4 hours. The last decision was to vote on the document as a whole, and consensus was reached.

The final tasks for the working groups included formally defining the three levels of benchmarks, composing a letter to the SBE, and updating the introductory statements. During this time, foundational standards were termed *supporting* standards, and +beyond standards became *enriched* standards. The name *priority* standards remained the same and were marked the gold standard. Composing the letter to the SBE work continued virtually over the next three days. Once completed, all committee members were given the opportunity to read and comment on the composition of the letter.

Supporting Documents / Attachments:

- PDF Document: Proposed 2019 Wyoming Computer Science Standards
- Letter to the State Board of Education from the CSSRC
- CS Implementation, Communication, and Professional Development Plans
- Presentation
- Ch. 10 Rules and Statement of Reasons

2019 WYOMING COMPUTER SCIENCE

CONTENT & PERFORMANCE STANDARDS

BOOT UP WYOMING

Effective MONTH XX, 2019

TO BE FULLY IMPLEMENTED IN DISTRICTS BY THE BEGINNING OF SCHOOL YEAR 2022-23

INTRODUCTION:

The Wyoming Computer Science Content and Performance Standards (WYCPS) were developed in accordance with Wyoming State Statute W.S. 21-2-304(c). The 2019 Wyoming Computer Science Standards were developed collaboratively through the contributions of the Computer Science Standards Review Committee (CSSRC) which included Wyoming parents, educators, and community members, as well as business members from across the state and nation. The committee's work was informed and guided by initial public input through community forums, as well as input solicited from specific stakeholder groups. Additional appendices and teacher resources, created by the CSSRC, are also available on the WDE website at edu.wyoming.gov/standards.

RATIONALE:

The committee's (CSSRC) vision is that every student in every school has the opportunity to learn computer science. We believe that computing is fundamental to understanding and participating in an increasingly technological society, and it is essential for every Wyoming student to learn as part of a modern education. We see computer science as a subject that provides students with a critical lens for interpreting the world around them and challenges them to explore how computing and technology can expand Wyoming's impact on the world.

The standards we (CSSRC) present here provide the necessary foundation for local school district decisions about curriculum, assessment, and instruction. Implementation of these standards will better prepare Wyoming high school graduates for the rigors of college and/or career. In turn, Wyoming employers will be able to hire workers with a strong foundation in Computer Science—both in specific content areas and in critical thinking and inquiry-based problem solving.

In grades K-5, the benchmarks are coded to represent supporting benchmarks, priority benchmarks, and enhanced benchmarks. It is the committee's expectation that all students receive instruction for the supporting and priority benchmarks and have an opportunity to demonstrate mastery of the content and performance expectations included in the priority benchmarks. Students may also have the opportunity to receive enrichment through the enhanced benchmarks.

In grades 6-8, the committee (CSSRC) determined the benchmark to be met by the end of this grade-band and also provides suggested progressions, which can be found on Appendix C: Teacher Resource Progression Document. (see Appendices on pg. 4)

In grades 9-12, the committee provides level 1 and level 2 benchmarks. Level 1 benchmarks include introductory skills. The level 2 benchmarks are intended for students who wish to advance their study of Computer Science. All level 1 and level 2 benchmarks are intended to be assessed for students taking courses covering the skills described in the benchmark.

COMPUTER SCIENCE:

Computer Science is the study of computing principles, design, and applications (hardware & software); the creation, access, and use of information through algorithms and problem solving, and the impact of computing on society.

COMPUTATIONAL THINKING:

Computational thinking is a necessary and meaningful 21st century skill. Computational thinking is defined as the thought processes involved in formulating a problem and expressing its solutions in such a way that a computer (human or machine) can effectively carry them out. Computational thinking develops into competencies in problem solving, critical thinking, productivity, and creativity. Over time, engaging in computational thought builds a student's capacity to persevere, work efficiently, gain confidence, recognize and resolve ambiguity, generalize concepts, and communicate

effectively. In order to adapt to global advancements in technology, students will need to use their computational thinking skills to formulate, articulate, and discuss solutions in a meaningful manner.

ORGANIZATION OF THE COMPUTER SCIENCE (CS) STANDARDS:

Domain

The core concepts to be studied in computer science are as follows: 1) Computing Systems; 2) Networks and the Internet; 3) Data and Analysis; 4) Algorithms and Programming; and 5) Impacts of Computing.

Content Standards

Content standards define what students are expected to know and be able to do throughout their study of computer science. They do not dictate what methodology or instructional materials should be used, nor how the material is delivered.

Benchmarks

Benchmarks are the skills students must master in order to demonstrate proficiency of the content standards throughout the grade band. In grades 9-12, benchmarks are organized into 2 levels. Mostly, Level 1 is intended to represent the introductory level while Level 2 reaches a deeper level.

For the K-5 grade-band, each benchmark is labeled identifying it as a *priority (shaded in gold)*, *supporting*, or *enhanced* benchmark.

- *Priority* Benchmark (Gold) - All students are expected to be instructed on and demonstrate mastery of the content and performance expectations included in these benchmarks.
- *Supporting* Benchmark - All students are expected to be instructed on these standards, taught within the context of the priority standards.
- *Enhanced* Benchmark - Students have an opportunity for enrichment above what all students are expected to know and do as required by the priority benchmarks.

= Plugged in This symbol designates when a benchmark may require hardware, software, or both in order to fully address the intent of the benchmark.

Performance Level Descriptors (PLDs)

Performance Level Descriptors (PLDs) describe the performance expectations of students for each of the four (4) performance level categories: advanced, proficient, basic, and below basic. These are a description of what students within each performance level are expected to know and be able to do.

WYOMING 2019 COMPUTER SCIENCE DOMAINS & STANDARDS

Computing Systems	Networks & The Internet	Data Analysis	Algorithms & Programming	Impacts of Computing
CS.D—Devices CS.HS—Hardware & Software CS.T—Troubleshooting	NI.NCO—Network Communication & Organization NI.C—Cybersecurity	DA.S—Storage DA.CVT—Collection, Visualization, & Transformation DA.IM—Inference & Models	AP.A—Algorithms AP.V—Variables AP.C—Control AP.M—Modularity AP.PD—Program Development	IC.C—Culture IC.SI—Social Interactions IC.SLE—Safety, Law, & Ethics

Benchmark Code: Grade.Domain.Standard.Benchmark#
Key: 2.CS.D.01 = 2nd Grade.Computing Systems.Devices.Benchmark #1

COMPUTER SCIENCE (CS) PRACTICES:

There are seven (7) CS Practices that are to be embedded in curriculum and instruction as the standards and benchmarks are taught and measured. The seven (7) CS Practices are listed below and are more deeply explored in Appendix A: Descriptions of the CS Practices. (see Appendices below)

Practice 1. Fostering an Inclusive Computing Culture

Practice 2. Collaborating Around Computing

Practice 3. Recognizing and Defining Computational Problems

Practice 4. Developing and Using Abstractions

Practice 5. Creating Computational Artifacts

Practice 6. Testing and Refining Computational Artifacts

Practice 7. Communicating About Computing

APPENDICES - found at edu.wyoming.gov/standards

- APPENDIX A: DESCRIPTIONS OF COMPUTER SCIENCE (CS) PRACTICES
- APPENDIX B: GLOSSARY
- APPENDIX C: TEACHER RESOURCE PROGRESSION DOCUMENT
- APPENDIX D: ADMINISTRATOR K-12 CS STANDARDS OVERVIEW
- APPENDIX E: WYOMING DIGITAL LEARNING GUIDELINES (based on the 2016 ISTE Standards for Students)

RESOURCES / REFERENCES

- K-12 Computer Science Framework, (2016). Retrieved from http://k12cs.org/. [Ch. 5 Practices].
- Computer Science Teachers Association (CSTA), (2017). Retrieved from http://www.csteachers.org/page/standards.

Computer Science | K-2 Introduction

K-2 Students may be most familiar with touch devices. These students may not yet understand the use of computing devices beyond playing games. They may have emerging problem-solving skills and introductory level sequencing abilities, but their understanding of programming concepts may be limited.

By the end of 2nd grade, students can:

- Protect and safeguard their information
- Follow and write step-by-step instructions
- Create programs to accomplish tasks
- Work respectfully and responsibly with others in an online environment

Computer Science | 3-5 Introduction

Throughout grades 3-5, students engage in creative applications of Computer Science concepts and practices introduced in K-2. By the end of fifth grade, students will build upon their previous understanding of algorithms, programming (coding), networks, and the Internet. In addition, students will create, modify, and troubleshoot increasingly complex programs for a variety of purposes. Students will be able to explain cultural, social, and ethical impacts of computing.

By the end of 5th grade, students can:

- Model how information is translated, transmitted, and processed
- Identify and implement strategies for protecting personal information
- Justify the format and location for storage
- Create and modify (remix) programs through an iterative process
- Develop, test, and refine digital artifacts
- Work respectfully and responsibly with others in an online environment and discuss the social impact of violating intellectual property rights

PROPOSED 2019 WYOMING COMPUTER SCIENCE CONTENT STANDARDS

Grade K-5 Progression

DOMAIN KEY	COMPUTING SYSTEMS	NETWORKS & THE INTERNET	DATA & ANALYSIS	ALGORITHMS & PROGRAMMING	IMPACTS OF COMPUTING

COMPUTING SYSTEMS	End of Grade 2	End of Grade 5
DEVICES (CS.D)	**SUPPORTING** **2.CS.D.01** Independently select and use a computing device to perform a variety of tasks for an intended outcome (e.g., create an artifact). **Practice 1.1** Fostering an Inclusive Computing Culture	**(+) ENHANCED** **5.CS.D.01** Independently, describe how internal and external parts of computing devices function to form a system. **Practice 7.2** Communicating About Computing
HARDWARE & SOFTWARE (CS.HS)	**SUPPORTING** **2.CS.HS.01** Demonstrate and describe the function of common components of computing systems (hardware and software) (e.g., use a browser, search engine). **Practice 7.2** Communicating About Computing	**PRIORITY** **5.CS.HS.01** Model how information is translated, transmitted, and processed in order to flow through hardware and software to accomplish tasks. **Practice 4.4** Developing and Using Abstractions
TROUBLESHOOTING	**SUPPORTING** **2.CS.T.01** Recognize computing systems might not work as expected and identify and effectively communicate simple hardware or software problems and implement solutions (e.g., app or program is not working as expected, no sound is coming from the device, caps lock turned on) and discuss problems with peers and adults. **Practice 6.2** Testing and Refining Computational Artifacts **Practice 7.2** Communicating About Computing	**SUPPORTING** **5.CS.T.01** Identify hardware and software problems that may occur during everyday use, then develop, apply, and explain strategies for solving these problems. **Practice 6.2** Testing and Refining Computational Artifacts

NETWORKS & THE INTERNET	End of Grade 2	End of Grade 5
NETWORK COMMUNICATION & ORGANIZATION (NI.NCO)	**SUPPORTING** **2.NI.NCO.01** Identify and describe that computing devices can be connected in a variety of ways (e.g., Bluetooth, Wi-Fi, home and school networks, the internet). **Practice 6.2** Testing and Refining Computational Artifacts	**SUPPORTING** **5.NI.NCO.01** Model and explain how information is broken down into smaller pieces, transmitted as packets through multiple devices over networks and the internet, and reassembled at the destination. **Practice 4.4** Developing and Using Abstractions
CYBERSECURITY (NI.C)	**PRIORITY** **2.NI.C.01** Explain what authentication factors (e.g., login) are, why we use them, and apply authentication to protect devices and information (personal and private) from unauthorized access. **Practice 7.3** Communicating About Computing	**PRIORITY** **5.NI.C.01** Discuss real-world cybersecurity problems and identify and implement appropriate strategies for how personal information can be protected. **Practice 3.1** Recognizing and Defining Computational Problems

DATA & ANALYSIS	End of Grade 2	End of Grade 5
STORAGE (DA.S)	**(+) ENHANCED** **2.DA.S.01** With guidance, develop and modify an organizational structure by creating, copying, moving, and deleting files and folders. **Practice 4.2** Developing and Using Abstractions	**PRIORITY** **5.DA.S.01** Justify the format and location for storing data based on sharing requirements and the type of information (e.g., images, videos, text). **Practice 4.2** Developing and Using Abstractions
COLLECTION, VISUALIZATION, & TRANSFORMATION (DA.CVT)	**SUPPORTING** **2.DA.CVT.01** With guidance, collect data and independently present the same data in various visual formats. **Practice 4.4** Developing and Using Abstractions **Practice 7.1** Communicating About Computing	**SUPPORTING** **5.DA.CVT.01** Organize and present collected data to highlight relationships and support a claim. **Practice 7.1** Communicating About Computing
INFERENCE & MODELS (DA.IM)	**SUPPORTING** **2.DA.IM.01** With guidance, interpret data and present it in a chart or graph (visualization) in order to make a prediction, with or without a computing device. **Practice 4.1** Developing and Using Abstractions	**SUPPORTING** **5.DA.IM.01** Use data to highlight or propose relationships, predict outcomes, or communicate an idea. **Practice 7.1** Communicating About Computing

ALGORITHMS & PROGRAMMING	End of Grade 2	End of Grade 5
ALGORITHMS (AP.A)	**PRIORITY** **2.AP.A.01** With guidance, identify and model daily processes by creating and following algorithms (sets of step-by- step instructions) to complete tasks (e.g., verbally, kinesthetically, with robot devices, or a programming language). **Practice 4.4** Developing and Using Abstractions	**PRIORITY** **5.AP.A.01** Using grade appropriate content and complexity, compare and refine multiple algorithms for the same task and determine which is the most appropriate. **Practice 3.3** Recognizing and Defining Computational Problems **Practice 6.3** Testing and Refining Computational Artifacts
VARIABLES (AP.V)	**SUPPORTING** **2.AP.V.01** Model the way programs store and manipulate data by using numbers or other symbols to represent information (e.g., thumbs up/down as representations of yes/no, arrows when writing algorithms to represent direction, or encode and decode words using numbers, pictographs, or other symbols to represent letters or words). **Practice 4.1** Developing and Using Abstractions	**PRIORITY** **5.AP.V.01** Using grade appropriate content and complexity, create programs that use variables to store and modify data. **Practice 5.2** Creating Computational Artifacts
CONTROL (AP.C)	**PRIORITY** **2.AP.C.01** With guidance, independently and collaboratively create programs to accomplish tasks using a programming language, robot device, or unplugged activity that includes sequencing, conditionals, and repetition. **Practice 5.2** Creating Computational Artifacts	**PRIORITY** **5.AP.C.01** Using grade appropriate content and complexity, create programs that include sequences, events, loops, and conditionals, both individually and collaboratively. **Practice 5.2** Creating Computational Artifacts
MODULARITY (AP.M)	**(+) ENHANCED** **2.AP.M.01** Using grade appropriate content and complexity, decompose (breakdown) the steps needed to solve a problem into a precise sequence of instructions (e.g., develop a set of instructions on how to play your favorite game). **Practice 3.2** Recognizing and Defining Computational Problems	**SUPPORTING** **5.AP.M.01** Using grade appropriate content and complexity, decompose (break down) problems into smaller, manageable subproblems to facilitate the program development process. **Practice 3.2** Recognizing and Defining Computational Problems
		SUPPORTING **5.AP.M.02** Using grade appropriate content and complexity, modify, remix, or incorporate portions of an existing program into one's own work, to develop something new or add more advanced features. **Practice 5.3** Creating Computational Artifacts

ALGORITHMS & PROGRAMMING	End of Grade 2	End of Grade 5
PROGRAM DEVELOPMENT (AP.PD)	**SUPPORTING** **2.AP.PD.01** Develop plans that describe a program's sequence of events, goals, and expected outcomes. **Practice 5.1** Creating Computational Artifacts **Practice 7.2** Communicating About Computing	**PRIORITY** **5.AP.PD.01** Use an iterative process to plan the development of a program by including others' perspectives and considering user preferences. **Practice 6.2** Testing and Refining Computational Artifacts
	SUPPORTING **2.AP.PD.02** Give credit to ideas, creations, and solutions of others while writing and developing programs. **Practice 7.3** Communicating About Computing	**SUPPORTING** **5.AP.PD.02** Using grade appropriate content and complexity, observe intellectual property rights and give appropriate credit when creating or remixing programs. **Practice 5.2** Creating Computational Artifacts **Practice 7.3** Communicating About Computing
	SUPPORTING **2.AP.PD.03** Independently and collaboratively debug (identify and fix errors) programs using a programming language. **Practice 6.2** Testing and Refining Computational Artifacts	**SUPPORTING** **5.AP.PD.03** Using grade appropriate content and complexity, test and debug (i.e., identify and fix errors) a program or algorithm to ensure it runs as intended. **Practice 6.1 & 6.2** Testing and Refining Computational Artifacts
	(+) ENHANCED **2.AP.PD.04** Use correct terminology (debug, program input/output, code) to explain the development of a program or an algorithm (e.g., in an unplugged activity, hands on manipulatives, or a programming language). **Practice 7.2** Communicating About Computing	**SUPPORTING** **5.AP.PD.04** Using grade appropriate content and complexity, describe choices made during program development using code comments, presentations, and demonstrations. **Practice 7.2** Communicating About Computing
		(+) ENHANCED **5.AP.PD.05** Using grade appropriate content and complexity, with teacher guidance, perform varying roles when collaborating with peers during the design, implementation, and review stages of program development. **Practice 2.2** Collaborating Around Computing

IMPACTS OF COMPUTING	End of Grade 2	End of Grade 5
CULTURE (IC.C)	**SUPPORTING** **2.IC.C.01** Describe how people use different types of technologies in their daily work and personal lives. **Practice 3.1** Recognizing and Defining Computational Problems	**(+) ENHANCED** **5.IC.C.01** Give examples and explain how computing technologies have changed the world and express how those technologies influence and are influenced by cultural practices. **Practice 3.1** Recognizing and Defining Computational Problems
		PRIORITY **5.IC.C.02** Develop, test, and refine digital artifacts or devices to improve accessibility and usability for diverse end users. **Practice 1.2** Fostering an Inclusive Computing Culture
SOCIAL INTERACTIONS (IC.SI)		**(+) ENHANCED** **5.IC.SI.01** Seek diverse perspectives for the purpose of improving computational artifacts. **Practice 1.1** Fostering an Inclusive Computing Culture
	PRIORITY **2.IC.SI.01** Practice grade-level appropriate behavior and responsibilities while participating in an online community. Identify and report inappropriate behavior. **Practice 2.1** Collaborating Around Computing	**PRIORITY** **5.IC.SI.02** Practice grade-level appropriate behavior and responsibilities while participating in an online community. Identify and report inappropriate behavior. **Practice 2.1** Collaborating Around Computing
SAFETY, LAW, & ETHICS (IC.SLE)		**SUPPORTING** **5.IC.SLE.01** Recognize and appropriately use public domain and creative commons media and discuss the social impact of violating intellectual property rights. **Practice 7.3** Communicating About Computing

PROPOSED 2019 WYOMING COMPUTER SCIENCE PERFORMANCE STANDARDS

Grade K-5 Performance Level Descriptors (PLDs)

DOMAIN - KEY	COMPUTING SYSTEMS	NETWORKS & THE INTERNET	DATA & ANALYSIS	ALGORITHMS & PROGRAMMING	IMPACTS OF COMPUTING

COMPUTING SYSTEMS	Standard Benchmark:	The Below Basic student:	The Basic student:	The Proficient student:	In addition to the Proficient Level, the Advanced student:
DEVICES (CS.D)	**2.CS.D.01** Independently select and use a computing device to perform a variety of tasks for an intended outcome (e.g., create an artifact).	provides little to no evidence in addressing the expectation(s).	with guidance, uses a computing device to complete assignments or teacher led activities.	regularly uses a computing device to independently: - power on and off devices. - authenticate, when applicable. - open appropriate programs. - complete assignments or teacher led activities.	demonstrates in-depth inferences and applications that go beyond the understanding or context of the standard (e.g., can recognize capabilities of multiple devices and can perform similar tasks with them).
	5.CS.D.01 Independently, describe how internal and external parts of computing devices function to form a system.	provides little to no evidence in addressing the expectation(s).	with guidance, describes with some errors how internal and external parts of computing devices function to form a system.	independently describes with few to no errors how internal and external parts of computing devices function to form a system.	demonstrates in-depth inferences and applications that go beyond the understanding or context of the standard (e.g., demonstrates on different types of devices).
HARDWARE & SOFTWARE (CS.HS)	**2.CS.HS.01** Demonstrate and describe the function of common components of computing systems (hardware and software) (e.g., use a browser, search engine).	provides little to no evidence in addressing the expectation(s).	with guidance: - identifies hardware components and software applications. - utilizes hardware components and software applications.	can identify and utilize: - a variety of hardware components (e.g., input devices, printers). - software applications (e.g., browsers, apps). - navigation to browser search engines and applications.	demonstrates in-depth inferences and applications that go beyond the understanding or context of the standard (e.g., justifies hardware and software choices).

COMPUTING SYSTEMS	Standard Benchmark:	The Below Basic student:	The Basic student:	The Proficient student:	In addition to the Proficient Level, the Advanced student:
HARDWARE & SOFTWARE Continued **(CS.HS)**	**5.CS.HS.01** Model how information is translated, transmitted, and processed in order to flow through hardware and software to accomplish tasks.	provides little to no evidence in addressing the expectation(s).	partially models how information is translated, transmitted, and processed in order to flow through hardware and software to accomplish tasks.	accurately models how information is translated, transmitted, and processed in order to flow through hardware and software to accomplish tasks.	demonstrates in-depth inferences and applications that go beyond the understanding or context of the standard (e.g., compare and contrast different devices).
TROUBLESHOOTING (CS.T)	**2.CS.T.01** Recognize that computing systems might not work as expected and identify and effectively communicate simple hardware or software problems and implement solutions (e.g., app or program is not working as expected, no sound is coming from the device, caps lock turned on) and discuss problems with peers and adults.	provides little to no evidence in addressing the expectation(s).	- can recognize that computing systems may not work as expected. - with guidance, identifies and effectively communicates simple hardware and software problems. - with guidance, implements solutions to simple hardware or software issues.	- can recognize that computing systems may not work as expected. - identifies and effectively communicates simple hardware and software problems. - implements solutions to simple hardware or software issues.	demonstrates in-depth inferences and applications that go beyond the understanding or context of the standard (e.g., helps others in troubleshooting issues, can troubleshoot more complex issues like connectivity or advanced software features).
	5.CS.T.01 Identify hardware and software problems that may occur during everyday use, then develop, apply, and explain strategies for solving these problems.	provides little to no evidence in addressing the expectation(s).	partially: - identifies hardware and software problems that may occur during everyday use. - attempts to solve identified problems, when applicable.	accurately: - identifies hardware and software problems that may occur during everyday use. - develops, applies, and explains strategies for solving identified problems, when applicable.	demonstrates in-depth inferences and applications that go beyond the understanding or context of the standard (e.g., develops a troubleshooting guide, helps others with troubleshooting issues efficiently, suggests preventative measures).

NETWORKS & THE INTERNET	Standard Benchmark:	The Below Basic student:	The Basic student:	The Proficient student:	In addition to the Proficient Level, the Advanced student:
NETWORK COMMUNICATION & ORGANIZATION (NI.NCO)	**2.NI.NCO.01** Identify and describe that computing devices can be connected in a variety of ways (e.g., Bluetooth, Wi-Fi, home and school networks, the internet).	provides little to no evidence in addressing the expectation(s).	- can identify that computing devices can be connected in a variety of ways. - with guidance, can describe a connectivity option (e.g., Wi-Fi or Bluetooth).	- can identify that computing devices can be connected in a variety of ways. - can describe different connectivity options (e.g., Bluetooth, internet).	demonstrates in-depth inferences and applications that go beyond the understanding or context of the standard (e.g., evaluates the appropriateness of different connectivity options for a variety of tasks).
	5.NI.NCO.01 Model and explain how information is broken down into smaller pieces, transmitted as packets through multiple devices over networks and the internet, and reassembled at the destination.	provides little to no evidence in addressing the expectation(s).	partially models and explains how information is: - broken down into smaller pieces, **and** - transmitted as packets through multiple devices over networks and the internet, **and/or** - reassembled at the destination.	accurately models and explains how information is: - broken down into smaller pieces. - transmitted as packets through multiple devices over networks and the internet. - reassembled at the destination.	demonstrates in-depth inferences and applications that go beyond the understanding or context of the standard (e.g., compares and contrasts different connection types).
CYBERSECURITY (NI.C)	**2.NI.C.01** Explain what authentication factors (e.g., login) are, why we use them, and apply authentication to protect devices and information (personal and private) from unauthorized access.	provides little to no evidence in addressing the expectation(s).	-identifies what authentication factors are. - with guidance, applies authentication factors to appropriate apps and devices.	- explains what authentication factors are and why we use them. - applies authentication factors to appropriate apps and devices.	demonstrates in-depth inferences and applications that go beyond the understanding or context of the standard (e.g., can compare authentication methods, one factor versus two factors).

NETWORKS & THE INTERNET	Standard Benchmark:	The Below Basic student:	The Basic student:	The Proficient student:	In addition to the Proficient Level, the Advanced student:
CYBERSECURITY Continued **(NI.C)**	**5.NI.C.01** Discuss real-world cybersecurity problems and identify and implement appropriate strategies for how personal information can be protected.	provides little to no evidence in addressing the expectation(s).	- generally discusses real-world cybersecurity problems, **and/or** - identifies appropriate strategies for how personal information can be protected.	- discusses with specificity real-world cybersecurity problems. - discusses personal consequences of inappropriate use. - identifies and implements appropriate strategies for how personal information can be protected.	demonstrates in-depth inferences and applications that go beyond the understanding or context of the standard (e.g., compares and contrasts a variety of approaches to authentication, evaluates current practices).

DATA & ANALYSIS	Standard Benchmark:	The Below Basic student:	The Basic student:	The Proficient student:	In addition to the Proficient Level, the Advanced student:
STORAGE (DA.S)	**2.DA.S.01** With guidance, develop and modify an organizational structure by creating, copying, moving, and deleting files and folders.	provides little to no evidence in addressing the expectation(s).	while working with a computing device and with guidance: - locates existing files. - opens existing files. - modifies existing files. - saves changes to a file.	with guidance, develops and modifies an organizational structure by: - creating folders. - copying existing folders and files. - moving existing folders and files. - deleting folders and files.	demonstrates in-depth inferences and applications that go beyond the understanding or context of the standard (e.g., can independently create organizational structure).
	5.DA.S.01 Justify the format and location for storing data based on sharing requirements and the type of information (e.g., images, videos, text).	provides little to no evidence in addressing the expectation(s).	describes the format, location, sharing requirements, or the type of information when storing data.	justifies the format and location for storing data based on sharing requirements and the type of information.	demonstrates in-depth inferences and applications that go beyond the understanding or context of the standard (e.g., determines the best file type for a given purpose, suggests strategies to solve a problem, creates a document in a variety of formats, converts files).

DATA & ANALYSIS	Standard Benchmark:	The Below Basic student:	The Basic student:	The Proficient student:	In addition to the Proficient Level, the Advanced student:
COLLECTION, VISUALIZATION, & TRANSFORMATION (DA.CVT)	**2.DA.CVT.01** With guidance, collect data and independently present the same data in various visual formats.	provides little to no evidence in addressing the expectation(s).	with guidance: - creates a data set, **and** - presents that data.	- with guidance, creates a data set, **and** - independently presents that data in multiple formats (e.g., as a table and graph or as a table and chart).	demonstrates in-depth inferences and applications that go beyond the understanding or context of the standard (e.g., independently creates and presents their own data sets).
	5.DA.CVT.01 Organize and present collected data to highlight relationships and support a claim.	provides little to no evidence in addressing the expectation(s).	organizes and presents collected data.	organizes and presents collected data to: - highlight comparisons. - highlight relationships. - to support a claim.	demonstrates in-depth inferences and applications that go beyond the understanding or context of the standard (e.g., helps others organize collected data, suggests improvements on how to organize collected data to a specific audience).
INFERENCE & MODELS (DA.IM)	**2.DA.IM.01** With guidance, interpret data and present it in a chart or graph (visualization) in order to make a prediction, with or without a computing device.	provides little to no evidence in addressing the expectation(s).	with guidance: - interprets data, **and** - presents it in a chart or graph (visualization).	with guidance: - interprets data. - presents it in a chart or graph (visualization). - makes a prediction based on the data.	demonstrates in-depth inferences and applications that go beyond the understanding or context of the standard (e.g., independently perform any of the proficient student steps).
	5.DA.IM.01 Use data to highlight or propose relationships, predict outcomes, or communicate an idea.	provides little to no evidence in addressing the expectation(s).	with guidance, uses data to: - highlight relationships, **and/or** - communicate an idea.	independently uses data to: - highlight or propose relationships, **and/or** - predict outcomes, **and/or** - communicate an idea.	demonstrates in-depth inferences and applications that go beyond the understanding or context of the standard (e.g., proposes alternative models, proposes additional factors that could affect a relationship).

ALGORITHMS & PROGRAMMING	Standard Benchmark:	The Below Basic student:	The Basic student:	The Proficient student:	In addition to the Proficient Level, the Advanced student:
ALGORITHMS (AP.A)	**2.AP.A.01** With guidance, identify and model daily processes by creating and following algorithms (sets of step-by- step instructions) to complete tasks (e.g., verbally, kinesthetically, with robot devices, or a programing language).	provides little to no evidence in addressing the expectation(s).	with guidance, follows algorithms to complete tasks.	with guidance: - follows algorithms to complete tasks. - creates algorithms to complete tasks.	demonstrates in-depth inferences and applications that go beyond the understanding or context of the standard (e.g., independently creates algorithms via one or more of the following techniques: verbally, kinesthetically, with robot devices, or a programing language).
	5.AP.A.01 Using grade appropriate content and complexity, compare and refine multiple algorithms for the same task and determine which is the most appropriate.	provides little to no evidence in addressing the expectation(s).	compares simple algorithms for the same task.	- compares and refines multiple algorithms for the same task. - determines which algorithm is the most appropriate for the same task.	demonstrates in-depth inferences and applications that go beyond the understanding or context of the standard (e.g., develop alternative algorithms).
VARIABLES (AP.V)	**2.AP.V.01** Model the way programs store and manipulate data by using numbers or other symbols to represent information (e.g., thumbs up/down as representations of yes/no, arrows when writing algorithms to represent direction, or encode and decode words using numbers, pictographs, or other symbols to represent letters or words).	provides little to no evidence in addressing the expectation(s).	with guidance: - uses symbols to represent information. - understands that inferred meanings of the symbols can change or can represent missing information. - creates expressions with symbols to convey data, information, or processes.	- uses symbols to represent information. - understands that inferred meanings of the symbols can change or can represent missing information. - creates expressions with symbols to convey data, information, or processes.	demonstrates in-depth inferences and applications that go beyond the understanding or context of the standard (e.g., creates complex expressions with symbols).

ALGORITHMS & PROGRAMMING	Standard Benchmark:	The Below Basic student:	The Basic student:	The Proficient student:	In addition to the Proficient Level, the Advanced student:
VARIABLES Continued **(AP.V)**	**5.AP.V.01** Using grade appropriate content and complexity, create programs that use variables to store and modify data.	provides little to no evidence in addressing the expectation(s).	modifies programs that use variables to: - store data. - modify data.	creates programs that use variables to: - store data. - modify data.	demonstrates in-depth inferences and applications that go beyond the understanding or context of the standard (e.g., uses a variety of variable types).
CONTROL (AP.C)	**2.AP.C.01** With guidance, independently and collaboratively create programs to accomplish tasks using a programming language, robot device, or unplugged activity that includes sequencing, conditionals, and repetition.	provides little to no evidence in addressing the expectation(s).	with guidance, create: - programs that include sequencing, conditionals, or repetition. - tasks that include sequencing, conditionals, or repetition.	with guidance: - individually create programs or tasks that include sequencing, conditionals, and repetition. - collaboratively create programs that include sequencing, conditionals, and repetition.	demonstrates in-depth inferences and applications that go beyond the understanding or context of the standard (e.g., independently creates programs that include sequencing, conditionals, and repetition).
	5.AP.C.01 Using grade appropriate content and complexity, create programs that include sequences, events, loops, and conditionals, both individually and collaboratively.	provides little to no evidence in addressing the expectation(s).	- independently, create programs that include sequences and events. - collaboratively, create programs that include sequences and events.	- independently, create programs that include combinations of sequences, events, loops, and conditionals. - collaboratively, create programs that include combinations of sequences, events, loops, and conditionals.	demonstrates in-depth inferences and applications that go beyond the understanding or context of the standard (e.g., incorporating nested loops and complex conditionals).
MODULARITY (AP.M)	**2.AP.M.01** Using grade appropriate content and complexity, decompose (breakdown) the steps needed to solve a problem into a precise sequence of instructions (e.g., develop a set of instructions on how to play your favorite game).	provides little to no evidence in addressing the expectation(s).	with guidance: - decomposes a problem. - creates a precise sequence of instructions to solve that problem.	- decomposes a problem. - creates a precise sequence of instructions to solve that problem.	demonstrates in-depth inferences and applications that go beyond the understanding or context of the standard (e.g., can create different instruction sets that accomplish the same task).

ALGORITHMS & PROGRAMMING	Standard Benchmark:	The Below Basic student:	The Basic student:	The Proficient student:	In addition to the Proficient Level, the Advanced student:
MODULARITY Continued **(AP.M)**	**5.AP.M.01** Using grade appropriate content and complexity, decompose (break down) problems into smaller, manageable subproblems to facilitate the program development process. **5.AP.M.02** Using grade appropriate content and complexity, modify, remix, or incorporate portions of an existing program into one's own work, to develop something new or add more advanced features.	provides little to no evidence in addressing the expectation(s).	- decomposes (breaks down) problems into smaller, manageable subproblems to facilitate the program development process, **and/or** - modifies, remixes, or incorporates portions of an existing program into one's own work.	- decomposes (breaks down) problems into smaller, manageable subproblems to facilitate the program development process. - modifies, remixes, or incorporates portions of an existing program into one's own work to develop something new or add more advanced features.	demonstrates in-depth inferences and applications that go beyond the understanding or context of the standard (e.g., helps others modify code, incorporates portions of multiple programs).
PROGRAM DEVELOPMENT (AP.PD)	**2.AP.PD.01** Develop plans that describe a program's sequence of events, goals, and expected outcomes. **2.AP.PD.02** Give credit to ideas, creations, and solutions of others while writing and developing programs. **2.AP.PD.03** Independently and collaboratively debug (identify and fix errors) programs using a programming language. **2.AP.PD.04** Use correct terminology (debug, program input/output, code) to explain the development of a program or an algorithm (e.g., in an unplugged activity, hands on manipulatives, or a programming language).	provides little to no evidence in addressing the expectation(s).	with guidance, demonstrates program development by: - creating a plan for a program. - writing the program. - giving credit for the resources used. - debugging the program.	demonstrates program development by: - creating a plan for a program. - writing the program. - giving credit for the resources used. - debugging the program.	demonstrates in-depth inferences and applications that go beyond the understanding or context of the standard (e.g., demonstrates the development process on different platforms, languages, or mediums).

ALGORITHMS & PROGRAMMING	Standard Benchmark:	The Below Basic student:	The Basic student:	The Proficient student:	In addition to the Proficient Level, the Advanced student:
PROGRAM DEVELOPMENT Continued **(AP.PD)**	**5.AP.PD.01** Use an iterative process to plan the development of a program by including others' perspectives and considering user preferences. **5.AP.PD.02** Using grade appropriate content and complexity, observe intellectual property rights and give appropriate credit when creating or remixing programs. **5.AP.PD.03** Using grade appropriate content and complexity, test and debug (i.e., identify and fix errors) a program or algorithm to ensure it runs as intended. **5.AP.PD.04** Using grade appropriate content and complexity, describe choices made during program development using code comments, presentations, and demonstrations. **5.AP.PD.05** Using grade appropriate content and complexity, with teacher guidance, perform varying roles when collaborating with peers during the design, implementation, and review stages of program development.	provides little to no evidence in addressing the expectation(s).	- observes intellectual property rights and gives appropriate credit when creating or remixing programs, **and** - uses an iterative process to plan the development of a program by including other perspectives and considers user preferences, **and/or** - tests and debugs (identify and fix errors) a program or algorithm to ensure it runs as intended, **and/or** - describes choices made during program development using code comments, presentations, and demonstrations, **and/or** - with teacher guidance, performs varying roles when collaborating with peers during the design, implementation, and review stages of program development.	- observes intellectual property rights and gives appropriate credit when creating or remixing programs. - uses an iterative process to plan the development of a program by including other perspectives and considers user preferences. - tests and debugs (identify and fix errors) a program or algorithm to ensure it runs as intended. - describes choices made during program development using code comments, presentations, and demonstrations. - with teacher guidance, performs varying roles when collaborating with peers during the design, implementation, and review stages of program development.	demonstrates in-depth inferences and applications that go beyond the understanding or context of the standard. By way of examples, - justifies their own copyright on their work; -explains the different types of copyrights and the process of getting permission; - provides guidance to other students when testing and debugging a program or algorithm; - proposes alternatives and justifies why they went with their current code.

IMPACTS OF COMPUTING	Standard Benchmark:	The Below Basic student:	The Basic student:	The Proficient student:	In addition to the Proficient Level, the Advanced student:
CULTURE (IC.C)	**2.IC.C.01** Describe how people use different types of technologies in their daily work and personal lives.	provides little to no evidence in addressing the expectation(s).	identifies how people use different types of technologies (e.g., cell phones, computers) in their daily work and personal lives.	describes how people use different types of technologies (e.g., cell phones, computers) in their daily work and personal lives.	demonstrates in-depth inferences and applications that go beyond the understanding or context of the standard (e.g., identifies and describes the potential impacts of different technologies).
	5.IC.C.01 Give examples and explain how computing technologies have changed the world and express how those technologies influence and are influenced by cultural practices. **5.IC.C.02** Develop, test, and refine digital artifacts or devices to improve accessibility and usability for diverse end users.	provides little to no evidence in addressing the expectation(s).	- gives examples of how computing technologies have changed the world, **and/or** - expresses how technologies interact with cultural practices, **and/or** - tests digital artifacts or devices for accessibility and usability for diverse end users.	- gives examples and explains how computing technologies have changed the world. - expresses how technologies influence and are influenced by cultural practices. - develops, tests, and refines digital artifacts or devices to improve accessibility and usability for diverse end users.	demonstrates in-depth inferences and applications that go beyond the understanding or context of the standard (e.g., makes and justifies predictions based on historical patterns, incorporates multiple forms of accessibility in one artifact).
SOCIAL INTERACTIONS (IC.SI)	**2.IC.SI.01** Practice grade-level appropriate behavior and responsibilities while participating in an online community. Identify and report inappropriate behavior.	provides little to no evidence in addressing the expectation(s).	with guidance: - makes appropriate choices when participating in an online community. - identifies inappropriate behavior and reporting procedures.	- makes appropriate choices when participating in an online community. - identifies inappropriate behavior and reporting procedures.	demonstrates in-depth inferences and applications that go beyond the understanding or context of the standard.

IMPACTS OF COMPUTING	Standard Benchmark:	The Below Basic student:	The Basic student:	The Proficient student:	In addition to the Proficient Level, the Advanced student:
SOCIAL INTERACTIONS Continued **(IC.SI)**	**5.IC.SI.01** Seek diverse perspectives for the purpose of improving computational artifacts. **5.IC.SI.02** Practice grade-level appropriate behavior and responsibilities while participating in an online community. Identify and report inappropriate behavior.	provides little to no evidence in addressing the expectation(s).	- practices grade-level appropriate behavior and responsibilities while participating in an online community. - identifies and reports inappropriate behavior, when applicable.	- seeks diverse perspectives for the purpose of improving computational artifacts. - practices grade-level appropriate behavior and responsibilities while participating in an online community. - identifies and reports inappropriate behavior, when applicable.	demonstrates in-depth inferences and applications that go beyond the understanding or context of the standard (e.g., creates resources that models or explains to peers how to participate in online communities or independently uses video conferencing tools or other online collaborative spaces, such as blogs, wikis, forums, or website comments, to gather feedback from individuals and groups).
SAFETY, LAW, & ETHICS (IC.SLE)	**5.IC.SLE.01** Recognize and appropriately use public domain and creative commons media and discuss the social impact of violating intellectual property rights.	provides little to no evidence in addressing the expectation(s).	identifies types of digital data that may have intellectual property rights that prevent copying or require attribution.	- recognizes and appropriately uses public domain and creative commons media. - discusses the social impact of violating intellectual property rights.	demonstrates in-depth inferences and applications that go beyond the understanding or context of the standard (e.g., explain the process of contributing to a public domain or creative commons media, create and use a custom intellectual property rights system used by members of the class).

Computer Science | 6-8 Introduction

Throughout grades 6-8, students continue to develop their understanding of algorithms and programming (coding). Students work collaboratively and independently to create and modify increasingly complex programs for a variety of purposes introduced in grades 3-5.

By the end of 8th grade, students can:

- Systematically identify, recommend, resolve, and document increasingly complex software and hardware problems with computing devices and their components
- Model the role of protocols in transmitting data across networks and the internet
- Critique physical and digital procedures that could be implemented to protect electronic data/information
- Use and refine computational tools to transform collected data in order to make it more useful and reliable
- Create flowcharts and pseudocode to design algorithms to solve complex problems
- Create clearly named variables that represent different data types and perform operations on their values
- Design and iteratively develop programs that combine control structures, including nested loops and compound conditionals
- Decompose problems into parts to facilitate the design, implementation, and review of programs
- Create procedures with parameters to organize code and make it easier to reuse
- Seek and incorporate feedback from team members and users to refine a solution to a problem
- Describe impacts associated with computing technologies that affect people's everyday activities and career options along with issues of bias and accessibility in the design of technologies
- Practice grade-level appropriate behavior and responsibilities while participating in an online community, including identifying and reporting inappropriate behavior
- Describe tradeoffs between allowing information to be public and keeping information private and secure
- Discuss the legal, social, and ethical impacts associated with software development and use, including both positive and malicious intent

Computer Science | 9-12 Introduction

In high school, students will continue to develop their knowledge of computing systems, their components, and how systems interact. Students will use their understanding about the basic principles of computation, that algorithms describe a step-by-step solution to a problem, that programs are algorithms written in a language that a computer can understand, and that the solution to many problems can be described as a program. A solid foundation of algebraic concepts is important for success in high school computer science courses. Students will expand their ability to identify patterns and create algorithms that can model the observed patterns.

By the end of 12th grade, students can:

- Create a computer program using sequencing, selection, and iteration
- Decompose complex problems into smaller, more manageable sections
- Use tools of coding to create, debug, and document the evolution of an artifact
- Compare and contrast trade-offs in programming techniques
- Develop complex computer program individually and as part of a group
- Recognize how various components of a complex computing system work together
- Use tools to analyze data and know how data is stored
- Explain how cybersecurity issues affect networks and the internet
- Justify how proliferation of computing affects privacy, rights, opportunities, and responsibility

The high school standards are organized into 2 levels. Mostly, Level 1 is intended to be at the introductory level, and Level 2 reaches at a deeper level.

PROPOSED 2019 WYOMING COMPUTER SCIENCE CONTENT STANDARDS

Grade 6-12 Progression

DOMAIN - KEY	COMPUTING SYSTEMS	NETWORKS & THE INTERNET	DATA & ANALYSIS	ALGORITHMS & PROGRAMMING	IMPACTS OF COMPUTING

COMPUTING SYSTEMS	End of Grade 8	High School Level 1	High School Level 2
DEVICES (CS.D)	**8.CS.D.01** Recommend improvements to the design of computing devices based on an analysis of how a variety of users interact with the device. **Practice 3.3** Recognizing and Defining Computational Problems	**L1.CS.D.01** Explain how abstractions hide the underlying implementation details of computing systems embedded in everyday objects. **Practice 4.1** Developing and Using Abstractions	
HARDWARE & SOFTWARE (CS.HS)	**8.CS.HS.01** Design and refine a project that combines hardware and software components to collect and exchange data. **Practice 5.1** Creating Computational Artifacts	**L1.CS.HS.01** Explain the interactions between application software, system software, and hardware layers. **Practice 4.1** Developing and Using Abstractions	**L2.CS.HS.01** Categorize the roles of operating system software. **Practice 4.1** Developing and Using Abstractions **Practice 7.2** Communicating About Computing
TROUBLESHOOTING (CS.T)	**8.CS.T.01** Systematically identify, resolve, and document increasingly complex software and hardware problems with computing devices and their components. **Practice 6.2** Testing and Refining Computational Artifacts	**L1.CS.T.01** Develop guidelines that convey systematic troubleshooting strategies that others can use to identify and resolve errors. **Practice 6.1 & 6.2** Testing and Refining Computational Artifacts	**L2.CS.T.01** Identify how hardware components facilitate logic, input, output, and storage in computing systems, and their common malfunctions. **Practice 7.2** Communicating About Computing

NETWORKS & THE INTERNET	End of Grade 8	High School Level 1	High School Level 2
NETWORK COMMUNICATION & ORGANIZATION (NI.NCO)	**8.NI.NCO.01** Model the role of protocols in transmitting data across networks and the internet (e.g., explain protocols and their importance to data transmission; model how packets are broken down into smaller pieces and how they are delivered). **Practice 4.4** Developing and Using Abstractions	**L1.NI.NCO.01** Evaluate the scalability and reliability of networks, by describing the relationship between routers, switches, servers, topology, and addressing. **Practice 4.1** Developing and Using Abstractions **Practice 7.2** Communicating About Computing	**L2.NI.NCO.01** Describe the issues that impact network functionality (e.g., bandwidth, load, latency, topology). **Practice 7.2** Communicating About Computing
CYBERSECURITY (NI.C)	**8.NI.C.01** Critique physical and digital procedures that could be implemented to protect electronic data/information. **Practice 7.3** Communicating About Computing	**L1.NI.C.01** Give examples to illustrate how sensitive data can be affected by malware and other attacks. **Practice 7.2** Communicating About Computing	**L2.NI.C.01** Compare ways software developers protect devices and information from unauthorized access. **Practice 7.2** Communicating About Computing
	8.NI.C.02 Apply multiple methods of encryption to model the secure transmission of data. **Practice 4.4** Developing and Using Abstractions	**L1.NI.C.02** Recommend cybersecurity measures to address various scenarios based on factors such as efficiency, feasibility, and ethical impacts. **Practice 3.3** Recognizing and Defining Computational Problems	
		L1.NI.C.03 Compare various security measures, considering trade-offs between the usability and security of a computing system. **Practice 6.3** Testing and Refining Computational Artifacts	
		L1.NI.C.04 Explain trade-offs when selecting and implementing cybersecurity recommendations. **Practice 7.2** Communicating About Computing	

DATA & ANALYSIS	End of Grade 8	High School Level 1	High School Level 2
STORAGE (DA.S)	**8.DA.S.01** Represent data using multiple encoding schemes (e.g., ASCII, binary). **Practice 4.4** Developing and Using Abstractions	**L1.DA.S.01** Translate between different bit representations of real-world phenomena, such as characters, numbers, and images. **Practice 4.1** Developing and Using Abstractions	
		L1.DA.S.02 Evaluate the trade-offs in how data elements are organized and where data is stored. **Practice 3.3** Recognizing and Defining Computational Problems	
COLLECTION, VISUALIZATION, & TRANSFORMATION (DA.CVT)	**8.DA.CVT.01** Using computational tools, transform collected data to make it more useful and reliable. **Practice 6.3** Testing and Refining Computational Artifacts	**L1.DA.CVT.01** Create interactive data representations using software tools to help others better understand real-world phenomena (e.g., paper surveys and online data sets). **Practice 4.4** Developing and Using Abstractions	**L2.DA.CVT.01** Use data analysis tools and techniques to identify patterns in data representing complex systems. **Practice 4.1** Developing and Using Abstractions **Practice 7.1** Communicating About Computing
			L2.DA.CVT.02 Select data collection tools and techniques, and use them to generate data sets that support a claim or communicate information. **Practice 7.1 & 7.2** Communicating About Computing
INFERENCE & MODELS (DA.IM)	**8.DA.IM.01** Refine computational models based on generated data. **Practice 4.4** Developing and Using Abstractions **Practice 5.3** Creating Computational Artifacts	**L1.DA.IM.01** Create computational models that represent the relationships among different elements of data collected from a phenomenon or process. **Practice 4.4** Developing and Using Abstractions	**L2.DA.IM.01** Formulate, refine, and test scientific hypotheses using models and simulations. **Practice 4.4** Developing and Using Abstractions

ALGORITHMS & PROGRAMMING	End of Grade 8	High School Level 1	High School Level 2
ALGORITHMS (AP.A)	**8.AP.A.01** Create flowcharts and pseudocode to design algorithms to solve complex problems. **Practice 4.1 & 4.4** Developing and Using Abstractions	**L1.AP.A.01** Create a prototype that uses algorithms (e.g., searching, sorting, finding shortest distance) to provide a possible solution for a real-world problem relevant to the student. **Practice 5.2** Creating Computational Artifacts	**L2.AP.A.01** Critically examine and trace classic algorithms. Use and adapt classic algorithms to solve computational problems (e.g., selection sort, insertion sort, binary search, linear search). **Practice 4.2** Developing and Using Abstractions
		L1.AP.A.02 Describe how artificial intelligence algorithms drive many software and physical systems. **Practice 7.2** Communicating About Computing	**L2.AP.A.02** Develop an artificial intelligence algorithm to play a game against a human opponent or solve a real-world problem. **Practice 5.2 & 5.3** Creating Computational Artifacts
			L2.AP.A.03 Evaluate algorithms (e.g., sorting, searching) in terms of their efficiency, correctness, and clarity. **Practice 4.2** Developing and Using Abstractions
VARIABLES (AP.V)	**8.AP.V.01** Using grade appropriate content and complexity, create clearly named variables that represent different data types and perform operations on their values. **Practice 5.1 & 5.2** Creating Computational Artifacts	**L1.AP.V.01** Use lists to simplify solutions, generalizing computational problems instead of repeatedly using simple variables. **Practice 4.1** Developing and Using Abstractions	**L2.AP.V.01** Compare and contrast simple data structures and their uses (e.g., lists, stacks, queues). **Practice 4.2** Developing and Using Abstractions
CONTROL (AP.C)	**8.AP.C.01** Using grade appropriate content and complexity, design and iteratively develop programs that combine control structures, including nested loops and compound conditionals. **Practice 5.1 & 5.2** Creating Computational Artifacts	**L1.AP.C.01** Justify the selection of specific control structures when tradeoffs involve implementation, readability, and program performance, and explain the benefits and drawbacks of choices made. **Practice 5.2** Creating Computational Artifacts	

ALGORITHMS & PROGRAMMING	End of Grade 8	High School Level 1	High School Level 2
CONTROL Continued **(AP.C)**		**L1.AP.C.02** Trace the execution of loops and conditional statements, illustrating output and changes in values of named variables. **Practice 3.2** Recognizing and Defining Computational Problems	**L2.AP.C.01** Trace the execution of recursion, illustrating output and changes in values of named variables. **Practice 3.2** Recognizing and Defining Computational Problems
		L1.AP.C.03 Design and iteratively develop computational artifacts for practical intent, personal expression, or to address a societal issue by using events to initiate instructions. **Practice 5.2** Creating Computational Artifacts	
MODULARITY (AP.M)	**8.AP.M.01** Using grade appropriate content and complexity, decompose problems and subproblems into parts to facilitate the design, implementation, and review of programs. **Practice 3.2** Recognizing and Defining Computational Problems	**L1.AP.M.01** Decompose problems into smaller components through systematic analysis, using constructs such as procedures, modules, and/or objects. **Practice 3.2** Recognizing and Defining Computational	**L2.AP.M.01** Construct solutions to problems using student-created components, such as procedures, modules, and/or objects. **Practice 4.3** Developing and Using Abstractions **Practice 5.2** Creating Computational Artifacts
	8.AP.M.02 Using grade appropriate content and complexity, create procedures with parameters to organize code and make it easier to reuse. **Practice 4.1 & 4.3** Developing and Using Abstractions	**L1.AP.M.02** Create artifacts by using procedures within a program, combinations of data and procedures, or independent but interrelated programs. **Practice 5.2** Creating Computational Artifacts	**L2.AP.M.02** Analyze a large-scale computational problem and identify generalizable patterns that can be applied to a solution. **Practice 4.1** Developing and Using Abstractions
			L2.AP.M.03 Demonstrate code reuse by creating programming solutions using libraries and APIs. **Practice 4.2** Developing and Using Abstractions **Practice 5.3** Creating Computational Artifacts

ALGORITHMS & PROGRAMMING	End of Grade 8	High School Level 1	High School Level 2
PROGRAM DEVELOPMENT (AP.PD)	**8.AP.PD.01** Using grade appropriate content and complexity, seek and incorporate feedback from team members and users to refine a solution to a problem. **Practice 1.1** Fostering an Inclusive Computing Culture **Practice 2.3** Collaborating Around Computing	**L1.AP.PD.01** Plan and develop programs by analyzing a problem and/or process, developing and documenting a solution, testing outcomes, and adapting the program for a variety of users. **Practice 5.1** Creating Computational Artifacts	**L2.AP.PD.01** Plan and develop programs that will provide solutions to a variety of users using a software life cycle process. **Practice 5.1** Creating Computational Artifacts
	8.AP.PD.02 Incorporate existing code, media, and libraries into original programs of increasing complexity and give attribution. **Practice 4.2** Developing and Using Abstractions **Practice 5.2** Creating Computational Artifacts **Practice 7.3** Communicating About Computing	**L1.AP.PD.02** Evaluate licenses that limit or restrict use of computational artifacts when using resources such as libraries. **Practice 7.3** Communicating About Computing	**L2.AP.PD.02** Use version control systems, integrated development environments (IDEs), and collaborative tools and practices (e.g., code documentation) in a group software project. **Practice 2.4** Collaborating Around Computing
	8.AP.PD.03 Systematically test and refine programs using a range of test cases. **Practice 6.1** Testing and Refining Computational Artifacts	**L1.AP.PD.03** Use debugging tools to identify and fix errors in a program. **Practice 6.2** Testing and Refining Computational Artifacts	
		L1.AP.PD.04 Design and develop computational artifacts, working in team roles, using collaborative tools. **Practice 2.4** Collaborating Around Computing	**L2.AP.PD.03** Develop programs for multiple computing platforms. **Practice 5.2** Creating Computational Artifacts
	8.AP.PD.04 Using grade appropriate content and complexity, document programs in order to make them easier to follow, test, and debug. **Practice 7.2** Communicating About Computing	**L1.AP.PD.05** Document design decisions using text, graphics, presentations, and/or demonstrations in the development of complex programs. **Practice 7.2** Communicating About Computing	**L2.AP.PD.04** Evaluate key qualities of a program through a process such as a code review (e.g., qualities could include correctness, usability, readability, efficiency, portability, and scalability).

			Practice 6.3 Testing and Refining Computational Artifacts
ALGORITHMS & PROGRAMMING	**End of Grade 8**	**High School Level 1**	**High School Level 2**
PROGRAM DEVELOPMENT Continued **(AP.PD)**	**8.AP.PD.05** Distribute tasks and maintain a project timeline when collaboratively developing computational artifacts. **Practice 2.2** Collaborating Around Computing	**L1.AP.PD.06** Evaluate and refine computational artifacts to make them more usable and accessible. **Practice 6.3** Testing and Refining Computational Artifacts	**L2.AP.PD.05** Develop and use a series of test cases to verify that a program performs according to its design specifications. **Practice 6.1** Testing and Refining Computational Artifacts
			L2.AP.PD.06 Explain security issues that might lead to compromised computer programs. **Practice 7.2** Communicating About Computing
			L2.AP.PD.07 Modify an existing program to add additional functionality and discuss intended and unintended implications (e.g., breaking other functionality). **Practice 5.3** Creating Computational Artifacts
			L2.AP.PD.08 Compare multiple programming languages and discuss how their features make them suitable for solving different types of problems. **Practice 7.2** Communicating About Computing

IMPACTS OF COMPUTING	End of Grade 8	High School Level 1	High School Level 2
CULTURE (IC.C)	**8.IC.C.01** Describe impacts associated with computing technologies that affect people's everyday activities and career options. **Practice 7.2** Communicating About Computing	**L1.IC.C.01** Evaluate the ways computing impacts personal, ethical, social, economic, and cultural practices. **Practice 1.2** Fostering an Inclusive Computing Culture	**L2.IC.C.01** Evaluate the beneficial and harmful effects that computational artifacts and innovations have on society. **Practice 1.2** Fostering an Inclusive Computing Culture
	8.IC.C.02 Describe issues of bias and accessibility in the design of technologies. **Practice 1.2** Fostering an Inclusive Computing Culture	**L1.IC.C.02** Test and refine computational artifacts to reduce bias and equity deficits. **Practice 1.2** Fostering an Inclusive Computing Culture	**L2.IC.C.02** Evaluate the impact of equity, access, and influence on the distribution of computing resources in a global society. **Practice 1.2** Fostering an Inclusive Computing Culture
		L1.IC.C.03 Demonstrate how a given algorithm applies to problems across disciplines. **Practice 3.1** Recognizing and Defining Computational Problems	**L2.IC.C.03** Predict how computational innovations that have revolutionized aspects of our culture might evolve. **Practice 5.2** Creating Computational Artifacts
SOCIAL INTERACTIONS (IC.SI)	**8.IC.SI.01** Using grade appropriate content and complexity, collaborate using tools to connect with peers when creating a computational artifact. **Practice 2.4** Collaborating Around Computing **Practice 5.2** Creating Computational Artifacts	**L1.IC.SI.01** Use tools and methods for collaboration. **Practice 2.4** Collaborating Around Computing	
	8.IC.SI.02 Practice grade-level appropriate behavior and responsibilities while participating in an online community. Identify and report inappropriate behavior. **Practice 2.1** Collaborating Around Computing **Practice 7.3** Communicating About Computing	**L1.IC.SI.02** Practice grade-level appropriate behavior and responsibilities while participating in an online community. Identify and report inappropriate behavior. **Practice 2.1** Collaborating Around Computing **Practice 7.3** Communicating About Computing	**L2.IC.SI.01** Practice grade-level appropriate behavior and responsibilities while participating in an online community. Identify and report inappropriate behavior. **Practice 2.1** Collaborating Around Computing **Practice 7.3** Communicating About Computing

IMPACTS OF COMPUTING	End of Grade 8	High School Level 1	High School Level 2
SAFETY, LAW, & ETHICS (IC.SLE)	**8.IC.SLE.01** Using grade appropriate content and complexity, describe tradeoffs between allowing information to be public and keeping information private and secure. **Practice 7.2** Communicating About Computing	**L1.IC.SLE.01** Explain the beneficial and harmful effects that intellectual property laws can have on innovation. **Practice 7.3** Communicating About Computing	**L2.IC.SLE.01** Debate laws and regulations that impact the development and use of software and technology. **Practice 3.3** Recognizing and Defining Computational Problems **Practice 7.3** Communicating About Computing
		L1.IC.SLE.02 Explain the privacy concerns related to the collection and generation of data through automated processes that may not be evident to users. **Practice 7.2** Communicating About Computing	
		L1.IC.SLE.03 Evaluate the social and economic implications of privacy in the context of safety, law, or ethics. **Practice 7.3** Communicating About Computing	
	8.IC.SLE.02 Using grade level appropriate content and complexity, discuss the legal, social, and ethical impacts associated with software development and use, including both positive and malicious intent. **Practice 1.1** Fostering an Inclusive Computing Culture **Practice 7.2** Communicating About Computing	**L1.IC.SLE.04** Using grade level appropriate content and complexity, discuss the legal, social, and ethical impacts associated with software development and use, including both positive and malicious intent. **Practice 1.1** Fostering an Inclusive Computing Culture **Practice 7.2** Communicating About Computing	**L2.IC.SLE.02** Using grade level appropriate content and complexity, discuss the legal, social, and ethical impacts associated with software development and use, including both positive and malicious intent. **Practice 1.1** Fostering an Inclusive Computing Culture **Practice 7.2** Communicating About Computing

PROPOSED 2019 WYOMING COMPUTER SCIENCE PERFORMANCE STANDARDS

Grade 6-12 Performance Level Descriptors (PLDs)

DOMAIN - KEY	COMPUTING SYSTEMS	NETWORKS & THE INTERNET	DATA & ANALYSIS	ALGORITHMS & PROGRAMMING	IMPACTS OF COMPUTING

COMPUTING SYSTEMS	Standard Benchmark:	The Below Basic student:	The Basic student:	The Proficient student:	In addition to the Proficient Level, the Advanced student:
DEVICES (CS.D)	**8.CS.D.01** Recommend improvements to the design of computing devices based on an analysis of how a variety of users interact with the device.	provides little to no evidence in addressing the expectation(s).	- understands the needs of the users, but is unable to analyze, **and/or** - describes the parts of computing devices, but cannot recommend improvements to the design.	- analyzes the needs of the users. - recommends improvements to the design of computing devices based on that analysis.	demonstrates in-depth inferences and applications that go beyond the understanding or context of the standard (e.g., recommend improvements to the design in more than one area (input, output, processing, storage) or group (special populations).
	L1.CS.D.01 Explain how abstractions hide the underlying implementation details of computing systems embedded in everyday objects.	provides little to no evidence in addressing the expectation(s).	identifies abstractions that hide the underlying implementation details of computing systems embedded in everyday objects.	explains how abstractions hide the underlying implementation details of computing systems embedded in everyday objects.	demonstrates in-depth inferences and applications that go beyond the understanding or context of the standard.
HARDWARE & SOFTWARE (CS.HS)	**8.CS.HS.01** Design and refine a project that combines hardware and software components to collect and exchange data.	provides little to no evidence in addressing the expectation(s).	- describes how hardware and software components collect and exchange data, but cannot design a project, **and/or** - creates a project that combines hardware and software components to collect and exchange data but cannot refine.	- designs a project that combines hardware and software components to collect and exchange data. - refines a project that combines hardware and software components to collect and exchange data.	demonstrates in-depth inferences and applications that go beyond the understanding or context of the standard (e.g., design a project that combines hardware and software components to collect and exchange data that affects the world around them, refine a project multiple times that combines hardware and software components to collect and exchange data to address real world usage).

COMPUTING SYSTEMS	Standard Benchmark:	The Below Basic student:	The Basic student:	The Proficient student:	In addition to the Proficient Level, the Advanced student:
HARDWARE & SOFTWARE Continued **(CS.HS)**	**L1.CS.HS.01** Explain the interactions between application software, system software, and hardware layers.	provides little to no evidence in addressing the expectation(s).	- identifies application software, system software, and hardware layers. - defines application software, system software, and hardware layers.	- identifies the interactions between application software, system software, and hardware layers. - defines the interactions between application software, system software, and hardware layers. - explains the interactions between application software, system software, and hardware layers. For example, text editing software interacts with the operating system to receive input from the keyboard, convert the input to bits for storage, and interpret the bits as readable text to display on the monitor.	demonstrates in-depth inferences and applications that go beyond the understanding or context of the standard (e.g., student demonstrates knowledge of specific, advanced terms for computer architecture, such as BIOS, kernel, or bus).
	L2.CS.HS.01 Categorize the roles of operating system software.	provides little to no evidence in addressing the expectation(s).	categorizes some of the roles of operating system software.	categorizes the roles of the operating system software (e.g., roles could include memory management, data storage/retrieval, process management, and access control).	demonstrates in-depth inferences and applications that go beyond the understanding or context of the standard.

COMPUTING SYSTEMS	Standard Benchmark:	The Below Basic student:	The Basic student:	The Proficient student:	In addition to the Proficient Level, the Advanced student:
TROUBLESHOOTING (CS.T)	**8.CS.T.01** Systematically identify, resolve, and document increasingly complex software and hardware problems with computing devices and their components.	provides little to no evidence in addressing the expectation(s).	can do some of the following: - identify software problems with computing devices and their components, - identify hardware problems with computing devices and their components, - resolve software problems with computing devices and their components, - resolve hardware problems with computing devices and their components, - document software problems with computing devices and their components, - document hardware problems with computing devices and their components.	can systematically: - identify software problems with computing devices and their components, - identify hardware problems with computing devices and their components, - resolve software problems with computing devices and their components, - resolve hardware problems with computing devices and their components, - document software problems with computing devices and their components, - document hardware problems with computing devices and their components.	demonstrates in-depth inferences and applications that go beyond the understanding or context of the standard (e.g., systematically assists others with hardware or software problems, creates a detailed troubleshooting document or tutorial, comes up with novel solutions).
	L1.CS.T.01 Develop guidelines that convey systematic troubleshooting strategies that others can use to identify and resolve errors.	provides little to no evidence in addressing the expectation(s).	develops guidelines with support that convey systematic troubleshooting strategies that others can use to identify and resolve errors.	develops guidelines independently that convey systematic troubleshooting strategies that others can use to identify and resolve errors (e.g., students could create a flow chart, a job aid for a help desk employee, or an expert system).	demonstrates in-depth inferences and applications that go beyond the understanding or context of the standard (e.g., someone with limited experience or knowledge could follow student developed guidelines).

COMPUTING SYSTEMS	Standard Benchmark:	The Below Basic student:	The Basic student:	The Proficient student:	In addition to the Proficient Level, the Advanced student:
TROUBLESHOOTING Continued **(CS.T)**	**L2.CS.T.01** Identify how hardware components facilitate logic, input, output, and storage in computing systems, and their common malfunctions.	provides little to no evidence in addressing the expectation(s).	identifies how some hardware components: - facilitate logic, input, output, and storage in computing systems, **and/or** - some of their common malfunctions.	identifies: - how hardware components facilitate logic, input, output, and storage in computing systems. - hardware components common malfunctions.	demonstrates in-depth inferences and applications that go beyond the understanding or context of the standard.

NETWORKS & THE INTERNET	Standard Benchmark:	The Below Basic student:	The Basic student:	The Proficient student:	In addition to the Proficient Level, the Advanced student:
NETWORK COMMUNICATION & ORGANIZATION (NI.NCO)	**8.NI.NCO.01** Model the role of protocols in transmitting data across networks and the internet (e.g., explain protocols and their importance to data transmission; model how packets are broken down into smaller pieces and how they are delivered).	provides little to no evidence in addressing the expectation(s).	- identifies protocols used in transmitting data across networks and the internet, **and/or** - explains the role of protocols in transmitting data across networks and the internet.	- models the role of protocols in transmitting data across networks and the internet.	demonstrates in-depth inferences and applications that go beyond the understanding or context of the standard (e.g., research and compare/contrast multiple network protocols).
	L1.NI.NCO.01 Evaluate the scalability and reliability of networks, by describing the relationship between routers, switches, servers, topology, and addressing.	provides little to no evidence in addressing the expectation(s).	- identifies routers, switches, servers, topology, and addressing. - defines routers, switches, servers, topology, and addressing.	by describing the relationship between routers, switches, servers, topology, and addressing, evaluates the: - scalability of networks. - reliability of networks.	demonstrates in-depth inferences and applications that go beyond the understanding or context of the standard (e.g., students can discuss different types of routers, switches, servers and/or topologies).
	L2.NI.NCO.01 Describe the issues that impact network functionality (e.g., bandwidth, load, latency, topology).	provides little to no evidence in addressing the expectation(s).	describes a limited number of issues that impact network functionality (e.g., bandwidth, load, latency, topology).	describes common issues that impact network functionality (e.g., bandwidth, load, latency, topology).	demonstrates an understanding of trade-offs between network functionality and design.

NETWORKS & THE INTERNET	Standard Benchmark:	The Below Basic student:	The Basic student:	The Proficient student:	In addition to the Proficient Level, the Advanced student:
CYBERSECURITY (NI.C)	**8.NI.C.01** Using grade appropriate content and complexity, create programs that use variables to store and modify data. **8.NI.C.02** Apply multiple methods of encryption to model the secure transmission of data.	provides little to no evidence in addressing the expectation(s).	- lists physical and digital procedures that could be implemented to protect electronic data/ information, **and/or** - describes multiple methods of encryption used to secure data.	- critiques physical and digital procedures that could be implemented to protect electronic data/information. - applies multiple methods of encryption to model the secure transmission of data.	demonstrates in-depth inferences and applications that go beyond the understanding or context of the standard (e.g., explain the impacts of hacking, ransomware, scams, and ethical/legal concerns; compare the advantages and disadvantages of multiple methods of encryption to model the secure transmission of information).
	L1.NI.C.01 Give examples to illustrate how sensitive data can be affected by malware and other attacks.	provides little to no evidence in addressing the expectation(s).	recalls examples to illustrate how sensitive data can be affected by malware and other attacks.	gives multiple detailed examples to illustrate how sensitive data can be affected by malware and other attacks.	demonstrates in-depth inferences and applications that go beyond the understanding or context of the standard.
	L2.NI.C.01 Compare ways software developers protect devices and information from unauthorized access.	provides little to no evidence in addressing the expectation(s).	lists ways software developers protect: - devices from unauthorized access. - information from unauthorized access.	compares ways software developers protect: - devices from unauthorized access. - information from unauthorized access.	demonstrates in-depth inferences and applications that go beyond the understanding or context of the standard (e.g., encryption strategies, authentication strategies).
	L1.NI.C.02 Recommend cybersecurity measures to address various scenarios based on factors such as efficiency, feasibility, and ethical impacts.	provides little to no evidence in addressing the expectation(s).	identifies cybersecurity measures to address various scenarios.	recommends cybersecurity measures to address various scenarios based on factors such as efficiency, feasibility, and ethical impacts.	demonstrates in-depth inferences and applications that go beyond the understanding or context of the standard.

NETWORKS & THE INTERNET	Standard Benchmark:	The Below Basic student:	The Basic student:	The Proficient student:	In addition to the Proficient Level, the Advanced student:
CYBERSECURITY Continued **(NI.C)**	**L1.NI.C.03** Compare various security measures, considering trade-offs between the usability and security of a computing system.	provides little to no evidence in addressing the expectation(s).	- identifies various security measures. - defines various security measures.	compares various security measures, considering trade-offs between the usability and security of a computing system.	demonstrates in-depth inferences and applications that go beyond the understanding or context of the standard (e.g., discuss security policies that are in place that present a trade-off between usability and security).
	L1.NI.C.04 Explain trade-offs when selecting and implementing cybersecurity recommendations.	provides little to no evidence in addressing the expectation(s).	when selecting and implementing cybersecurity recommendations, can give an example of trade-offs: - from a single viewpoint, **and/or** - with inappropriate terminology.	explains trade-offs from multiple perspectives using appropriate terminology when selecting and implementing cybersecurity recommendations.	demonstrates in-depth inferences and applications that go beyond the understanding or context of the standard (e.g., make a recommendation and justify).

DATA & ANALYSIS	Standard Benchmark:	The Below Basic student:	The Basic student:	The Proficient student:	In addition to the Proficient Level, the Advanced student:
STORAGE (DA.S)	**8.DA.S.01** Represent data using multiple encoding schemes (e.g., ASCII, binary).	provides little to no evidence in addressing the expectation(s).	- recognizes data is stored in multiple encoding schemes.	- represents data using multiple encoding schemes.	demonstrates in-depth inferences and applications that go beyond the understanding or context of the standard (e.g., convert data between multiple encoding schemes; ASCII to binary, hex to rgb).
	L1.DA.S.01 Translate between different bit representations of real-world phenomena, such as characters, numbers, and images.	provides little to no evidence in addressing the expectation(s).	can translate between a bit representation of real-world phenomena, such as characters, numbers, or images.	translates between different bit representations of real-world phenomena, such as characters, numbers, and images.	demonstrates in-depth inferences and applications that go beyond the understanding or context of the standard.

DATA & ANALYSIS	Standard Benchmark:	The Below Basic student:	The Basic student:	The Proficient student:	In addition to the Proficient Level, the Advanced student:
STORAGE Continued **(DA.S)**	**L1.DA.S.02** Evaluate the trade-offs in how data elements are organized and where data is stored.	provides little to no evidence in addressing the expectation(s).	- identifies the trade-offs in how data elements are organized and where data is stored. - describes the trade-offs in how data elements are organized and where data is stored.	evaluates the trade-offs in how data elements are organized and where data is stored.	demonstrates in-depth inferences and applications that go beyond the understanding or context of the standard (e.g., research emerging technologies for data storage and evaluate trade-off with current technologies).
COLLECTION, VISUALIZATION, & TRANSFORMATION (DA.CVT)	**8.DA.CVT.01** Using computational tools, transform collected data to make it more useful and reliable.	provides little to no evidence in addressing the expectation(s).	- explores a variety of computational tools and the content of their data. - uses computational tools to collect data.	determines appropriate computational tools to: - transform data to remove errors. - highlight or expose relationships in the data.	demonstrates in-depth inferences and applications that go beyond the understanding or context of the standard (e.g., error checking input during data collection process, export data to another format).
	L1.DA.CVT.01 Create interactive data representations using software tools to help others better understand real-world phenomena (e.g., paper surveys and online data sets).	provides little to no evidence in addressing the expectation(s).	creates, with errors, interactive data representations using software tools.	creates, with no or minor errors, appropriate interactive data representations using software tools to help others better understand real-world phenomena.	demonstrates in-depth inferences and applications that go beyond the understanding or context of the standard (e.g., research emerging visualization techniques and use them to create new data representations).
	L2.DA.CVT.01 Use data analysis tools and techniques to identify patterns in data representing complex systems.	provides little to no evidence in addressing the expectation(s).	uses data analysis tools and techniques to identify patterns in data representing complex systems but draws incorrect conclusions.	uses data analysis tools and techniques to identify correct patterns in data representing complex systems.	demonstrates in-depth inferences and applications that go beyond the understanding or context of the standard (e.g., make a plausible predication based on pattern).

DATA & ANALYSIS	Standard Benchmark:	The Below Basic student:	The Basic student:	The Proficient student:	In addition to the Proficient Level, the Advanced student:
COLLECTION, VISUALIZATION, & TRANSFORMATION Continued **(DA.CVT)**	**L2.DA.CVT.02** Select data collection tools and techniques, and use them to generate data sets that support a claim or communicate information.	provides little to no evidence in addressing the expectation(s).	- selects data collection tools and techniques. - uses data collection tools and techniques to generate data sets but are unable to support a claim or communicate information.	- selects data collection tools and techniques. - uses data collection tools to generate data sets that support a claim or communicate information.	demonstrates in-depth inferences and applications that go beyond the understanding or context of the standard.
INFERENCE & MODELS (DA.IM)	**8.DA.IM.01** Refine computational models based on generated data.	provides little to no evidence in addressing the expectation(s).	- uses models and simulations to formulate, refine, and test hypotheses, **and/or** - tests and analyzes the effects of changing variables while using computational models.	- refines computational models based on generated data.	demonstrates in-depth inferences and applications that go beyond the understanding or context of the standard (e.g., make multiple refinements).
	L1.DA.IM.01 Create computational models that represent the relationships among different elements of data collected from a phenomenon or process.	provides little to no evidence in addressing the expectation(s).	creates computational models that represent the relationships among different elements of data collected from a phenomenon or process.	creates accurate computational models that represent the relationships among different elements of data collected from a phenomenon or process.	demonstrates in-depth inferences and applications that go beyond the understanding or context of the standard.
	L2.DA.IM.01 Formulate, refine, and test scientific hypotheses using models and simulations.	provides little to no evidence in addressing the expectation(s).	formulates scientific hypotheses using models and simulations.	- formulates scientific hypotheses using models and simulations. - refines scientific hypotheses using models and simulations. - tests scientific hypotheses using models and simulations.	demonstrates in-depth inferences and applications that go beyond the understanding or context of the standard.

ALGORITHMS & PROGRAMMING	Standard Benchmark:	The Below Basic student:	The Basic student:	The Proficient student:	In addition to the Proficient Level, the Advanced student:
ALGORITHMS (AP.A)	**8.AP.A.01** Create flowcharts and pseudocode to design algorithms to solve complex problems.	provides little to no evidence in addressing the expectation(s).	- uses flowcharts to modify existing algorithms, **and/or** - uses pseudocode to modify existing algorithms, **and/or** - uses natural language to modify existing algorithms.	- creates flowcharts to design algorithms to solve complex problems. - writes pseudocode to design algorithms to solve complex problems.	demonstrates in-depth inferences and applications that go beyond the understanding or context of the standard (e.g., design algorithms to solve complex problems in multiple ways and determine and use the most effective planning tool).
	L1.AP.A.01 Create a prototype that uses algorithms (e.g., searching, sorting, finding shortest distance) to provide a possible solution for a real-world problem relevant to the student.	provides little to no evidence in addressing the expectation(s).	creates a prototype that uses an algorithm (e.g., searching, sorting, finding shortest distance) to provide a possible solution for a real-world problem relevant to the student.	creates a prototype that uses multiple algorithms (e.g., searching, sorting, finding shortest distance) to provide a possible solution for a real-world problem relevant to the student.	demonstrates in-depth inferences and applications that go beyond the understanding or context of the standard (e.g., student generated problem).
	L2.AP.A.01 Critically examine and trace classic algorithms. Use and adapt classic algorithms to solve computational problems (e.g., selection sort, insertion sort, binary search, linear search).	provides little to no evidence in addressing the expectation(s).	- examines and traces classic algorithms with minor errors. - uses classic algorithms to solve computational problems.	- critically examines and traces classic algorithms. - uses classic algorithms to solve computational problems. - adapts classic algorithms to solve computational problems.	demonstrates in-depth inferences and applications that go beyond the understanding or context of the standard (e.g., use and justify why a given algorithm is more efficient than another).
	L1.AP.A.02 Describe how artificial intelligence algorithms drive many software and physical systems.	provides little to no evidence in addressing the expectation(s).	describes how artificial intelligence algorithms drive a software system or physical system.	describes how artificial intelligence algorithms drive many software and physical systems.	demonstrates in-depth inferences and applications that go beyond the understanding or context of the standard (e.g., student discusses different types of artificial intelligence algorithms).

ALGORITHMS & PROGRAMMING	Standard Benchmark:	The Below Basic student:	The Basic student:	The Proficient student:	In addition to the Proficient Level, the Advanced student:
ALGORITHMS Continued **(AP.A)**	**L2.AP.A.02** Develop an artificial intelligence algorithm to play a game against a human opponent or solve a real-world problem.	provides little to no evidence in addressing the expectation(s).	- develops an artificial intelligence algorithm to play a game against a human opponent or solve a real-world problem. - incorrectly captures some rules of the game.	- develops an artificial intelligence algorithm to play a game against a human opponent or solve a real-world problem. - correctly implements all rules of the game.	demonstrates in-depth inferences and applications that go beyond the understanding or context of the standard (e.g., uses heuristics to select the moves of the computer).
	L2.AP.A.03 Evaluate algorithms (e.g., sorting, searching) in terms of their efficiency, correctness, and clarity.	provides little to no evidence in addressing the expectation(s).	evaluates algorithms in terms of their: - efficiency, **or** - correctness, **or** - clarity.	evaluates algorithms in terms of their: - efficiency. - correctness. - clarity.	demonstrates in-depth inferences and applications that go beyond the understanding or context of the standard.
VARIABLES (AP.V)	**8.AP.V.01** Using grade appropriate content and complexity, create clearly named variables that represent different data types and perform operations on their values.	provides little to no evidence in addressing the expectation(s).	- recognizes that variables can represent different data types, **and/or** - can create a variable, **and/or** - can perform operations on the values of variables.	- clearly names variables. - creates variables that represent different data types. - performs operations on the values of variables.	demonstrates in-depth inferences and applications that go beyond the understanding or context of the standard (e.g., explain types of errors that can occur if improper data types are used in operations, understand structures or classes can contain multiple data types).
	L1.AP.V.01 Use lists to simplify solutions, generalizing computational problems instead of repeatedly using simple variables.	provides little to no evidence in addressing the expectation(s).	with guidance, uses lists to simplify solutions, generalizing computational problems instead of repeatedly using simple variables.	independently uses lists to simplify solutions, generalizing computational problems instead of repeatedly using simple variables.	demonstrates in-depth inferences and applications that go beyond the understanding or context of the standard (e.g., uses standard list operations like filter, map, and reduce).

ALGORITHMS & PROGRAMMING	Standard Benchmark:	The Below Basic student:	The Basic student:	The Proficient student:	In addition to the Proficient Level, the Advanced student:
VARIABLES Continued **(AP.V)**	**L2.AP.V.01** Compare and contrast simple data structures and their uses (e.g., lists, stacks, queues).	provides little to no evidence in addressing the expectation(s).	- identifies simple linear data structures and their uses. - explains simple linear data structures and their uses.	compares and contrasts simple linear data structures and their uses.	demonstrates in-depth inferences and applications that go beyond the understanding or context of the standard (e.g., trees).
CONTROL (AP.C)	**8.AP.C.01** Using grade appropriate content and complexity, design and iteratively develop programs that combine control structures, including nested loops and compound conditionals.	provides little to no evidence in addressing the expectation(s).	designs and iteratively develops programs that: - use simple loops. - use simple conditionals.	designs and iteratively develops programs that include: - nested loops. - compound conditionals.	demonstrates in-depth inferences and applications that go beyond the understanding or context of the standard (e.g., multiple examples of nested loops and compound conditions in a program, evidence of efficient code, clear documentation).
	L1.AP.C.01 Justify the selection of specific control structures when tradeoffs involve implementation, readability, and program performance, and explain the benefits and drawbacks of choices made.	provides little to no evidence in addressing the expectation(s).	justifies the selection of specific control structures when tradeoffs involve: - implementation, **or** - readability, **or** - program performance.	- justifies the selection of specific control structures when tradeoffs involve implementation, readability, and program performance. - explains the benefits and drawbacks of choices.	demonstrates in-depth inferences and applications that go beyond the understanding or context of the standard (e.g., exception handling).
	L1.AP.C.02 Trace the execution of loops and conditional statements, illustrating output and changes in values of named variables.	provides little to no evidence in addressing the expectation(s).	traces the execution of: - loops illustrating output and changes in values of named variables, **or** - conditional statements illustrating output and changes in values of named variables.	traces the execution of: - loops illustrating output and changes in values of named variables, **and** - conditional statements illustrating output and changes in values of named variables.	In addition to the proficient level, student demonstrates in-depth inferences and applications that go beyond the understanding or context of the standard.

ALGORITHMS & PROGRAMMING	Standard Benchmark:	The Below Basic student:	The Basic student:	The Proficient student:	In addition to the Proficient Level, the Advanced student:
CONTROL Continued **(AP.C)**	**L2.AP.C.01** Trace the execution of recursion, illustrating output and changes in values of named variables.	provides little to no evidence in addressing the expectation(s).	with guidance: - traces the execution of recursion. - illustrates output and changes in values of name variables.	independently: - traces the execution of linear recursion. - illustrates output and changes in values of name variables (e.g., factorial function).	demonstrates in-depth inferences and applications that go beyond the understanding or context of the standard (e.g., Fibonacci).
	L1.AP.C.03 Design and iteratively develop computational artifacts for practical intent, personal expression, or to address a societal issue by using events to initiate instructions.	provides little to no evidence in addressing the expectation(s).	designs computational artifacts that uses events to initiate instructions.	- designs computational artifacts for practical intent, personal expression, or to address a societal issue by using events to initiate instructions. - iteratively develops computational artifacts for practical intent, personal expression, or to address a societal issue by using events to initiate instructions.	demonstrates in-depth inferences and applications that go beyond the understanding or context of the standard (e.g., using multiple user interface components).
MODULARITY (AP.M)	**8.AP.M.01** Using grade appropriate content and complexity, decompose problems and subproblems into parts to facilitate the design, implementation, and review of programs. **8.AP.M.02** Using grade appropriate content and complexity, create procedures with parameters to organize code and make it easier to reuse.	provides little to no evidence in addressing the expectation(s).	- recognizes the inefficiency of repetition in programming, **and/or** - recognizes the organizational, readability and labor-saving advantages of code reuse.	- decomposes problems and subproblems into parts. - creates procedures with parameters.	demonstrates in-depth inferences and applications that go beyond the understanding or context of the standard (e.g., create procedures with multiple parameters and/or return values).

ALGORITHMS & PROGRAMMING	Standard Benchmark:	The Below Basic student:	The Basic student:	The Proficient student:	In addition to the Proficient Level, the Advanced student:
MODULARITY Continued **(AP.M)**	**L1.AP.M.01** Decompose problems into smaller components through systematic analysis, using constructs such as procedures, modules, and/or objects.	provides little to no evidence in addressing the expectation(s).	decomposes problems into smaller components that are incohesive or tightly coupled.	decomposes problems into smaller components that are highly cohesive and loosely coupled through systematic analysis, using constructs such as procedures, modules, and/or objects.	demonstrates in-depth inferences and applications that go beyond the understanding or context of the standard (e.g., an appropriate class hierarchy).
	L2.AP.M.01 Construct solutions to problems using student-created components, such as procedures, modules, and/or objects.	provides little to no evidence in addressing the expectation(s).	with guidance, constructs solutions to problems using student-created components, such as procedures, modules, and/or objects.	constructs solutions to problems using student-created components, such as procedures, modules, and/or objects.	demonstrates in-depth inferences and applications that go beyond the understanding or context of the standard.
	L1.AP.M.02 Create artifacts by using procedures within a program, combinations of data and procedures, or independent but interrelated programs.	provides little to no evidence in addressing the expectation(s).	with guidance, creates artifacts by using: - procedures within a program, **or** - combinations of data and procedures, **or** - independent but interrelated programs.	independently, creates artifacts by using: - procedures within a program, **or** - combinations of data and procedures, **or** - independent but interrelated programs.	demonstrates in-depth inferences and applications that go beyond the understanding or context of the standard.
	L2.AP.M.02 Analyze a large-scale computational problem and identify generalizable patterns that can be applied to a solution.	provides little to no evidence in addressing the expectation(s).	- analyzes a large-scale computational problem and with guidance. - identifies generalizable patterns that can be applied to a solution.	- analyzes a large-scale computational problem. - independently identifies generalizable patterns that can be applied to a solution.	demonstrates in-depth inferences and applications that go beyond the understanding or context of the standard.
	L2.AP.M.03 Demonstrate code reuse by creating programming solutions using libraries and APIs.	provides little to no evidence in addressing the expectation(s).	with guidance, demonstrates code reuse by creating programming solutions using libraries and APIs.	independently, demonstrates code reuse by creating programming solutions using libraries and APIs.	demonstrates in-depth inferences and applications that go beyond the understanding or context of the standard.

ALGORITHMS & PROGRAMMING	Standard Benchmark:	The Below Basic student:	The Basic student:	The Proficient student:	In addition to the Proficient Level, the Advanced student:
PROGRAM DEVELOPMENT (AP.PD)	**8.AP.PD.01** Using grade appropriate content and complexity, seek and incorporate feedback from team members and users to refine a solution to a problem. **8.AP.PD.02** Incorporate existing code, media, and libraries into original programs of increasing complexity and give attribution. **8.AP.PD.03** Systematically test and refine programs using a range of test cases. Program Development: **8.AP.PD.04** Using grade appropriate content and complexity, document programs in order to make them easier to follow, test, and debug.	provides little to no evidence in addressing the expectation(s).	- recognizes the advantage of using existing code. - recognizes reasons for testing and refining programs. - recognizes the advantage of documenting programs. - recognizes the role of using feedback.	- incorporates existing code, media, and libraries into original programs. - systematically tests and refines programs. - documents programs. - seeks and incorporates feedback.	demonstrates in-depth inferences and applications that go beyond the understanding or context of the standard (e.g., seek open source libraries to include in their program, seek feedback from a wide audience).
	8.AP.PD.05 Distribute tasks and maintain a project timeline when collaboratively developing computational artifacts.	provides little to no evidence in addressing the expectation(s).	using a pre-written computational artifact: - identifies the project timeline tasks necessary for program development. - breaks down tasks and follows an individual timeline when developing a computational artifact.	when collaboratively developing computational artifacts: - distributes tasks. - maintains a project timeline.	demonstrates in-depth inferences and applications that go beyond the understanding or context of the standard (e.g., adjust the timeline and redistribute tasks to meet the deadline).

ALGORITHMS & PROGRAMMING	Standard Benchmark:	The Below Basic student:	The Basic student:	The Proficient student:	In addition to the Proficient Level, the Advanced student:
PROGRAM DEVELOPMENT Continued **(AP.PD)**	**L1.AP.PD.01** Plan and develop programs by analyzing a problem and/or process, developing and documenting a solution, testing outcomes, and adapting the program for a variety of users.	provides little to no evidence in addressing the expectation(s).	with instructor support, plans and develops programs by: - analyzing a problem and/or process. - developing and documenting a solution. - testing outcomes.	plans and develops programs by: - analyzing a problem and/or process. - developing and documenting a solution. - testing outcomes. - adapting the program for a variety of users.	independently plans and develops programs by: - analyzing a problem and/or process. - developing and documenting a solution. - testing outcomes. - adapting the program for a variety of users.
	L2.AP.PD.01 Plan and develop programs that will provide solutions to a variety of users using a software life cycle process.	provides little to no evidence in addressing the expectation(s).	with instructor support: - plans a program that will provide solutions to a variety of users using a software life cycle process. - develops a program that will provide solutions to a variety of users using a software life cycle process.	- plans a program that will provide solutions to a variety of users using a software life cycle process. - develops a program that will provide solutions to a variety of users using a software life cycle process.	independently: - plans a program that will provide solutions to a variety of users using a software life cycle process. - develops a program that will provide solutions to a variety of users using a software life cycle process.
	L1.AP.PD.02 Evaluate licenses that limit or restrict use of computational artifacts when using resources such as libraries.	provides little to no evidence in addressing the expectation(s).	- identifies licenses that limit or restrict use of computational artifacts when using resources such as libraries. - defines licenses that limit or restrict use of computational artifacts when using resources such as libraries.	evaluates licenses that limit or restrict use of computational artifacts when using resources such as libraries (e.g.,students might consider two software libraries that address a similar need, justifying their choice based on the library that has the least restrictive license).	demonstrates in-depth inferences and applications that go beyond the understanding or context of the standard.

ALGORITHMS & PROGRAMMING	Standard Benchmark:	The Below Basic student:	The Basic student:	The Proficient student:	In addition to the Proficient Level, the Advanced student:
PROGRAM DEVELOPMENT Continued **(AP.PD)**	**L2.AP.PD.02** Use version control systems, integrated development environments (IDEs), and collaborative tools and practices (e.g., code documentation) in a group software project.	provides little to no evidence in addressing the expectation(s).	uses: - integrated development environments (IDEs) in a group software project. - collaborative tools or practices (e.g., code documentation) in a group software project.	uses: - version control systems in a group software project. - integrated development environments (IDEs) in a group software project. - collaborative tools and practices (e.g., code documentation) in a group software project.	demonstrates in-depth inferences and applications that go beyond the understanding or context of the standard.
	L1.AP.PD.03 Use debugging tools to identify and fix errors in a program.	provides little to no evidence in addressing the expectation(s).	identifies strategies to test and debug (identify and fix errors) a program or algorithm to ensure it runs.	tests and debugs (identify and fix errors) a program or algorithm to ensure it runs as intended.	demonstrates in-depth inferences and applications that go beyond the understanding or context of the standard.
	L1.AP.PD.04 Design and develop computational artifacts, working in team roles, using collaborative tools.	provides little to no evidence in addressing the expectation(s).	- designs computational artifacts using collaborative tools. - develops computational artifacts using collaborative tools.	designs and develops computational artifacts, working in team roles, using collaborative tools (e.g., team roles in pair programming are driver and navigator but could be more specialized in larger teams).	demonstrates in-depth inferences and applications that go beyond the understanding or context of the standard. As programs grow more complex, the choice of resources that aid program development becomes increasingly important and should be made by the students.
	L2.AP.PD.03 Develop programs for multiple computing platforms.	provides little to no evidence in addressing the expectation(s).	with instructor support, develops programs for multiple computing platforms.	develops programs for multiple computing platforms (e.g., disparate programs for different platforms: computer desktop, web, or mobile).	develops programs for multiple cross-platform computing platforms (e.g., platforms could include: computer desktop, web, or mobile).

ALGORITHMS & PROGRAMMING	Standard Benchmark:	The Below Basic student:	The Basic student:	The Proficient student:	In addition to the Proficient Level, the Advanced student:
PROGRAM DEVELOPMENT Continued **(AP.PD)**	**L1.AP.PD.05** Document design decisions using text, graphics, presentations, and/or demonstrations in the development of complex programs.	provides little to no evidence in addressing the expectation(s).	partially documents design decisions using: - text, graphics, presentations, **and/or** - demonstrations in the development of complex programs.	documents design decisions using: - text, graphics, presentations, **and/or** - demonstrations in the development of complex programs.	demonstrates in-depth inferences and applications that go beyond the understanding or context of the standard.
	L2.AP.PD.04 Evaluate key qualities of a program through a process such as a code review (e.g., qualities could include correctness, usability, readability, efficiency, portability, and scalability).	provides little to no evidence in addressing the expectation(s).	- identifies key qualities of a program. - defines key qualities of a program (e.g., correctness, usability, readability, efficiency, portability, and scalability).	evaluates key qualities of a program through a process such as a code review (e.g., correctness, usability, readability, efficiency, portability, and scalability).	evaluates key qualities of a program and makes recommendations to improve that program through a process such as a code review (e.g., correctness, usability, readability, efficiency, portability, and scalability).
	L1.AP.PD.06 Evaluate and refine computational artifacts to make them more usable and accessible.	provides little to no evidence in addressing the expectation(s).	with support: - evaluates computational artifacts to make them more usable and accessible. - refines computational artifacts to make them more usable and accessible.	- evaluates computational artifacts to make them more usable and accessible. - refines computational artifacts to make them more usable and accessible.	supports others as they: - evaluate computational artifacts to make them more usable and accessible. -refine computational artifacts to make them more usable and accessible.

ALGORITHMS & PROGRAMMING	Standard Benchmark:	The Below Basic student:	The Basic student:	The Proficient student:	In addition to the Proficient Level, the Advanced student:
PROGRAM DEVELOPMENT Continued **(AP.PD)**	**L2.AP.PD.05** Develop and use a series of test cases to verify that a program performs according to its design specifications.	provides little to no evidence in addressing the expectation(s).	uses a series of test cases to verify that a program performs according to its design specifications.	- develops a series of test cases to verify that a program performs according to its design specifications. - uses a series of test cases to verify that a program performs according to its design specifications. - at this level, students are expected to select their own test cases.	demonstrates in-depth inferences and applications that go beyond the understanding or context of the standard.
	L2.AP.PD.06 Explain security issues that might lead to compromised computer programs.	provides little to no evidence in addressing the expectation(s).	- identifies security issues that might lead to compromised computer programs. - describes security issues that might lead to compromised computer programs.	explains security issues that might lead to compromised computer programs (e.g., lack of bounds checking, poor input validation, and circular references).	explains and provides potential solutions for security issues that might lead to compromised computer programs.
	L2.AP.PD.07 Modify an existing program to add additional functionality and discuss intended and unintended implications (e.g., breaking other functionality).	provides little to no evidence in addressing the expectation(s).	modifies an existing program to add additional functionality.	- modifies an existing program to add additional functionality. - discusses intended and unintended implications (e.g., breaking other functionality).	demonstrates in-depth inferences and applications that go beyond the understanding or context of the standard.
	L2.AP.PD.08 Compare multiple programming languages and discuss how their features make them suitable for solving different types of problems.	provides little to no evidence in addressing the expectation(s).	- identifies multiple programming languages. - explains multiple programming languages.	- compares multiple programming languages. - discusses how their features make them suitable for solving different types of problems.	demonstrates in-depth inferences and applications that go beyond the understanding or context of the standard.

IMPACTS OF COMPUTING	Standard Benchmark:	The Below Basic student:	The Basic student:	The Proficient student:	In addition to the Proficient Level, the Advanced student:
CULTURE (IC.C)	**8.IC.C.01** Describe impacts associated with computing technologies that affect people's everyday activities and career options. **8.IC.C.02** Describe issues of bias and accessibility in the design of technologies.	provides little to no evidence in addressing the expectation(s).	- lists computing technologies that affect people's everyday activities, **and/or** - lists computing technologies that affect people's career options, **and/or** - identifies an accessibility issue related to technology.	- describes impacts associated with computing technologies that affect people's everyday activities. - describes impacts associated with computing technologies that affect people's career options. - describes issues of bias and accessibility in the design of technologies.	demonstrates in-depth inferences and applications that go beyond the understanding or context of the standard (e.g., devise solutions to solve issues of bias in accessibility, reduce negative impacts of computing technology in everyday life).
	L1.IC.C.01 Evaluate the ways computing impacts personal, ethical, social, economic, and cultural practices.	provides little to no evidence in addressing the expectation(s).	- identifies the ways computing impacts personal, ethical, social, economic, and cultural practices. - defines the ways computing impacts personal, ethical, social, economic, and cultural practices.	evaluates the ways computing impacts personal, ethical, social, economic, and cultural practices.	demonstrates in-depth inferences and applications that go beyond the understanding or context of the standard.
	L2.IC.C.01 Evaluate the beneficial and harmful effects that computational artifacts and innovations have on society.	provides little to no evidence in addressing the expectation(s).	- identifies the beneficial and harmful effects that computational artifacts and innovations have on society. - defines the beneficial and harmful effects that computational artifacts and innovations have on society.	evaluates the beneficial and harmful effects that computational artifacts and innovations have on society.	demonstrates in-depth inferences and applications that go beyond the understanding or context of the standard.

IMPACTS OF COMPUTING	Standard Benchmark:	The Below Basic student:	The Basic student:	The Proficient student:	In addition to the Proficient Level, the Advanced student:
CULTURE Continued **(IC.C)**	**L1.IC.C.02** Test and refine computational artifacts to reduce bias and equity deficits.	provides little to no evidence in addressing the expectation(s).	identifies how computational artifacts reduce bias and equity deficits.	- tests computational artifacts to reduce bias and equity deficits. - refines computational artifacts to reduce bias and equity deficits.	demonstrates in-depth inferences and applications that go beyond the understanding or context of the standard (e.g., student creates a computational artifact that utilizes accepted accessibility standards).
	L2.IC.C.02 Evaluate the impact of equity, access, and influence on the distribution of computing resources in a global society.	provides little to no evidence in addressing the expectation(s).	provides examples for how: - equity impacts the distribution of computing resources in a global society. - access impacts the distribution of computing resources in a global society. - influence impacts the distribution of computing resources in a global society.	evaluates the impact of: - equity on the distribution of computing resources in a global society. - access on the distribution of computing resources in a global society. - influence on the distribution of computing resources in a global society.	demonstrates in-depth inferences and applications that go beyond the understanding or context of the standard.
	L1.IC.C.03 Demonstrate how a given algorithm applies to problems across disciplines.	provides little to no evidence in addressing the expectation(s).	identifies several disciplines a given algorithm applies to.	demonstrates how a given algorithm applies to problems across disciplines.	demonstrates in-depth inferences and applications that go beyond the understanding or context of the standard.
	L2.IC.C.03 Predict how computational innovations that have revolutionized aspects of our culture might evolve.	provides little to no evidence in addressing the expectation(s).	identifies computational innovations that have revolutionized aspects of our culture.	predicts how computational innovations, that have revolutionized aspects of our culture, might evolve.	demonstrates in-depth inferences and applications that go beyond the understanding or context of the standard.

IMPACTS OF COMPUTING	Standard Benchmark:	The Below Basic student:	The Basic student:	The Proficient student:	In addition to the Proficient Level, the Advanced student:
SOCIAL INTERACTIONS (IC.SI)	**8.IC.SI.01** Using grade appropriate content and complexity, collaborate using tools to connect with peers when creating a computational artifact. **8.IC.SI.02** Practice grade-level appropriate behavior and responsibilities while participating in an online community. Identify and report inappropriate behavior.	provides little to no evidence in addressing the expectation(s).	- collaborates with peers using a tool in an attempt to create a computational artifact. - intermittently collaborates and behaves within an online community.	- collaborates using tools to connect with peers when creating a computational artifact. - practices grade-level appropriate behavior and responsibilities while participating in an online community. - identifies and reports inappropriate behavior while participating in an online community, when applicable.	demonstrates in-depth inferences and applications that go beyond the understanding or context of the standard (e.g., moderate, model appropriate behavior, and facilitate discussions in an online community).
	L1.IC.SI.01 Use tools and methods for collaboration.	provides little to no evidence in addressing the expectation(s).	uses basic tools and methods for collaboration.	uses a variety of tools and methods for collaboration.	demonstrates in-depth inferences and applications that go beyond the understanding or context of the standard (e.g., students could compare and recommend ways different tools could help a team become more cohesive).
	L1.IC.SI.02 Practice grade-level appropriate behavior and responsibilities while participating in an online community. Identify and report inappropriate behavior.	provides little to no evidence in addressing the expectation(s).	generally practices grade-level appropriate behavior and responsibilities while participating in an online community.	- practices grade-level appropriate behavior and responsibilities while participating in an online community. - identifies and reports inappropriate behavior.	models grade-level appropriate behavior and responsibilities while participating in an online community.

IMPACTS OF COMPUTING	Standard Benchmark:	The Below Basic student:	The Basic student:	The Proficient student:	In addition to the Proficient Level, the Advanced student:
SOCIAL INTERACTIONS Continued **(IC.SI)**	**L2.IC.SI.01** Practice grade-level appropriate behavior and responsibilities while participating in an online community. Identify and report inappropriate behavior.	provides little to no evidence in addressing the expectation(s).	generally practices grade-level appropriate behavior and responsibilities while participating in an online community.	- practices grade-level appropriate behavior and responsibilities while participating in an online community. - identifies and reports inappropriate behavior.	models grade-level appropriate behavior and responsibilities while participating in an online community.
SAFETY, LAW, & ETHICS (IC.SLE)	**8.IC.SLE.01** Using grade appropriate content and complexity, describe tradeoffs between allowing information to be public and keeping information private and secure. **8.IC.SLE.02** Using grade appropriate content and complexity, describe tradeoffs between allowing information to be public and keeping information private and secure.	provides little to no evidence in addressing the expectation(s).	- lists reasons for allowing information to be public and keeping information private and secure, **and/or** With regard to positive and/or malicious intent can: - name the legal impacts associated with software development and use, - name the social impacts associated with software development and use, - name the ethical impacts associated with software development and use.	- describes tradeoffs between allowing information to be public and keeping information private and secure, **and** With regard to positive and malicious intent: - discusses the legal impacts associated with software development and use, - discusses the social impacts associated with software development and use, - discusses the ethical impacts associated with software development and use.	demonstrates in-depth inferences and applications that go beyond the understanding or context of the standard (e.g., research and report on current legal, social, and ethical worldwide trends in software development; construct an argument for or against the use of personal data by commercial entities or government).
	L1.IC.SLE.01 Explain the beneficial and harmful effects that intellectual property laws can have on innovation.	provides little to no evidence in addressing the expectation(s).	- identifies a beneficial effect intellectual property laws have had on innovation, **and/or** - identifies a harmful effect intellectual property laws have had on innovation.	- identifies a beneficial effect intellectual property laws have had on innovation. - identifies a harmful effect intellectual property laws have had on innovation.	demonstrates in-depth inferences and applications that go beyond the understanding or context of the standard.

IMPACTS OF COMPUTING	Standard Benchmark:	The Below Basic student:	The Basic student:	The Proficient student:	In addition to the Proficient Level, the Advanced student:
SAFETY, LAW, & ETHICS Continued **(IC.SLE)**	**L2.IC.SLE.01** Debate laws and regulations that impact the development and use of software and technology.	provides little to no evidence in addressing the expectation(s).	- identifies laws and regulations that impact the development and use of software and technology. - defines laws and regulations that impact the development and use of software and technology.	debates laws and regulations that impact the development and use of software and technology.	demonstrates in-depth inferences and applications that go beyond the understanding or context of the standard.
	L1.IC.SLE.02 Explain the privacy concerns related to the collection and generation of data through automated processes that may not be evident to users.	provides little to no evidence in addressing the expectation(s).	identifies the privacy concerns related to the collection and generation of data through automated processes that may not be evident to users.	explains the privacy concerns related to the collection and generation of data through automated processes that may not be evident to users.	demonstrates in-depth inferences and applications that go beyond the understanding or context of the standard.
	L1.IC.SLE.03 Evaluate the social and economic implications of privacy in the context of safety, law, or ethics.	provides little to no evidence in addressing the expectation(s).	provides examples of the: - social implications of privacy in the context of safety, law, or ethics. - economic implications of privacy in the context of safety, law, or ethics.	evaluates the: - social implications of privacy in the context of safety, law, or ethics. - economic implications of privacy in the context of safety, law, or ethics.	demonstrates in-depth inferences and applications that go beyond the understanding or context of the standard.

IMPACTS OF COMPUTING	Standard Benchmark:	The Below Basic student:	The Basic student:	The Proficient student:	In addition to the Proficient Level, the Advanced student:
SAFETY, LAW, & ETHICS Continued **(IC.SLE)**	**L1.IC.SLE.04** Using grade level appropriate content and complexity, discuss the legal, social, and ethical impacts associated with software development and use, including both positive and malicious intent.	provides little to no evidence in addressing the expectation(s).	provides examples of the: - legal impacts associated with software development and use, including both positive and malicious intent, **or** - social impacts associated with software development and use, including both positive and malicious intent, **or** - ethical impacts associated with software development and use, including both positive and malicious intent.	discusses the: - legal impacts associated with software development and use, including both positive and malicious intent. - social impacts associated with software development and use, including both positive and malicious intent. - ethical impacts associated with software development and use, including both positive and malicious intent.	demonstrates in-depth inferences and applications that go beyond the understanding or context of the standard.
	L2.IC.SLE.02 Using grade level appropriate content and complexity, discuss the legal, social, and ethical impacts associated with software development and use, including both positive and malicious intent.	provides little to no evidence in addressing the expectation(s).	provides examples of the: - legal impacts associated with software development and use, including both positive and malicious intent, **or** - social impacts associated with software development and use, including both positive and malicious intent, **or** - ethical impacts associated with software development and use, including both positive and malicious intent.	discusses the: - legal impacts associated with software development and use, including both positive and malicious intent. - social impacts associated with software development and use, including both positive and malicious intent. - ethical impacts associated with software development and use, including both positive and malicious intent.	demonstrates in-depth inferences and applications that go beyond the understanding or context of the standard.

Date: April 12, 2019

To: Walt Wilcox, Chairman, and all members of the
Wyoming State Board of Education

From: Computer Science Standards Review Committee

Subject: Revised Computer Science Standards with Embedded Priorities

As a committee of K-14 teachers and administrators, computer science professionals and interested community members, we appreciate the thoughtful feedback we received from the State Board of Education, our education community, and the public. We have read and discussed the feedback and engaged in serious discussions on the issues raised. Although this brief letter addresses only the key issues and adjustments, know that we spent many hours critically analyzing each of the standards, both before and after we received feedback.

Outcomes: The proposed standards are based on, and aligned with, national standards and standards from several other states. During our original rounds of small, large, and full group discussions on each standard, we considered perspectives from a multitude of stakeholders with and without content area expertise. During our most recent meeting, based on all the recent feedback, we worked with the WDE to revise the K-5 standards to include guidance for prioritizing standards while maintaining alignment with national expectations.

Standards and Benchmarks: Many of the committee members are current or former elementary educators both with and without expertise in computer science. We believe each of the standards is grade-level appropriate and is in alignment with the national standards and standards in several other states. However, we understand the difficulties inherent with teaching elementary classes and believe that, in this set of revisions, we have created a solution for reducing the total load at the elementary grades.

Based on three separate rounds of review and consensus-building on the elementary benchmarks, we determined that they can be broken into three groups: *priority*, *supporting*, and *enhanced*. First, we marked as "*priority benchmarks*" the ones we determined to be most essential for students to master at their grade level. Second, we identified many benchmarks that will naturally be taught in the course of teaching the priority benchmarks or in teaching to benchmarks from different content areas. We marked these as "*supporting benchmarks*". These benchmarks cover essential skills but need not be separated out as individual outcomes. Third, we identified some benchmarks that would be beneficial for students to know, but not essential. These benchmarks are marked as "*enhanced benchmarks*".

There are now four priority benchmarks for the K-2 grade band and nine for the 3-5 grade band.

Utility: We understand and appreciate your concerns related to domain-specific language. We believe it is important that, to adequately prepare students, the standards be written in the language of computer science just as the math and science standards are written in the languages of math and science. We do understand some terminology is unfamiliar to many teachers and, indeed, many members of the public. We have added clarifications within some of the benchmarks (for example, clarifying “authentication factor” with “login”), provided a glossary, and provided implementation ideas for each benchmark.

In response to the confusion due to the overall format, we have worked with the WDE to make the document more user-friendly. We know that the many references to cross-disciplinary standards and support material add complexity, but they also highlight how interconnected computer science now is with many other disciplines. We believe that, as districts implement these new standards, the cross-references will be an essential resource.

The issue of labeling is also understood by the committee. However, in order for teachers to have easy access to classroom resources and professional development opportunities as they implement these standards, our labelling must be consistent with other standards so teachers can find resources developed by others. Therefore, we have kept the benchmark labeling as it was in the draft.

Deployment: While we are excited to help add this 10th content area to the Common Core of Knowledge, we too are very concerned with implementation across the state. We agree that it would be helpful to have specific deployment plans regarding professional development and certification. We endorse your statement that the legislature should support implementation and professional development opportunities with additional funding. Resources and professional development opportunities are available. Let’s make sure our teachers have access to them.

Conclusion: We appreciate all of the feedback on the original standards document. After reconvening and going through a point-by-point review of how each K-5 benchmark fits as a building block for a quality Computer Science education, we feel that the new version provides the guidance needed to help maintain a reasonable load for classroom teachers.

We want to reiterate our thanks to everyone who took the time to read through the standards document and related resources. We, too, want the best for Wyoming students and we believe the review process and our subsequent revisions have strengthened the proposed standards.

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Implementation Plan

2019 Wyoming Computer Science Content and Performance Standards			
State Support - WDE	**Phase 1: Awareness / Planning [2018-2020]**	**Phase 2: Transition / Implementation [2020-2022]**	**Phase 3: Full Implementation [2022-2023]**
	❏ Conduct Educators survey to determine implementation needs ❏ Provide Updates through Superintendent's Memo, Edmodo, Facebook, Twitter, state Conferences ❏ Follow Updates on states working with implementation standards similar to the proposed 2019 WY CS Standards ❏ Membership in CSTA and ISTE to remain current on CS standards related issues ❏ Develop communication plan for the 2019 WY CS Standards	❏ Develop toolkit on WDE website with resources for the 2019 WY CS Standards ❏ Develop and provide professional development focused on the 2019 WY CS Standards ❏ Update website with resources ❏ Maintain membership to professional organizations focused on computer science education ❏ Maintain statewide communication regarding implementation for the 2019 WY CS Standards	❏ Maintain membership to professional organizations focused on computer science education ❏ Maintain statewide communication regarding implementation for the 2019 WY CS Standards ❏ Continue to develop and maintain resources and toolkit on the WDE website ❏ Develop and provide professional development on the 2019 WY CS Standards ❏ Collect feedback from districts on standards implementation
Recommended District Support	**Phase 1: Awareness / Planning [2018-2020]**	**Phase 2: Transition / Implementation [2020-2022]**	**Phase 3: Full Implementation [2022-2023]**
	❏ Review standards and contact WDE with questions or to clarify the standards' document ❏ Consider possible impacts of the computer science standards on curriculum, district assessments and instruction	❏ Develop an implementation plan for the maintain statewide communication regarding implementation for the 2019 WY CS Standards ❏ Review alignment of potential curricular resources	❏ Provide feedback to WDE on implementation of the of the 2019 WY CS Standards ❏ Evaluate implementation of the 2019 WY CS Standards ❏ Review curriculum district assessments and instructional practices

DRAFT Presented at SBE Meeting March 21, 2019

Developed by WDE Standards Team - Computer Science Consultant Brian Cole 307-777-5036, brian.cole@wyo.gov

Communication Plan

2019 Wyoming Computer Science Content and Performance Standards			
State Support - WDE	**Phase 1: Awareness / Planning [2018-2020]**	**Phase 2: Transition [2020-2022]**	**Phase 3: Implementation [2022-2023]**
	❑ Gather contact information for individuals interested in serving on the Computer Science Standards Committee: • Educators (K-12, Administrators, Higher Education) • Parents, Community • Business/Industry • Students ❑ Provide information about the standards process and invite members of the public to serve on the committee ❑ Press release – announcing open public comment timeframe and hearings ❑ Add resources and supporting documents to the WDE website / toolkit as needed	❑ Inform districts and the public of the computer science standards on the WDE website ❑ Provide updates at content conferences in Wyoming ❑ Educate school districts on the structure and layout of the proposed standards ❑ Gather district feedback ❑ Create of a professional development plan ❑ Create of an implementation plan	❑ Inform school districts and public of 2019 WY CS Standards and available online resources ❑ Send communication through media streams including Edmodo / WDE newsletter / WDE social media ❑ Maintain communication regarding statewide implementation ❑ Updated professional development opportunities
Modes of Communication	**Primary**	**Secondary**	**Supporting**
	• WDE Website • Superintendent's Memo • WDE Press Release • WDE Standards Newsletter	• FAQs • Social Media – Facebook, Twitter • Professional Learning Communities - Edmodo	• NPR Radio

DRAFT Presented at SBE Meeting March 21, 2019

Developed by WDE Standards Team - Computer Science Consultant Brian Cole 307-777-5036, brian.cole@wyo.gov

Professional Development Plan

2019 Wyoming Computer Science Content and Performance Standards			
State Support - WDE	**Phase 1: Awareness / Planning [2018-2020]**	**Phase 2: Transition [2020-2022]**	**Phase 3: Implementation [2022-2023]**
	❏ When adopted, post 2019 WY CS Standards on WDE website ❏ Survey districts on PD needs and develop PD plan ❏ Educate on the structure and layout of the 2019 WY CS Standards ❏ Provide updates at conferences within the state ❏ Create resources / documents/ videos on the WDE website / toolkit ❏ Present standard's timeline and computer science processes to the State Board of Education, WCDA, and other PD events	❏ Monitor district needs and collect feedback on implementation of the 2019 WY CS Standards ❏ Respond to individual district's questions ❏ Provide professional development through WDE newsletter ❏ Develop and facilitate professional development opportunities on the 2019 WY CS Standards ❏ Update and maintain resources on the WDE website ❏ Update and share new information at statewide events(e.g., WCDA, SBE, STEAM, Innovations) ❏ Provide resources and PD opportunities on Edmodo	❏ Assess districts progress on implementation of the 2019 WY CS Standards ❏ Respond to individual district questions ❏ Update and maintain professional development through memos, Edmodo, and WDE Standards' newsletter ❏ Prepare and share best practices through professional development around implementing the 2019 WY CS Standards ❏ Facilitate professional development opportunities on the 2019 WY CS Standards ❏ Update and maintain resources on the WDE website ❏ Update and share new information at statewide events ❏ Provide resources and PD opportunities on Edmodo

DRAFT Presented at SBE Meeting March 21, 2019

Developed by WDE Standards Team - Computer Science Consultant Brian Cole 307-777-5036, brian.cole@wyo.gov

		❑ Align selected district curriculum, instruction, district assessments, and professional development ❑ Maintain and develop resources, including resources found on the WDE website ❑ Identify and select aligned instructional practices	❑ Review district assessment data

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Update on Proposed 2019 Wyoming Computer Science Content & Performance Standards

State Board of Education
April 25, 2019

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EDU.WYOMING.GOV

WDE Consultants

WYOMING
DEPARTMENT OF EDUCATION

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Overview

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- Update on CSSRC April 8-9 Meeting
- Proposed CS Standards
- Timeline for Process
- Implementation, Communication, and Professional Development Plans
- Resources & Appendices

April 8-9 CSSRC Meeting

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- Welcome
- Whole group discussion on comments/questions (HW)
- Grade-band subgroup review of K-5 benchmarks - determine approach (subgroups = K-2, 3-5, MS/HS)
- Call-in discussion with non-attending CSSRC members
- Whole group discussion on decisions to be made
  - Revise/rearrange/remove sections of the document
  - Determine “big rocks”
  - Possibly merging benchmarks
  - Decide what benchmarks should be foundational, priority, and (+)beyond

April 8-9 CSSRC Meeting (cont.)

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- Reconvene in grade-band subgroups and reach consensus
- Merge groups (K-2/3-5 and MS/HS) to review, revise, and reach consensus
- Whole committee - review, revise, and reach consensus

CSSRC Final Consensus

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- Break out the K-5 benchmarks into 3 levels
  - ***Priority*** Benchmark (Gold) - All students are expected to be instructed on and demonstrate mastery of the content and performance expectations included in these benchmarks.
  - ***Supporting*** Benchmark - All students are expected to be instructed on these standards, taught within the context of the priority standards.
  - ***Enhanced*** Benchmark - Students have an opportunity for enrichment above what all students are expected to know and do as required by the priority benchmarks.

K-5 CS Content Standards

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PROPOSED 2019 WYOMING COMPUTER SCIENCE CONTENT STANDARDS

Grade K-5 Progression

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DOMAIN - KEY	COMPUTING SYSTEMS	NETWORKS & THE INTERNET	DATA & ANALYSIS	ALGORITHMS & PROGRAMMING	IMPACTS OF COMPUTING

COMPUTING SYSTEMS	End of Grade 2	End of Grade 5
DEVICES (CS.D)	**SUPPORTING** 2.CS.D.01 Independently select and use a computing device to perform a variety of tasks for an intended outcome (e.g., create an artifact). **Practice 1.1** Fostering an Inclusive Computing Culture	**(+) ENHANCED** 5.CS.D.01 Independently, describe how internal and external parts of computing devices function to form a system. **Practice 7.2** Communicating About Computing
HARDWARE & SOFTWARE (CS.HS)	**SUPPORTING** 2.CS.HS.01 Demonstrate and describe the function of common components of computing systems (hardware and software) (e.g., use a browser, search engine). **Practice 7.2** Communicating About Computing	**PRIORITY** 5.CS.HS.01 Model how information is translated, transmitted, and processed in order to flow through hardware and software to accomplish tasks. **Practice 4.4** Developing and Using Abstractions
TROUBLESHOOTING (CS.T)	**SUPPORTING** 2.CS.T.01 Recognize computing systems might not work as expected and identify and effectively communicate simple hardware or software problems and implement solutions (e.g., app or program is not working as expected, no sound is coming from the device, caps lock turned on) and discuss problems with peers and adults. **Practice 6.2** Testing and Refining Computational Artifacts **Practice 7.2** Communicating About Computing	**SUPPORTING** 5.CS.T.01 Identify hardware and software problems that may occur during everyday use, then develop, apply, and explain strategies for solving these problems. **Practice 6.2** Testing and Refining Computational Artifacts

K-5 CS Performance Standards (PLDs)

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PROPOSED 2019 WYOMING COMPUTER SCIENCE PERFORMANCE STANDARDS

Grade K-5 Performance Level Descriptors (PLDs)

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DOMAIN - KEY	COMPUTING SYSTEMS	NETWORKS & THE INTERNET	DATA & ANALYSIS	ALGORITHMS & PROGRAMMING	IMPACTS OF COMPUTING

COMPUTING SYSTEMS	Standard Benchmark:	The Below Basic student:	The Basic student:	The Proficient student:	In addition to the Proficient Level, the Advanced student:
DEVICES (CS.D)	**2.CS.D.01** Independently select and use a computing device to perform a variety of tasks for an intended outcome (e.g., create an artifact).	provides little to no evidence in addressing the expectation(s).	with guidance, uses a computing device to complete assignments or teacher led activities.	regularly uses a computing device to independently: - power on and off devices. - authenticate, when applicable. - open appropriate programs. - complete assignments or teacher led activities.	demonstrates in-depth inferences and applications that go beyond the understanding or context of the standard (e.g., can recognize capabilities of multiple devices and can perform similar tasks with them).
	5.CS.D.01 Independently, describe how internal and external parts of computing devices function to form a system.	provides little to no evidence in addressing the expectation(s).	with guidance, describes with some errors how internal and external parts of computing devices function to form a system.	independently describes with few to no errors how internal and external parts of computing devices function to form a system.	demonstrates in-depth inferences and applications that go beyond the understanding or context of the standard (e.g., demonstrates on different types of devices).

CS Standards Review Timeline

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Apr-May 2018
- Call for Participants to serve on Computer Science Standards Review Committee (CSSRC)
- Collect Community Input (5 locations around state + online for 55 days)
- CSSRC Webinar - Understanding the Standards Review Process and Homework Assignment

July 2018
- CSSRC 3-day Face-to-Face Meeting in Casper [July 15-17, 2018]

Oct-Dec
- CSSRC 3-day Face-to-Face Meeting in Casper [October 25-27, 2018]
- 4 Webinars - subgroup work to finalize grade band PLDs and Clarification Statements
- 3 Webinars - subgroup work on Introduction, Appendices, and Cross-Disciplinary Connections
- 1 Webinar - whole committee to review and finalize Computer Science Standards Document

January 2019
- Present Proposed 2019 CS Standards to SBE
- Press Release and Superintendent's Memo announcing Public Input on the Proposed 2019 Computer Science Standards
- Opened Public Input online (1/22-3/5)
- Opened Educator Survey (1/22-3/3)

Feb. - Mar.
- Collect Public Input (5 locations + online for 45 days) [February 25-28, 2019]
- Presented Memo updating the SBE at their Feb. mtg. on the Public Input process to date
- Present Public Input to the SBE at March meeting

CS Standards Review Timeline
Proposed Next Steps

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May- June

- Ch. 10 Rules Promulgation
  - Governor's Office 10-day review
  - Press Release and Superintendent's Memo
  - 45-day minimum Public Comment (online)

July- Aug.

- Present Comments to SBE
- Action to Adopt

Sept.-Nov.

- LSO and Governor's 75-day Review

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Plans for Implementation, Communication, and Professional Development

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Implementation Plan

WYOMING DEPARTMENT OF EDUCATION

2019 Wyoming Computer Science Content and Performance Standards			
State Support - WDE	Phase 1: Awareness / Planning [2018-2020]	Phase 2: Transition / Implementation [2020-2022]	Phase 3: Full Implementation [2022-2023]
	❑ Conduct Educators survey to determine implementation needs ❑ Provide Updates through Superintendent's Memo, Edmodo, Facebook, Twitter, state Conferences ❑ Follow Updates on states working with implementation standards similar to the proposed 2019 WY CS Standards ❑ Membership in CSTA and ISTE to remain current on CS standards related issues ❑ Develop communication plan for the 2019 WY CS Standards	❑ Develop toolkit on WDE website with resources for the 2019 WY CS Standards ❑ Develop and provide professional development focused on the 2019 WY CS Standards ❑ Update website with resources ❑ Maintain membership to professional organizations focused on computer science education ❑ Maintain statewide communication regarding implementation for the 2019 WY CS Standards	❑ Maintain membership to professional organizations focused on computer science education ❑ Maintain statewide communication regarding implementation for the 2019 WY CS Standards ❑ Continue to develop and maintain resources and toolkit on the WDE website ❑ Develop and provide professional development on the 2019 WY CS Standards ❑ Collect feedback from districts on standards implementation
Recommended District Support	Phase 1: Awareness / Planning [2018-2020]	Phase 2: Transition / Implementation [2020-2022]	Phase 3: Full Implementation [2022-2023]
	❑ Review standards and contact WDE with questions or to clarify the standards' document ❑ Consider possible impacts of the computer science standards on curriculum, district assessments and instruction	❑ Develop an implementation plan for the maintain statewide communication regarding implementation for the 2019 WY CS Standards ❑ Review alignment of potential curricular resources	❑ Provide feedback to WDE on implementation of the of the 2019 WY CS Standards ❑ Evaluate implementation of the 2019 WY CS Standards ❑ Review curriculum district assessments and instructional practices

Communication Plan

WYOMING
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2019 Wyoming Computer Science Content and Performance Standards			
State Support - WDE	**Phase 1: Awareness / Planning [2018-2020]**	**Phase 2: Transition [2020-2022]**	**Phase 3: Implementation [2022-2023]**
	❑ Gather contact information for individuals interested in serving on the Computer Science Standards Committee: • Educators (K-12, Administrators, Higher Education) • Parents, Community • Business/Industry • Students ❑ Provide information about the standards process and invite members of the public to serve on the committee ❑ Press release – announcing open public comment timeframe and hearings ❑ Add resources and supporting documents to the WDE website / toolkit as needed	❑ Inform districts and the public of the computer science standards on the WDE website ❑ Provide updates at content conferences in Wyoming ❑ Educate school districts on the structure and layout of the proposed standards ❑ Gather district feedback ❑ Create of a professional development plan ❑ Create of an implementation plan	❑ Inform school districts and public of 2019 WY CS Standards and available online resources ❑ Send communication through media streams including Edmodo / WDE newsletter / WDE social media ❑ Maintain communication regarding statewide implementation ❑ Updated professional development opportunities
Modes of Communication	**Primary**	**Secondary**	**Supporting**
	• WDE Website • Superintendent's Memo • WDE Press Release • WDE Standards Newsletter	• FAQs • Social Media – Facebook, Twitter • Professional Learning Communities - Edmodo	• NPR Radio

Professional Development Plan

WYOMING DEPARTMENT OF EDUCATION

2019 Wyoming Computer Science Content and Performance Standards			
State Support - WDE	**Phase 1: Awareness / Planning [2018-2020]**	**Phase 2: Transition [2020-2022]**	**Phase 3: Implementation [2022-2023]**
	❑ When adopted, post 2019 WY CS Standards on WDE website ❑ Survey districts on PD needs and develop PD plan ❑ Educate on the structure and layout of the 2019 WY CS Standards ❑ Provide updates at conferences within the state ❑ Create resources / documents/ videos on the WDE website / toolkit ❑ Present standard's timeline and computer science processes to the State Board of Education, WCDA, and other PD events	❑ Monitor district needs and collect feedback on implementation of the 2019 WY CS Standards ❑ Respond to individual district's questions ❑ Provide professional development through WDE newsletter ❑ Develop and facilitate professional development opportunities on the 2019 WY CS Standards ❑ Update and maintain resources on the WDE website ❑ Update and share new information at statewide events(e.g., WCDA, SBE, STEAM, Innovations) ❑ Provide resources and PD opportunities on Edmodo	❑ Assess districts progress on implementation of the 2019 WY CS Standards ❑ Respond to individual district questions ❑ Update and maintain professional development through memos, Edmodo, and WDE Standards' newsletter ❑ Prepare and share best practices through professional development around implementing the 2019 WY CS Standards ❑ Facilitate professional development opportunities on the 2019 WY CS Standards ❑ Update and maintain resources on the WDE website ❑ Update and share new information at statewide events ❑ Provide resources and PD opportunities on Edmodo

Resources / Appendices

WYOMING DEPARTMENT OF EDUCATION

found at edu.wyoming.gov/standards

APPENDIX A: DESCRIPTIONS OF CS PRACTICES

APPENDIX B: GLOSSARY

APPENDIX C: TEACHER RESOURCE PROGRESSION DOCUMENT

APPENDIX D: ADMINISTRATOR K-12 CS STANDARDS OVERVIEW

APPENDIX E: WYOMING DIGITAL LEARNING GUIDELINES (based on the 2016 ISTE Standards for Students)

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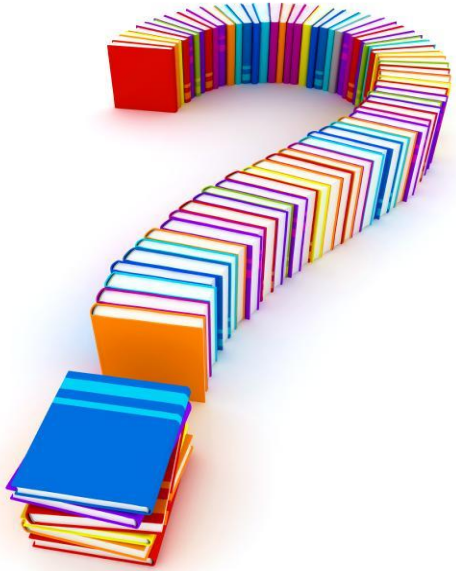
QUESTIONS



Changes to Ch. 10 Rules

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- Hyperlinking directly to the new standards documents
- Removing past approval dates which are no longer relevant and potentially confusing to readers
- Removing dates which are already explicit on referenced and linked standards documents

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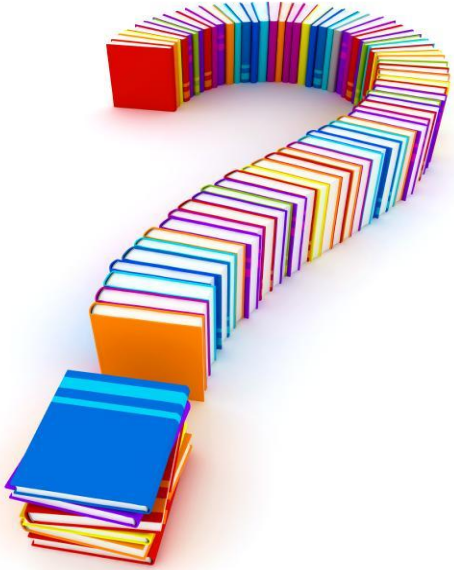

CHAPTER 10
WYOMING CONTENT AND PERFORMANCE STANDARDS
STATEMENT OF REASONS

Pursuant to Wyo. Stat. § 21-2-304(a)(iii), the Wyoming State Board of Education must prescribe uniform student content and performance standards for the common core of knowledge specified by Wyo. Stat. § 21-9-101(b)(i). Prior to 2018, the common core of knowledge included Reading/Language Arts, Social Studies, Mathematics, Science, Fine and Performing Arts, Physical Education, Health and Safety, Humanities, Career/Vocational Education, Foreign Cultures and Languages, and Government and Civics.

SEA 48 was signed by Governor Mead on March 14, 2018, requiring the addition of Computer Science Standards and the following changes to the Basket of Goods in W.S. 21-9-101(a)(i), as outlined below.

(i) Common Core of Knowledge
(M) ~~Applied technology~~ (repealed)
(O) Computer science (added)
(iii) Common Core of Skills
(C) ~~Keyboarding~~ Computational thinking and computer applications

Section 3 of the bill requires the State Board of Education to promulgate uniform content and performance standards for computer science by January 1, 2022, to be effective beginning with the 2022-23 school year.

After careful consideration, and with support from members of the Standards Review Committee and input from school districts and the public at large, the Wyoming State Board of Education approved the new Computer Science Standards on March 21, 2019.

The Board is promulgating revised rules for the Wyoming Content and Performance Standards for the content area of Computer Science. These standards define the knowledge and skills students should know and be able to do throughout their K-12 education so they can graduate from high school able to succeed in college and career.

In developing the Computer Science Standards, the Wyoming Department of Education, on the Board's behalf, convened a standards review committee composed of 40 members, which included educators, professors, parents, content experts, and business/community members. Prior to the committee's first meeting, the Department collected input online and held five community input meetings, across the state, to inform the public of the upcoming review process and to solicit information for the standards review committees' consideration. Following the work of the committee, the Department also collected input online and held five public input hearings, across the state, to inform the public and gather feedback from the public for the Board's consideration when voting whether to adopt the proposed standards in the content area of Computer Science.

Additional changes to these rules include adding a reference to the 2019 Wyoming Computer Science Content and Performance Standards.

The Board previously revised the process for compiling public comments to more adequately inform the Board of the nature of the comments and the reasons for either adopting or rejecting the comment. This process includes articulating comments separately even if they were part of a single submission that addressed several topics, grouping substantially identical comments together with a single response, and organizing the comments and responses into comment, discussion, and changes sections. These changes should make it easier to understand the comments received and the agency's response to those comments. Comments received in this rulemaking will be addressed accordingly.

These rules meet the minimum substantive state statutory requirements and are within the Board and Department’s statutory authority. No part of this action should be interpreted as any attempt to dictate curriculum at the local or state level.

Wyoming Department of Education
Wyoming Content and Performance Standards

CHAPTER 10

Section 1. Authority. These rules and regulations are promulgated pursuant to W.S. 21-2-304(a)(i), (ii), (iii), ~~and~~ (iv), and (c) .

Section 2. Applicability. These rules and regulations pertain to the uniform student content and performance standards for the common core of knowledge and the common core of skills specified under W.S. 21-9-101(b).

Section 3. Definitions.

(a) "Common Core of Knowledge" means areas of knowledge each student is expected to acquire at levels established by the state board of education. W.S. 21-9-101(b)(i) This includes the ~~nine~~ ten content areas listed in subsection (c) and ~~Health and Safety,~~ Humanities~~, Applied Technology,~~ and Government and Civics.

(b) "Common Core of Skills" means skills each student is expected to demonstrate at levels established by the state board of education. W.S. 21-9-101(b)(iii). These skills may be integrated into the uniform student content and performance standards for the Common Core of Knowledge. This includes Problem Solving, Interpersonal Communications, ~~Keyboarding~~ Computational Thinking and Computer Applications, Critical Thinking, Creativity, and Life Skills, including Personal Financial Management Skills.

(c) "Content and Performance Standards" means standards that include the K-12 content standards, benchmark standards, and the performance standards with performance level descriptors established for the Common Core of Knowledge and Common Core of Skills. W.S. 21-2-304(a)(iii) The ~~nine~~ ten content areas are as follows:

(i) English Language Arts (ELA)

(ii) Mathematics

(iii) Science

(iv) Social Studies

(v) Health

(vi) Physical Education

(vii) Foreign Language

(viii) Career & Vocational Education

(ix) Fine & Performing Arts

(x) Computer Science

(d) "Wyoming Extended Standards" also interchangeable with "Wyoming Standards Extensions" means standards for students with the most significant cognitive disabilities that show a clear link to the content standards for the grade in which the student is enrolled, although the grade-level content may be reduced in complexity or modified to reflect pre-requisite skills.

Section 4. Uniform Student Content and Performance Standards.

(a) Uniform student content and performance standards, including standards for graduation, are hereby incorporated by reference pursuant to W.S. 16-3-103(h) and include the following:

(i) 2012 Wyoming Language Arts Content and Performance Standards as approved by the Wyoming State Board of Education on April 27, 2012;

(A) 2012 Wyoming Language Arts Content and Performance Standards amended on April 27, 2012 shall be fully implemented on or before the first day of the 2015-2016 school year.

(B) The 2014 Language Arts Performance Level Descriptors, as incorporated by reference, shall be the Wyoming Language Arts Performance Standards for the 2012 Wyoming Language Arts Content Standards.

(C) The 2014 Wyoming Language Arts Extended Standards for students with significant cognitive disabilities, as incorporated by reference, shall be fully implemented on or before the first day of the 2017-18 school year.

(D) The Wyoming Language Arts Content and Performance Standards, Performance Level Descriptors, and Extended Standards are available at https://edu.wyoming.gov/educators/standards/language-arts.

(ii) 2018 Wyoming Mathematics Content and Performance Standards available at https://edu.wyoming.gov/educators/standards/mathematics.

(A) The 2014 Mathematics Performance Level Descriptors, as incorporated by reference, shall be the Wyoming Mathematics Performance Standards.

(B) The 2014 Wyoming Mathematics Standards Extensions for students with significant cognitive disabilities, as incorporated by reference, shall be fully implemented on or before the first day of the 2017-18 school year.

(C) The Wyoming Mathematics Content and Performance Standards, Performance Level Descriptors, and Standards Extensions are available at https://edu.wyoming.gov/educators/standards/mathematics.

(iii) 2016 Wyoming Science Content and Performance Standards are available at https://edu.wyoming.gov/educators/standards/science.

(A) The 2018 Wyoming Science Extended Standards for students with significant cognitive disabilities are available at https://edu.wyoming.gov/educators/standards/extended-benchmarks.

(iv) 2014 with 2018 Additions Wyoming Social Studies Content and Performance Standards are available at https://edu.wyoming.gov/educators/standards/social-studies.

(v) 2012 Wyoming Health Content and Performance Standards as approved by the Wyoming State Board of Education on April 27, 2012;

(A) 2012 Wyoming Health Content and Performance Standards amended on April 27, 2012 shall be fully implemented on or before the first day of the 2015-2016 school year.

(B) The Wyoming Health Content and Performance Standards are available at https://edu.wyoming.gov/educators/standards/health-education.

(vi) 2014 Wyoming Physical Education Content and Performance Standards are available at https://edu.wyoming.gov/educators/standards/physical-education.

(vii) 2013 Wyoming Foreign Language Content and Performance Standards as approved by the Wyoming State Board of Education on May 8, 2013;

(A) 2013 Wyoming Foreign Language Content and Performance Standards amended on May 8, 2013 shall be fully implemented on or before the first day of the 2016-2017 school year.

(B) The Wyoming Foreign Language Content and Performance Standards are available at https://edu.wyoming.gov/educators/standards/foreign-language.

(viii) 2014 Wyoming Career/Vocational Education Content and Performance Standards are available at https://edu.wyoming.gov/educators/standards/career-vocational.

(ix) 2013 Wyoming Fine and Performing Arts Content and Performance Standards as approved by the Wyoming State Board of Education on May 8, 2013;

(A) 2013 Wyoming Fine and Performing Arts Content and Performance Standards amended on May 8, 2013 shall be fully implemented on or before the first day of the 2016-2017 school year.

(B) The Wyoming Fine and Performing Arts Content and Performance Standards are available at https://edu.wyoming.gov/educators/standards/arts.

(x) 2019 Wyoming Computer Science Content and Performance Standards as approved by the Wyoming State Board of Education on March 21, 2019;

(A) 2019 Wyoming Computer Science Content and Performance Standards approved on March 21, 2019 shall be fully implemented on or before the first day of the 2022-2023 school year.

(B) The Wyoming Computer Science Content and Performance Standards are available at link to CS webpage.

(b) The above-referenced content and performance standards are available at the Wyoming Department of Education website at https://edu.wyoming.gov (or at cost of production) from the Wyoming Department of Education, 122 E. 25th Street, Suite E200, Cheyenne, WY 82002.

(c) The above-referenced content and performance standards are the most current editions.

(d) The above performance standards that are incorporated by reference do not include any amendments to or editions of the standards since the effective date of this rule.