Wyoming Mathematics Academic Content Standards
Kindergarten

<table>
<tr>
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CONTENT STANDARD 1. <u>NUMBER OPERATIONS AND CONCEPTS</u>
Students use numbers, number sense, and number relationships in a problem-solving situation.
ACADEMIC CONTENT STANDARD 1. <u>NUMBER OPERATIONS AND CONCEPTS</u>
Students sequence numbers and use number operations and related concepts to solve problems.

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Kindergarten Benchmark

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Kindergarten Academic Benchmark

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Levels of Complexity

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1. Students read and represent numbers up to 9.

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K.A.N.1 Students represent the numbers zero and 1.

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Level IV
Students consistently and independently perform in unfamiliar settings using natural supports.
Students represent zero, one, and numbers greater than 1.
Ex. Given a number greater than 1, students select the corresponding number of objects.

Level III
Students consistently perform in several familiar settings.
Students represent the numbers zero and 1.
Ex. Given the number zero or one, students select the corresponding number of objects upon request.

Level II
Students require external support and multiple prompts in limited familiar settings.
Students match a representation of the numbers zero or 1.

Level I
Students require external support and multiple prompts in a structured setting.
Students attend to how others match and represent the numbers zero and 1.

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Kindergarten Benchmark	Kindergarten Academic Benchmark	Levels of Complexity
2. Students recognize the larger of two sets. (Which set has more or less?)	**K.A.N.2 Students recognize a set of similar objects.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students recognize similar sets that have the same amount.** Ex. When given sets of like pictures, symbols, or objects and unlike pictures, symbols, or objects, students recognize the sets with the same or different amounts.
		Level III *Students consistently perform in several familiar settings.* **Students recognize a set of similar objects.** Ex. When given a set of like pictures, symbols, or objects and unlike pictures, symbols, or objects, students recognize the set.
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students match pictures, symbols, or objects to a like set of objects.** Ex. Given a picture, symbol, or objects, students select a set of objects that matches.
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to how others match a set of similar objects.**

Kindergarten Benchmark	Kindergarten Academic Benchmark	Levels of Complexity
3. Students recognize and name penny, nickel, dime, and quarter using real coins.	K.A.N.3 Students recognize a penny using real coins.	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students identify/label a penny using real coins.**
		Level III *Students consistently perform in several familiar settings.* **Students recognize a penny using real coins.** Ex. Given three objects, students indicate which one is a penny upon request.
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students distinguish between a coin and a non-coin object.**
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to how others use/interact with a penny.**

Kindergarten Benchmark	Kindergarten Academic Benchmark	Levels of Complexity
4. Students count with understanding up to 21 objects to solve problems.	**K.A.N.4 Students count up to one object.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students count more than one object.**
		Level III *Students consistently perform in several familiar settings.* **Students count up to one object.** Ex. Presented with one object, students use one-to-one correspondence to count "1."
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students copy one object being counted.**
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to how others count objects.**

Kindergarten Benchmark	Kindergarten Academic Benchmark	Levels of Complexity
5. Students act out or use objects as strategies to solve problems. ***Note: Students communicate the reasoning used in solving these problems. They may use tools/technology to support learning.**	**Addressed in K.A.N.4**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Addressed in K.A.N.4** **Level III** *Students consistently perform in several familiar settings.* **Addressed in K.A.N.4** **Level II** *Students require external support and multiple prompts in limited familiar settings.* **Addressed in K.A.N.4** **Level I** *Students require external support and multiple prompts in a structured setting.* **Addressed in K.A.N.4**

CONTENT STANDARD 2. GEOMETRY Students apply geometric concepts, properties, and relationships in a problem-solving situation. ACADEMIC CONTENT STANDARD 2. GEOMETRY Students recognize, sort, compare, and contrast geometric shapes and objects and relationships.		
Kindergarten Benchmark	**Kindergarten Academic Benchmark**	**Levels of Complexity**
1. Students recognize, name, compare, and sort geometric shapes (circle, square, triangle and rectangle).	K.A.G.1. Students recognize and sort a circle by shape.	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students recognize and sort circles and squares.**
		Level III *Students consistently perform in several familiar settings.* **Students recognize and sort a circle by shape.** Ex. Given a set of shapes including circles and squares and a request to identify the circles, students identify a circle and group like shapes.
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students match a circle to a circle.** Ex. Given pictures, symbols, or objects, students match a corresponding picture, symbol, or object.
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to matching a circle to a circle.**

Kindergarten Benchmark	Kindergarten Academic Benchmark	Levels of Complexity
2. Students select, use, and communicate organizational methods in a problem -solving situation using geometric shapes. ***Note: Students communicate the reasoning used in solving these problems. They may use tools/technology to support learning.**	**K.A.G.2 Students use circles.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students select and use circles.** Ex. Given a request, students select a template of a circle and draw a circle. **Level III** *Students consistently perform in several familiar settings.* **Students use circles.** Ex. Students copy, manipulate, stack or match circles. **Level II** *Students require external support and multiple prompts in limited familiar settings.* **Students interact with circles.** **Level I** *Students require external support and multiple prompts in a structured setting.* **Students attend to how others use circles.**

CONTENT STANDARD 3. MEASUREMENT Students use a variety of tools and techniques of measurement in a problem-solving situation. ACADEMIC CONTENT STANDARD 3. MEASUREMENT Students use tools to apply numbers and concepts to length, capacity, time, and weight.		
Kindergarten Benchmark	**Kindergarten Academic Benchmark**	**Levels of Complexity**
1. Students apply estimation and measurement of length to content problems using non-standard units up to 9 units. ***Note: Students communicate the reasoning used in solving these problems. They may use tools/technology to support learning.**	**K.A.M.1 Students recognize measurement of same length using non-standard units.** Ex. Using shoes, string, connecting cubes	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students recognize measurement of same and different lengths using non-standard units.**
		Level III *Students consistently perform in several familiar settings.* **Students recognize measurement of same lengths using non-standard units.** Ex. Given an object and connecting cubes of the same length, students recognize that they are the same length.
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students recognize measurement of length using one non-standard unit.** Ex. Given a non-standard unit of measurement, students match the unit to an object which could be measured.
		Level 1 *Students require external support and multiple prompts in a structured setting.* **Students attend to how others use measurement of length using non-standard units.**

CONTENT STANDARD 4. ALGEBRA		
Students use algebraic methods to investigate, model, and interpret patterns and functions involving numbers, shapes, data, and graphs in a problem-solving situation.		
ACADEMIC CONTENT STANDARD 4. ALGEBRA		
Students recognize and extend patterns and use numbers and symbols to solve problems.		
Kindergarten Benchmark	**Kindergarten Academic Benchmark**	**Levels of Complexity**
1. Students recognize, describe, and create three-element patterns by using manipulatives. ***Note: Students communicate the reasoning used in solving these problems. They may use tools/technology to support learning.**	**K.A.A.1 Students recognize one element of a two-element repeating pattern using manipulatives.** Ex. Circle, square; circle, square...	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students recognize two elements of a two- element pattern.** Ex. Given a two-element pattern, students identify both elements.
		Level III *Students consistently perform in several familiar settings.* **Students recognize one element of a two-element repeating pattern using manipulatives.** Ex. Shown a pattern containing two elements (circle, square), students identify one of the elements.
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students match like two-element patterns.** Ex. Given two like patterns, students identify if the patterns match.

		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to others working with two- element patterns.**

CONTENT STANDARD 5. DATA ANALYSIS AND PROBABILITY		
Students use data analysis and probability to analyze given situations and the results of experiments.		
ACADEMIC CONTENT STANDARD 5. DATA ANALYSIS AND PROBABILITY		
Students collect and organize data and make predictions based on given situations.		
Kindergarten Benchmark	**Kindergarten Academic Benchmark**	**Levels of Complexity**
1. Students sort real objects to create graphs.	**K.A.D.1 Students identify opposites.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students select the opposite characteristic/attribute of that which is presented.** Ex. When given a picture of a sunny day, students select a picture of a cloudy day.
		Level III *Students consistently perform in several familiar settings.* **Students identify opposites.** Ex: When presented with a pair of pictures of a sunny day and a cloudy day, and a pair of pictures of sunny day and a boy, students select the pair of opposites.
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students match opposites.** Ex: When presented with a pair of opposites of weather related words, such as sun and cloud, students reproduce the set of opposites.
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to how others match and identify opposites.**

Kindergarten Benchmark	Kindergarten Academic Benchmark	Levels of Complexity
2. Students communicate conclusions from a set of data. (Which set has more or less?) ***Note: Students communicate the reasoning used in solving these problems. They may use tools/technology to support learning.**	**K.A.D.2 Students identify which set has *more* when given two sets of data including pictures and objects.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students select a set of *more* and a set of *less* given sets of data including pictures and objects.** **Level III** *Students consistently perform in several familiar settings.* **Students identify which set has *more* when given two sets of data including pictures and objects.** Ex. Given two different sets of data, students identify which set has more. **Level II** *Students require external support and multiple prompts in limited familiar settings.* **Students match two sets of data with the same amount.** **Level I** *Students require external support and multiple prompts in a structured setting.* **Students attend to how others match two sets of data with the same amount.**

Wyoming Mathematics Academic Content Standards
Grade 1

CONTENT STANDARD 1. **NUMBER OPERATIONS AND CONCEPTS**
Students use numbers, number sense, and number relationships in a problem-solving situation.
ACADEMIC CONTENT STANDARD 1. NUMBER OPERATIONS AND CONCEPTS
Students sequence numbers and use number operations and related concepts to solve problems.

Grade 1 Benchmark	Grade 1 Academic Benchmark	Levels of Complexity
1. Students use the concept of place value to read and represent numbers up to 99.	**1.A.N.1 Students represent numbers up to 3.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students represent and label numbers up to 3**. Ex. Given a group of three objects, the students indicate the corresponding number.
		Level III *Students consistently perform in several familiar settings.* **Students represent numbers up to 3**. Ex. When given a group of objects and asked to show 2 objects, students select the correct number of objects.
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students match the representation of a number up to 3**.
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to how others represent a number up to 3.**

Grade 1 Benchmark	Grade 1 Academic Benchmark	Levels of Complexity
2. Students use sets of objects to compare values and order numerals.	**1.A.N.2 Students compare 2 sets of objects to identify which set has *more*, *less*, and *equal* amounts.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students compare 3 sets of objects to identify more, less, and equal amounts.**
		Level III *Students consistently perform in several familiar settings.* **Students compare 2 sets of objects to identify which set has *more*, *less*, and *equal* amounts.** Ex. Given two sets of objects and asked to identify the set with *more*, students identify the set with more.
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students compare 2 sets of objects to identify which set has *more*.**
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend how others compare 2 sets of objects to identify which set has *more*, *less*, and *equal* amounts.**

Grade 1 Benchmark	Grade 1 Academic Benchmark	Levels of Complexity
3. Students use coins (penny, nickel, dime, and quarter) to compare values (more/less).	1.A.N.3 Students identify a penny and a quarter using real coins.	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students identify and label a penny and a quarter using real coins.**
		Level III *Students consistently perform in several familiar settings.* **Students identify a penny and a quarter using real coins.** Ex. When given a collection of coins, students correctly identify a penny and a quarter.
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students match a penny to a penny and a quarter to a quarter using real coins.**
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to how others identify a penny and a quarter.**

Grade 1 Benchmark	Grade 1 Academic Benchmark	Levels of Complexity
4. Students demonstrate computational fluency* with basic facts (add to 10).	**1.A.N.4 Students add by ones to a sum of three.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students add to a sum of three.** Ex. Given one block and two blocks, the students add the blocks to make 3.
		Level III *Students consistently perform in several familiar settings.* **Students add by ones to a sum of three.** Ex. Given one block and one block, students add the blocks to make 2 .
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students match adding one more up to 3.** Ex. Given one block and one block equals two blocks, students match blocks to the presented ones to show a sum of 2.
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to adding up to 3 objects.**

Grade 1 Benchmark	Grade 1 Academic Benchmark	Levels of Complexity
5. Students make a picture or use objects as strategies to solve problems.	**Addressed in 1.A.N.4**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Addressed in 1.A.N.4**
		Level III *Students consistently perform in several familiar settings.* **Addressed in 1.A.N.4**
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Addressed in 1.A.N.4**
		Level I *Students require external support and multiple prompts in a structured setting.* **Addressed in 1.A.N.4**

Grade 1 Benchmark	Grade 1 Academic Benchmark	Levels of Complexity
6. Students communicate their choice of appropriate grade- level procedures and results when performing operations in a problem-solving situation. ***Note: Students communicate the reasoning used in solving these problems. They may use tools/technology to support learning.**	**Addressed in 1.A.N.2.** **Students communicate the reasoning used in problem solving through comparison.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Addressed in 1.A.N.2.** **Level III** *Students consistently perform in several familiar settings.* **Addressed in 1.A.N.2.** **Level II** *Students require external support and multiple prompts in limited familiar settings.* **Addressed in 1.A.N.2.** **Level I** *Students require external support and multiple prompts in a structured setting.* **Addressed in 1.A.N.2.**

CONTENT STANDARD 2. __GEOMETRY__
Students apply geometric concepts, properties, and relationships in a problem-solving situation.
ACADEMIC CONTENT STANDARD 2. __GEOMETRY__
Students recognize, sort, compare, and contrast geometric shapes and objects and relationships.

Grade 1 Benchmark	Grade 1 Academic Benchmark	Levels of Complexity
1. Students recognize, name, compare, and sort 2- and 3-dimensional geometric objects.	**1.A.G.1 Students recognize and sort a circle and square by shape.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students recognize and sort circles, squares, and triangles.**
		Level III *Students consistently perform in several familiar settings.* **Students recognize and sort a circle and square by shape.**
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students match a circle to a circle and a square to a square.** Ex. Given pictures, symbols, or objects, students match a corresponding picture, symbol or object.
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to matching a circle to a circle and a square to a square.**

Grade 1 Benchmark	Grade 1 Academic Benchmark	Levels of Complexity
2. Students select, use, and communicate organizational methods in a problem-solving situation using 2- and 3- dimensional geometric objects. ***Note: Students communicate the reasoning used in solving these problems. They may use tools/technology to support learning.**	**Addressed in 1.A.G.1.** **Students communicate the reasoning used in solving these problems by sorting.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Addressed in 1.A.G.1.**
		Level III *Students consistently perform in several familiar settings.* **Addressed in 1.A.G.1.**
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Addressed in 1.A.G.1.**
		Level I *Students require external support and multiple prompts in a structured setting.* **Addressed in 1.A.G.1.**

CONTENT STANDARD 3. MEASUREMENT Students use a variety of tools and techniques of measurement in a problem-solving situation. ACADEMIC CONTENT STANDARD 3. MEASUREMENT Students use tools to apply numbers and concepts to length, capacity, time, and weight.		
Grade 1 Benchmark	**Grade 1 Academic Benchmark**	**Levels of Complexity**
1. Students apply estimation and measurement of length to content problems using non-standard units up to 99 units.	**1.A.M.1 Students recognize measurement of length using non-standard units up to 3.** Ex. Using shoes, string, connecting cubes	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students recognize measurement of lengths using non-standard units more than 3.**
		Level III *Students consistently perform in several familiar settings:* **Students recognize measurement of length using non-standard units up to 3.** Ex. Students use three lengths of string to measure objects.
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students recognize measurement of length using one non-standard unit up to 2.**
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to how others use measurement.**

Grade 1 Benchmark	Grade 1 Academic Benchmark	Levels of Complexity
2. Students apply estimation and measurement of capacity to content problems using non-standard units.	**1.A.M.2 Students demonstrate measurement of capacity using non-standard units.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students measure and label a container at capacity.**
		Level III *Students consistently perform in several familiar settings.* **Students demonstrate measurement of capacity using non-standard units.** Ex. Given a smaller container and a large container, students use the smaller container to fill a large container.
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students interact with measurement of capacity using non-standard units.**
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to how others use measurement of capacity using non-standard units.**

Grade 1 Benchmark	Grade 1 Academic Benchmark	Levels of Complexity
3. Students tell time, using both analog and digital clocks to the nearest half-hour. ***Note: Students communicate the reasoning used in solving these problems. They may use tools/technology to support learning.**	**1.A.M.3 Students describe time events.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students recognize time beyond the current day.** Ex. Student identify the day after today as tomorrow. **Level III** *Students consistently perform in several familiar settings.* **Students describe time events.** Ex. Students recognize meal times and bedtime. **Level II** *Students require external support and multiple prompts in limited familiar settings.* **Students recognize day and night.** **Level I** *Students require external support and multiple prompts in a structured setting.* **Students attend to how others describe/show time events.**

CONTENT STANDARD 4. ALGEBRA
Students use algebraic methods to investigate, model, and interpret patterns and functions involving numbers, shapes, data, and graphs in a problem-solving situation.
ACADEMIC CONTENT STANDARD 4. ALGEBRA
Students recognize and extend patterns and use numbers and symbols to solve problems.

Grade 1 Benchmark	Grade 1 Academic Benchmark	Levels of Complexity
1. Students recognize, create, and describe four-element patterns by using manipulatives and graphic representations.	1.A.A.1 Students recognize one element of a three-element repeating pattern using manipulatives.	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students recognize two elements of a three-element repeating pattern using manipulatives.**
		Level III *Students consistently perform in several familiar settings.* **Students recognize one element of a three-element repeating pattern using manipulatives.** Ex. Given a three- element repeating pattern (square, circle, triangle) and a set of random shapes, students identify a shape in the presented pattern.
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students match a three- element repeating pattern using manipulatives.**
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to matching three-element repeating patterns using manipulatives.**

Grade 1 Benchmark	Grade 1 Academic Benchmark	Levels of Complexity
2. Students apply knowledge of repeating patterns when solving problems. ***Note: Students communicate the reasoning used in solving these problems. They may use tools/technology to support learning.**	**1.A.A.2 Students differentiate two three-element repeating patterns using manipulatives.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students differentiate three three-element repeating patterns using manipulatives.** **Level III** *Students consistently perform in several familiar settings.* **Students differentiate two three-element repeating patterns using manipulatives.** Ex. Given 2 three element repeating patterns (square, circle, triangle and square, circle, square), students identify the position of the element which is different. **Level II** *Students require external support and multiple prompts in limited familiar settings.* **Students copy two different three-element repeating patterns.** **Level I** *Students require external support and multiple prompts in a structured setting.* **Students attend to how others differentiate two three-element repeating patterns.**

CONTENT STANDARD 5. DATA ANALYSIS AND PROBABILITY
CONTENT STANDARD 5. DATA ANALYSIS AND PROBABILITY

CONTENT STANDARD 5. <u>DATA ANALYSIS AND PROBABILITY</u>
Students use data analysis and probability to analyze given situations and the results of experiments.
ACADEMIC CONTENT STANDARD 5. <u>DATA ANALYSIS AND PROBABILITY</u>
Students collect and organize data and make predictions based on given situations.

Grade 1 Benchmark	Grade 1 Academic Benchmark	Levels of Complexity
1. Students collect and classify information to create graphs with pictures and report data in problem- solving situations.	**1.A.D.1 Students identify one set of objects on a given attribute given a group of two different types of objects.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students identify one set of objects on a given attribute given a group of three different types of objects.**
		Level III *Students consistently perform in several familiar settings.* **Students identify one set of objects on a given attribute given a group of two different types of objects.** Ex. Given a group of objects containing red circles and red squares and other color objects and the given attribute *red*, students group the red objects.
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students match one set of objects on a given attribute given a group of two different types of objects.**
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend as others identify one set of objects on a given attribute given a group of two different types of objects.**

Grade 1 Benchmark	Grade 1 Academic Benchmark	Levels of Complexity
2. Students communicate conclusions about a set of data using graphs with pictures.	**1.A.D.2 Students identify *more* or *less* when given two sets of data including pictures and objects.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students label *more* or *less* when given two sets of data including pictures and objects.** **Level III** *Students consistently perform in several familiar settings.* **Students identify *more* or *less* when given two sets of data including pictures and objects.** Ex. Given a group of 5 pictures of animals and 3 pictures of people, students identify the group of pictures which has *more*. **Level II** *Students require external support and multiple prompts in limited familiar settings.* **Students identify *more* when given a set of data including pictures and objects.** **Level I** *Students require external support and multiple prompts in a structured setting.* **Students attend to how others identify *more* or *less* when given 2 sets of data including pictures and objects.**

Grade 1 Benchmark	Grade 1 Academic Benchmark	Levels of Complexity
3. Students perform and record (with tally marks) simple probability experiments. ***Note: Students use tools/technology to solve problems involving data analysis and probability.**	**1.A.D.3 Students use tools of probability to build familiarity.** **Ex. Number cubes, spinners, etc.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students use tools of probability for a purpose.** Ex. Given a game, students use a colored spinner to take turns. **Level III** *Students consistently perform in several familiar settings.* **Students use tools of probability to build familiarity.** Ex. Given number cubes or spins, students play with the tools. **Level II** *Students require external support and multiple prompts in limited familiar settings.* **Students interact with tools of probability.** **Level I** *Students require external support and multiple prompts in a structured setting.* **Students attend to how others use tools of probability.**

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Wyoming Mathematics Academic Content Standards
Grade 2

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<tr><td colspan="3">CONTENT STANDARD 1. NUMBER OPERATIONS AND CONCEPTS
Students use numbers, number sense, and number relationships in a problem-solving situation.
ACADEMIC CONTENT STANDARD 1. NUMBER OPERATIONS AND CONCEPTS
Students sequence numbers and use number operations and related concepts to solve problems.</td></tr>
<tr><td>Grade 2
Benchmark</td><td>Grade 2
Academic Benchmark</td><td>Levels of Complexity</td></tr>
<tr>
<td>1. Students use the concept of place value to read and write designated numbers up to 999.</td>
<td>2.A.N.1 Students represent numbers 0 – 4.</td>
<td>Level IV
<i>Students consistently and independently perform in unfamiliar settings using natural supports.</i>
Students represent and label numbers 0 - 4.
Ex. Given a group of objects and asked to represent and label 4 objects, students represent the corresponding number by counting 4 objects and label by selecting the numeral 4.</td>
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<td>Level III
<i>Students consistently perform in several familiar settings.</i>
Students represent numbers 0 – 4.
Ex. Given a group of objects, students count out the requested number of objects.</td>
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<td>Level II
<i>Students require external support and multiple prompts in limited familiar settings.</i>
Students represent a number up to 4.
Ex. Given a group of objects, students count out the requested number of objects.</td>
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<td>Level I
<i>Students require external support and multiple prompts in a structured setting.</i>
Students attend to how others represent a number up to 4.
Ex. Students respond to a presented number by body movement, eye gaze, or vocalization.</td>
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Grade 2 Benchmark	Grade 2 Academic Benchmark	Levels of Complexity
2. Students compare and order whole numbers up to 999.	**2.A.N.2 Students order a set of whole numbers up to 4.** ***Students communicate the reasoning used in problem solving through ordering.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students order a set of 3 whole numbers up to and greater than 4.** **Level III** *Students consistently perform in several familiar settings.* **Students order a set of whole numbers up to 4.** Ex. Given a set of numbers {2,4,3}, students order the set {2,3,4}. **Level II** *Students require external support and multiple prompts in limited familiar settings.* **Students recognize whether or not a set of 3 whole consecutive numbers less than 4 is presented in order.** **Level I** *Students require external support and multiple prompts in a structured setting.* **Students attend to how others order a set of whole numbers up to 4.** Ex. Students attend to how others use numbers by body movement, eye gaze, or vocalization.

Grade 2 Benchmark	Grade 2 Academic Benchmark	Levels of Complexity
3. Students use coins to compare the values and make combinations up to one dollar.	**2.A.N.3 Students identify a penny, a quarter, and a dime using real coins.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students identify and label a penny, a quarter, and a dime using real coins.**
		Level III *Students consistently perform in several familiar settings:* **Students identify a penny, a quarter, and a dime using real coins.** Ex. When given a collection of coins, students identify a penny, a quarter, and a dime.
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students match a penny to a penny, a quarter to a quarter, and a dime to a dime using real coins.**
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to how others identify a penny, a quarter, and a dime.** Ex. Students attend to how others use/interact with a penny through eye gaze, body movement, facial expressions, etc.

Grade 2 Benchmark	Grade 2 Academic Benchmark	Levels of Complexity
4. Students demonstrate computational fluency with basic facts (add to 20, subtract from 10).	**2.A.N.4 Students add by ones to a sum of 4.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students add to a sum of four.** Ex. Given a set of blocks, students will combine the blocks in combinations (1 + 3, 2 + 2, 3 + 1).
		Level III *Students consistently perform in several familiar settings.* **Students add by ones to a sum of 4.** Ex. Given three blocks and one block, students add the blocks to make 4 .
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students match adding one more up to 4.** Ex. Given two blocks, students add one more block.
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to others adding by one up to 4.** Ex. Students interact with others counting through body movement, vocalizations, eye gaze, etc.

Grade 2 Benchmark	Grade 2 Academic Benchmark	Levels of Complexity
5. Students use mental math (fact families) and estimation strategies (referent to a group of 10) to solve problems.	**The cognitive complexity of using mental math or estimation requires further development of other math benchmarks.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Not addressed**
		Level III *Students consistently perform in several familiar settings.* **Not addressed**
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Not addressed**
		Level I *Students require external support and multiple prompts in a structured setting.* **Not addressed**

Grade 2 Benchmark	Grade 2 Academic Benchmark	Levels of Complexity
6. Students look for patterns and use guess and check as strategies to solve problems.	**2.A.N.5 Students provide a reasonable guess given a mathematical problem and possible answers.** ***The goal is to develop the meaning of the word "guess."***	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students provide a reasonable guess given a question.** Ex. Given a question, students provide their own guess.
		Level III *Students consistently perform in several familiar settings.* **Students provide a reasonable guess given a mathematical problem and possible answers.** Ex. Given a question, students choose a reasonable guess from the possible answers.
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students match a provided answer to a question.** Ex. When students are asked "Guess what's for lunch?" and provided with a correct answer, students match the answer.
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to how others provide a reasonable guess given a mathematical problem and possible answers.**

Grade 2 Benchmark	Grade 2 Academic Benchmark	Levels of Complexity
7. Students communicate their choice of appropriate grade-level procedures and results when performing operations in a problem-solving situation. ***Note: Students communicate the reasoning used in solving these problems. They may use tools/technology to support learning.**	**Combined with 2.A.N.2**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Combined with 2.A.N.2**
		Level III *Students consistently perform in several familiar settings.* **Combined with 2.A.N.2**
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Combined with 2.A.N.2**
		Level I *Students require external support and multiple prompts in a structured setting.* **Combined with 2.A.N.2**

CONTENT STANDARD 2. GEOMETRY Students apply geometric concepts, properties, and relationships in a problem-solving situation. ACADEMIC CONTENT STANDARD 2. GEOMETRY Students recognize, sort, compare, and contrast geometric shapes and objects and relationships.		
Grade 2 Benchmark	**Grade 2 Academic Benchmark**	**Levels of Complexity**
1. Students name, classify, and describe 2- and 3-dimensional geometric objects.	**2.A.G.1 Students recognize and sort a circle, square, and triangle.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students recognize and sort circles, squares, triangles and a 3-D object.**
		Level III *Students consistently perform in several familiar settings.* **Students recognize and sort a circle, square, and triangle.** Ex. Given a group of shapes, students select requested shape.
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students match circle to circle, square to square, and triangle to triangle.** Ex. Given pictures, symbols, or objects, students match a corresponding picture, symbol or object.
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to others matching circles, squares, and triangles.**

Grade 2 Benchmark	Grade 2 Academic Benchmark	Levels of Complexity
2. Students identify lines of symmetry in various geometric objects.	**2.A.G.2 Students identify a pair of objects as *same* or *different*.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students select a *same* or *different* pair from a set of objects.**
		Level III *Students consistently perform in several familiar settings.* **Students identify a pair of objects as *same or different*.** Ex. Given a pair of objects containing a red square and a red square of the same size, students identify the pair as the *same.*
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students match *same* objects.**
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to how others match *same* objects.** Ex. Students attend to how others match like objects through eye gaze, verbalizations, and body movements.

Grade 2 Benchmark	Grade 2 Academic Benchmark	Levels of Complexity
3. Students select, use, and communicate organizational methods in problem- solving situations with 2- and 3- dimensional objects. *Note: Students communicate the reasoning used in solving these problems. They may use tools/technology to support learning.	2.A.G.3 Students use circles, squares, and triangles.	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students select *and* use circles, squares, and triangles.** Ex. When requested to use a triangle, students select and draw a triangle. **Level III** *Students consistently perform in several familiar settings.* **Students use circles, squares, and triangles.** Ex. Students match circles to circles and squares to squares. **Level II** *Students require external support and multiple prompts in limited familiar settings.* **Students interact with circles, squares, and triangles.** Ex. Students manipulate circles. **Level I** *Students require external support and multiple prompts in a structured setting.* **Students attend to how others use circles, squares, and triangles.** Ex. Students attend to how others use circles, squares, and triangles through vocalizations, eye gaze, and body movements.

CONTENT STANDARD 3. MEASUREMENT Students use a variety of tools and techniques of measurement in a problem-solving situation. ACADEMIC CONTENT STANDARD 3. MEASUREMENT Students use tools to apply numbers and concepts to length, capacity, time, and weight.		
Grade 2 Benchmark	Grade 2 Academic Benchmark	Levels of Complexity
1. Students apply estimation and measurement of length to content problems using standard units to the nearest inch.	2.A.M.1 Students demonstrate measurement of length using up to 4 inches using standard measurement units.	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students demonstrate measurement of length using more than 4 one inch cubes.**
		Level III *Students consistently perform in several familiar settings.* **Students demonstrate measurement of length using up to 4 inches using standard measurement units.** Ex. Students measure the length of an object using up to 4 one inch cubes.
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students demonstrate measurement of length using up to 3 one inch cubes.**
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to others use of measurement of length using up to 4 one inch cubes.** Ex. Students attend through eye gaze, vocalizations, or body movement to others use of measurement of length using up to 4 one inch cubes.

Grade 2 Benchmark	Grade 2 Academic Benchmark	Levels of Complexity
2. Students apply estimation and measurement of weight to content problems using non-standards units.	**2.A.M.2 Students identify heavy and light in measurement of weight using non-standard units.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students identify *and* label heavy and light in measurement of weight using non-standard units.**
		Level III *Students consistently perform in several familiar settings.* **Students identify heavy and light in measurement of weight using non-standard units.** Ex. Given a pencil and a book and asked which is heavy or light, students identify the correct item.
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students match heavy or light objects.** Ex. Given a heavy object, students match a like heavy object.
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to the use of heavy and light objects.**

Grade 2 Benchmark	Grade 2 Academic Benchmark	Levels of Complexity
3. Students tell time, using both analog and digital clocks to the nearest five minutes. *Note: Students communicate the reasoning used in solving these problems. They may use tools/technology to support learning.	2.A.M.3 Students identify simple tools associated with measuring time.	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students identify tools associated with measuring time.** Ex. Given different types of clocks, students identify the measurement tools as clocks for telling time. **Level III** *Students consistently perform in several familiar settings.* **Students identify simple tools associated with measuring time.** Ex. Students identify a picture schedule indicating their academic activities for the morning. **Level II** *Students require external support and multiple prompts in limited familiar settings.* **Students identify a simple tool for measuring time.** **Level I** *Students require external support and multiple prompts in a structured setting.* **Students attend to the use of a simple tool for measuring time.** Ex. Students attend through eye gaze or body movement to the use of timers or picture schedules on students' desks.

CONTENT STANDARD 4. ALGEBRA
Students use algebraic methods to investigate, model, and interpret patterns and functions involving numbers, shapes, data, and graphs in a problem-solving situation.

ACADEMIC CONTENT STANDARD 4. ALGEBRA
Students recognize and extend patterns and use numbers and symbols to solve problems.

Grade 2 Benchmark	Grade 2 Academic Benchmark	Levels of Complexity
1. Students recognize, describe, create, and extend patterns by using manipulatives and graphic representations.	2.A.A.1 Students recognize two elements of a four-element repeating pattern using manipulatives.	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students recognize three elements of a four-element repeating pattern using manipulatives patterns.**
		Level III *Students consistently perform in several familiar settings.* **Students recognize two elements of a four-element repeating pattern using manipulatives.** Ex. Given a four-element repeating pattern (square, circle, triangle, circle) and a set of random shapes, students identify two shapes in the presented pattern.
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students match a four-element repeating pattern using manipulatives.**
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to how others use four-element repeating patterns.**

Grade 2 Benchmark	Grade 2 Academic Benchmark	Levels of Complexity
2. Students apply knowledge of appropriate grade-level patterns when solving problems. ***Note: Students communicate the reasoning used in solving these problems. They may use tools/technology to support learning.**	**2.A.A.2 Students differentiate two four-element repeating patterns using manipulatives.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students differentiate three four-element repeating patterns using manipulatives**.
		Level III *Students consistently perform in several familiar settings.* **Students differentiate two four-element repeating patterns using manipulatives.** Ex. Given 2 four element repeating patterns (square, circle, triangle, circle and square, circle, square, circle), students identify the position of the element which is different.
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students match one different four-element repeating pattern to a like pattern using manipulatives.**
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to differentiation of two four-element repeating patterns using manipulatives.**

CONTENT STANDARD 5. DATA ANALYSIS AND PROBABILITY		
Students use data analysis and probability to analyze given situations and the results of experiments.		
ACADEMIC CONTENT STANDARD 5. DATA ANALYSIS AND PROBABILITY		
Students collect and organize data and make predictions based on given situations.		
Grade 2 Benchmark	Grade 2 Academic Benchmark	Levels of Complexity
1. Students collect, organize, and report data using graphs and Venn diagrams.	2.A.D.1 Students identify one set of objects with two specified attributes given a group of three different types of objects on a graphic representation.	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students identify one set of objects with two specified attributes given a group of four different types of objects on a graphic representation.**
		Level III *Students consistently perform in several familiar settings.* **Students identify one set of objects with two specified attributes given a group of three different types of objects on a graphic representation.** Ex. Given a group of objects containing red, large circles and red, large squares and blue, large squares, students group the red objects on a graphic representation; students identify the red, large objects.
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students match one set of objects with two specified attributes on a graphic representation.**
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to how others match one set of objects with two specified attributes on a graphic representation.**

Grade 2 Benchmark	Grade 2 Academic Benchmark	Levels of Complexity
2. Students communicate conclusions about a set of data using graphs and Venn diagrams.	**2.A.D.2 Students identify *more* or *less* when given two sets of data on a teacher-provided graphic representation.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students label *more* and *less* when given two sets of data on a graphic representation.**
		Level III *Students consistently perform in several familiar settings.* **Students identify *more* or *less* when given two sets of data on a teacher-provided graphic representation.**
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students match *more* or *less* when given two sets of data on a teacher-provided graphic representation.**
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to how others match *more* or *less* when given two sets of data on a teacher-provided graphic representation.** Ex. When shown two matched objects, students attend through body movement, eye gaze, vocalization, etc.

Grade 2 Benchmark	Grade 2 Academic Benchmark	Levels of Complexity
3. Students perform and record results of simple probability experiments using equally and unequally divided spinners. ***Note: Students communicate the reasoning used in solving these problems. They may use tools/technology to support learning.**	**2.A.D.3 Students perform simple probability activities using equally divided spinners.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students perform simple probability activities using equally and unequally divided spinners.** Ex. Given an equally and an unequally divided spinner, students spin and label results. **Level III** *Students consistently perform in several familiar settings.* **Students perform simple probability activities using equally divided spinners.** Ex. Given a spinner, students spin a total of 3 times. **Level II** *Students require external support and multiple prompts in limited familiar settings.* **Students match results of probability activities using equally divided spinners.** Ex. Given the result of a spin, students match the result. **Level I** *Students require external support and multiple prompts in a structured setting.* **Students attend to how others use equally divided spinners.**

Wyoming Mathematics Academic Content Standards
Grade 3

CONTENT STANDARD 1. NUMBER OPERATIONS AND CONCEPTS **Students use numbers, number sense, and number relationships in a problem-solving situation.** **ACADEMIC CONTENT STANDARD 1. NUMBER OPERATIONS AND CONCEPTS** **Students sequence numbers and use number operations and related concepts to solve problems.**		
Grade 3 Benchmark	**Grade 3 Academic Benchmark**	**Levels of Complexity**
1. Students use the concept of place value to read and write designated numbers up to 9,999.	**3.A.N.1 Students represent numbers between 5 and 9.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students represent and label numbers 0 - 9.** Ex. Given a group of objects and asked to represent and label 9 objects, students represent the corresponding number by counting 9 objects and label by selecting the numeral 9.
		Level III *Students consistently perform in several familiar settings.* **Students represent numbers between 5 and 9.** Ex. Given a group of objects, students count out the requested number of objects.
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students represent a whole number up to 9.** Ex. Given a group of objects, students count out the requested number of objects.
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to how others represent a whole number up to 9.** Ex. Students attend to a presented number by body movement, eye gaze, or vocalization.

Grade 3 Benchmark	Grade 3 Academic Benchmark	Levels of Complexity
2. Students compare and order whole numbers up to 9,999.	3.A.N.2 Students compare and order a set of 3 whole numbers up to 9. Students communicate the reasoning used in problem solving through comparison and ordering.	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students compare and order a set of 5 whole numbers up to 9 and above.**
		Level III *Students consistently perform in several familiar settings.* **Students compare and order a set of 3 whole numbers up to 9.** Ex. Given a set of numbers containing 8, 7, 9, students order the set 7, 8, 9. Given a set of numbers containing 6 and 8, students compare to identify which number is *more.*
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students recognize whether or not a set of 3 consecutive whole numbers less than 5 is presented in the correct order given a number line or tactile representation.**
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to how others compare and order a set of 3 whole numbers less than 9.** Ex. Students respond with eye gaze or facial expressions when attending to how others compare and order a set of 3 whole numbers less than 9.

Grade 3 Benchmark	Grade 3 Academic Benchmark	Levels of Complexity
3. Students use coins and bills to compare the values and make combinations up to five dollars.	**3.A.N.3 Students identify the value of two coins as *more*, *less*, or *equal* using pennies and quarters.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students compare and label as *more or less* the value of a penny, a quarter, a dime, and a nickel using real coins.** Ex. Given a collection of coins, students select and label a coin that is *more or less* than a dime.
		Level III *Students consistently perform in several familiar settings.* **Students identify the value of two coins as *more*, *less,* or *equal* using pennies and quarters.** Ex. Given a collection of coins, students identify a penny as *more or less than* a quarter.
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students match the coin that has more value when given two coins.** Ex. Given 2 coins, students match a presented coin which has more value.
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to how others use real coins.**

Grade 3 Benchmark	Grade 3 Academic Benchmark	Levels of Complexity
4. Students demonstrate computational fluency with basic facts (add to 20 and subtract from 20).	3.A.N.4 Students add by ones to a sum of up to 9.	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students add basic facts greater than 9 and subtract by 1.** Ex. Given a set of more than 9 blocks, students add the blocks in combinations up to 9 and subtract by 1.
		Level III *Students consistently perform in several familiar settings.* **Students add by ones to a sum of up to 9.** Ex. Given a set of 8 blocks, students add one block to make 9.
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students match the action of adding one more up to 9.** Ex. Given 4 blocks and one more block and presented with 4 blocks and one more block to make 5 blocks, students match adding one more block to make 5 blocks.
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to how others add objects up to 9.** Ex. Students attend to others counting objects up to 9 through verbalizations or movement.

Grade 3 Benchmark	Grade 3 Academic Benchmark	Levels of Complexity
5. Students add and subtract two- and three-digit numbers with and without regrouping.	**Addition and subtraction are addressed in 3.A.N.4**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Addition and subtraction are addressed in 3.A.N.4**
		Level III *Students consistently perform in several familiar settings.* **Addition and subtraction are addressed in 3.A.N.4**
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Addition and subtraction are addressed in 3.A.N.4**
		Level I *Students require external support and multiple prompts in a structured setting.* **Addition and subtraction are addressed in 3.A.N.4**

Grade 3 Benchmark	Grade 3 Academic Benchmark	Levels of Complexity
6. Students make an organized list and break problems into parts as strategies to solve problems.	**3.A.N.5 Students demonstrate an understanding of how to break the quantity of 5 into the sum of different parts.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students demonstrate an understanding of how to break the quantity of 9 into the sum of different parts.** Ex. Given 2 sets of 9 popsicle sticks, students show the equivalence of 6 and 2 compared to 4 and 4.
		Level III *Students consistently perform in several familiar settings.* **Students demonstrate an understanding of how to break the quantity of 5 into the sum of different parts.** Ex. Given 2 sets of 5 popsicle sticks, students show the equivalence of 1 and 4 compared to 2 and 3.
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students match two given sets of objects with equal sums.** Ex. Given 2 sets of popsicle sticks, students match the equivalence of 2 and 2 compared to 1 and 3.
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to/interact with how others match two given sets of objects with equal sums.**

Grade 3 Benchmark	Grade 3 Academic Benchmark	Levels of Complexity
7. Students use estimation strategies (rounding to the nearest 10 or 100, or front-end loading) to solve problems.	3.A.N.6 Students provide a reasonable estimate (guess) to a presented problem given two variables.	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students provide a reasonable estimate (guess) to a presented problem with more than two variables.** Ex. Given three jars of marbles with varying amounts, students estimate which has more.
		Level III *Students consistently perform in several familiar settings.* **Students provide a reasonable estimate (guess) to a presented problem given two variables.** Ex. Given two jars of marbles with varying amounts, students estimate which has more.
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students match their estimate to a provided estimate.** Ex. Given a jar with 1 marble and a jar with 5 marbles, students match their estimation to one of the jars.
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to others use of estimation.** Ex. Students attend to others use of estimation through eye gaze, nodding, and/or verbalizations.

Grade 3 Benchmark	Grade 3 Academic Benchmark	Levels of Complexity
8. Students communicate their choice of procedures and results when performing number operations in a problem-solving situation. ***Note: Students communicate the reasoning used in solving these problems. They may use tools/technology to support learning.**	**Addressed in 3.A.N.2**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Addressed in 3.A.N.2**
		Level III *Students consistently perform in several familiar settings.* **Addressed in 3.A.N.2**
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Addressed in 3.A.N.2**
		Level I *Students require external support and multiple prompts in a structured setting.* **Addressed in 3.A.N.2**

CONTENT STANDARD 2. GEOMETRY Students apply geometric concepts, properties, and relationships in a problem-solving situation. ACADEMIC CONTENT STANDARD 2. GEOMETRY Students recognize, sort, compare, and contrast geometric shapes and objects and relationships.		
Grade 3 Benchmark	Grade 3 Academic Benchmark	Levels of Complexity
1. Students describe 2- and 3-dimensional geometric objects and relationships.	3.A.G.1 Students identify 2- dimensional objects and recognize similarities between 2- and 3-dimensional objects.	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students label 2- dimensional objects and identify similarities and differences between 2- and 3-dimensional objects.** Ex. Given a sphere, a circle, and a square, students label the circle and the square as being 2-dimensional objects, and identify a sphere and square as being different.
		Level III *Students consistently perform in several familiar settings.* **Students identify 2- dimensional objects and recognize similarities between 2- and 3- dimensional objects.** Ex. Given a sphere (3-dimensional) and a circle (2-dimensional), students recognize a sphere and a circle as being similar in shape.
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students match 2- dimensional objects and interact with 3-dimensional objects***.*
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to the use of 2- and 3-dimensional shapes.**

Grade 3 Benchmark	Grade 3 Academic Benchmark	Levels of Complexity
2. Students describe and compare various geometric objects using congruency and lines of symmetry.	3.A.G.2 Students identify a pair of congruent geometric shapes.	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students select a pair of congruent geometric shapes when given a set of 3 geometric shapes.**
		Level III *Students consistently perform in several familiar settings.* **Students identify a pair of congruent geometric shapes.** Ex. Given a set of geometric objects, students identify objects of the same shape and same size.
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students match a pair of congruent geometric shapes.**
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to how others match congruent shapes.**

Grade 3 Benchmark	Grade 3 Academic Benchmark	Levels of Complexity
3. Students select, use, and communicate organizational methods in problem-solving situations appropriate to grade level. ***Note: Students communicate the reasoning used in solving these problems. They may use tools/technology to support learning.**	**3.A.G.3 Students organize a set of congruent geometric shapes according to a graphic representation provided by the teacher.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students organize a set of congruent geometric shapes according to a graphic representation.** Ex. Given a group of shapes, students sort by congruency and place them on a graph or grid system. **Level III** *Students consistently perform in several familiar settings.* **Students organize a set of congruent geometric shapes according to a graphic representation provided by the teacher.** Ex. Given a parameter for grouping a set of shapes, students sort by congruency and place them on a provided graph or grid system. **Level II** *Students require external support and multiple prompts in limited familiar settings.* **Students match a set of congruent geometric shapes to like shapes on a provided graphic representation.** Ex. Given a group of congruent objects, students match objects to like objects on a provided graph or grid system. **Level I** *Students require external support and multiple prompts in a structured setting.* **Students interact with/attend to how others place a set of congruent geometric shapes on a graph.**

CONTENT STANDARD 3. MEASUREMENT		
Students use a variety of tools and techniques of measurement in a problem-solving situation.		
ACADEMIC CONTENT STANDARD 3. MEASUREMENT		
Students use tools to apply numbers and concepts to length, capacity, time, and weight.		
Grade 3 Benchmark	Grade 3 Academic Benchmark	Levels of Complexity
1. Students apply estimation and measurement of length to content problems using actual measuring devices and express the results in U.S. customary units (inches, feet, and yards).	**3.A.M.1 Students demonstrate measurement of up to 9 one-inch increments and 3 one-foot increments of length using customary units.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students identify and label measurement of length using inches and feet.** Ex. Given items of different lengths, students label items as longer or shorter and use mathematical language including inches and feet.
		Level III *Students consistently perform in several familiar settings.* **Students demonstrate measurement of up to 9 one-inch increments and 3 one-foot increments of length using customary units.** Ex. Given a ruler and one inch cube, students identify which is longer and which is shorter.
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students match long or short objects.** Ex. Given a long object, students match to a like, long object.
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to how others use objects of different lengths.**

Grade 3 Benchmark	Grade 3 Academic Benchmark	Levels of Complexity
2. Students apply estimation and measurement of capacity in problem-solving situations using actual measuring devices and express the results in U.S. customary units (cups, quarts, and gallons).	**3.A.M.2 Students demonstrate measurement of capacity using customary units of up to 4 cups.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students demonstrate and label measurement of capacity using customary units of up to 4 cups.** Ex. Given a cup and a quart, students count and label the number of cups required to fill the quart.
		Level III *Students consistently perform in several familiar settings.* **Students demonstrate measurement of capacity using customary units of up to 4.** Ex. Given a cup and a quart, students count the number of cups required to fill the quart.
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students match a cup to a cup.** Ex. Given a picture, symbol, or object, students match to like picture, symbol or object.
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to the demonstration of measurement of capacity using customary units of a cup.**

Grade 3 Benchmark	Grade 3 Academic Benchmark	Levels of Complexity
3. Students demonstrate relationships within the U.S. customary units in problem- solving situations.	**3.A.M.3 Students compare the relationships between U.S. customary units of length (inches and feet).**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students label and compare the relationships between U.S. customary units of length (inches and feet).** Ex. Given a length-related question, students use the terms *inch* and *foot* in their comparison.
		Level III *Students consistently perform in several familiar settings.* **Students compare the relationships between U.S. customary units of length (inches and feet).** Ex. Given a one inch cube and a one foot piece of string, students identify which is longer.
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students match the presented relationship between U.S. customary units of length (inches and feet).** Ex. Students match a longer unit of length to a like longer unit of length.
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to the comparison of the relationships between U.S. customary units of length (inches and feet).**

Grade 3 Benchmark	Grade 3 Academic Benchmark	Levels of Complexity
4. Students determine perimeter of rectangles and squares using models in problem solving situations.	**3.A.M.4 Students identify perimeter as the distance around an object.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students identify and label perimeter as the distance around an object.** Ex. Given a square whose perimeter is 9 inches and a piece of a string, students outline the shape using the string and identify the length.
		Level III *Students consistently perform in several familiar settings.* **Students demonstrate perimeter as the distance around an object.** Ex. Student use a string to outline a given shape.
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students match the perimeter as the distance around an object.** Ex. Given a length of string placed around an object which matches the perimeter of the object, students outline a like object with the string.
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to the measurement of perimeter as the distance around an object.**

Grade 3 Benchmark	Grade 3 Academic Benchmark	Levels of Complexity
5. Students tell time, using both analog and digital clocks, to the nearest minute using A.M. and P.M. ***Note: Students communicate the reasoning used in solving these problems. They may use tools/technology to support learning.**	**3.A.M.5 Students associate activities with time of day (morning or afternoon).**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students associate activities with time of day and label time of day (morning or afternoon).** Ex. When given 2 morning activities and 1 afternoon activity from the class schedule, students identify and label activities as morning or afternoon. **Level III** *Students consistently perform in several familiar settings.* **Students associate activities with time of day (morning or afternoon).** Ex. Given an activity completed in the morning class schedule, students identify as a morning activity. **Level II** *Students require external support and multiple prompts in limited familiar settings.* **Students match morning activities with other morning activities.** Ex. Given a set of 2 morning activities and another set of 2 morning activities and a set of 4 like morning activities, students match the 2 sets of morning activities. **Level I** *Students require external support and multiple prompts in a structured setting.* **Students attend to how others match morning activities with other morning activities.**

CONTENT STANDARD 4. **ALGEBRA**
Students use algebraic methods to investigate, model, and interpret patterns and functions involving numbers, shapes, data, and graphs in a problem-solving situation.
ACADEMIC CONTENT STANDARD 4. **ALGEBRA**
Students recognize and extend patterns and use numbers and symbols to solve problems.

Grade 3 Benchmark	Grade 3 Academic Benchmark	Levels of Complexity
1. Students recognize, describe, create, and extend patterns by using manipulatives, numbers, and graphic representations.	**3.A.A.1 Students extend a three-element repeating pattern up to one place using manipulatives or graphic representations.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students extend a three-element repeating pattern up to 2 places using manipulatives or graphic representation.** Ex. Given a set of different colored blocks and a three-element repeating pattern, students extend the pattern by two places.
		Level III *Students consistently perform in several familiar settings.* **Students extend a three-element repeating pattern up to one place using manipulatives or graphic representations.** Ex. Given a set of different colored blocks and a three-element repeating pattern, students extend the pattern by one place.
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students copy a three-element repeating pattern using manipulatives.**
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to how others copy a three-element repeating pattern.**

Grade 3 Benchmark	Grade 3 Academic Benchmark	Levels of Complexity
2. Students apply knowledge of appropriate grade- level patterns when solving problems. ***Note: Students communicate the reasoning used in solving these problems. They may use tools/technology to support learning.**	**3.A.A.2 Students differentiate two four-element repeating patterns using numbers.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students differentiate three four-element repeating patterns using numbers.**
		Level III *Students consistently perform in several familiar settings.* **Students differentiate two four-element repeating patterns using numbers.** Ex. Given two four-element pattern (1,2,3,4 and 1,2,3,5), students identify how they are different.
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students match two four-element repeating patterns using numbers or graphic representation.** Ex. Given a circle, circle square; circle repeating pattern, students match a like pattern.
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to how others copy two four-element repeating patterns using numbers.**

CONTENT STANDARD 5. DATA ANALYSIS AND PROBABILITY Students use data analysis and probability to analyze given situations and the results of experiments. ACADEMIC CONTENT STANDARD 5. DATA ANALYSIS AND PROBABILITY Students collect and organize data and make predictions based on given situations.		
Grade 3 Benchmark	**Grade 3 Academic Benchmark**	**Levels of Complexity**
1. Students collect, organize, and compare data using graphs and Venn diagrams.	**3.A.D.1 Students organize objects according to one attribute onto a provided graphic representation.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students organize and place objects based on two attributes onto their own graphic representation, and label the common attribute for comparison.** Ex. Given a set of objects, students organize the objects into groups based on two attributes onto their own graphic representation, and label which group has more.
		Level III *Students consistently perform in several familiar settings.* **Students organize objects according to one attribute onto a provided graphic representation.** Ex. Given a group of objects, students organize a set of similar objects based on one attribute onto a provided graphic representation.
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students match a presented organized group of objects based on one attribute.** Ex. Given two groups of objects sorted by color, students match the presented group containing red objects.
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to how others match objects in two groups based on one attribute.** Ex. Students attend to sorted groups of objects based on one attribute through eye gaze and vocalizations.

Grade 3 Benchmark	Grade 3 Academic Benchmark	Levels of Complexity
2. Students communicate conclusions about a set of data by interpreting information using graphs and Venn diagrams.	3.A.D.2. Students identify which set of 4 given sets of data has the *most, least*, or *same* number of items presented on a graphic representation.	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students identify and label which set of 4 given sets of data has the *most, least*, or *same* number of items presented on a graphic representation.** Ex. Given 4 sets of data (4 blue blocks, 6 green circles, 3 red triangles, and 4 red rectangles), students identify and label which 2 sets of data have the *same* number of items.
		Level III *Students consistently perform in several familiar settings.* **Students identify which set of 4 given sets of data has the *most, least*, or *same* number of items presented on a graphic representation.** Ex. Given 4 sets of data (4 blue blocks, 6 green circles, 3 red triangles, and 4 red rectangles), students identify which 2 sets of data have the *same* number of items.
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students match 2 given sets of data of which one has more items.** Ex. Given 2 sets of data of which one set contains 3 items and the other set contains more items and other additional items, students match the presented sets of data.
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to/interact with others use of 2 given sets of data of which one has more items.** Ex. Students attend to how others use 2 sets of organized data through eye gaze, vocalizations, body movements, etc.

Grade 3 Benchmark	Grade 3 Academic Benchmark	Levels of Complexity
3. Students predict, perform, and record likely results of simple probability experiments. ***Note: Students communicate the reasoning used in solving these problems. They may use tools/technology to support learning.**	**3.A.D.3. Students perform and record the results of simple probability activities using a spinner with equally divided parts.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students perform, record, and compare the results of simple probability activities using a spinner with equally divided parts and a spinner with unequally divided parts.** Ex. Given an equally divided spinner and an unequally divided spinner, students spin a requested number of times, record, and compare the results of the spins.
		Level III *Students consistently perform in several familiar settings.* **Students perform and record the results of simple probability activities using a spinner with equally divided parts.** Ex. Given a spinner with equally divided parts, students spin a requested number of times and record the results of the spins.
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students perform and match the recorded results of simple probability activities using spinners with equally divided parts.** Ex. Given a game, students match the move of a marker to match the result of spinning.
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to how others use spinners with equally divided parts.**

Wyoming Mathematics Academic Content Standards
Grade 4

CONTENT STANDARD 1. NUMBER OPERATIONS AND CONCEPTS Students use numbers, number sense, and number relationships in a problem-solving situation. ACADEMIC CONTENT STANDARD 1. NUMBER OPERATIONS AND CONCEPTS Students sequence numbers and use number operations and related concepts to solve problems.		
Grade 4 Benchmark	**Grade 4 Academic Benchmark**	**Levels of Complexity**
1. Students use the concept of place value to read and write whole numbers up to 999,999 in words, standard, and expanded form.	**4.A.N.1 Students represent whole numbers between 10 and 15.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students represent and label whole numbers up to 15.** Ex. Given random presentation of numbers up to and above 15 on index cards, students represent numbers on cards.
		Level III *Students consistently perform in several familiar settings.* **Students represent whole numbers between 10 and 15.** Ex. Given random presentation of numbers up to15 on index cards, students represent those values using manipulatives.
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students represent a whole number up to 10.** Ex. Given the number 7 on an index card, students represent the value of 7 using manipulatives.
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to how others use a whole number up to 10.**

Grade 4 Benchmark	Grade 4 Academic Benchmark	Levels of Complexity
2. Students compare and order whole numbers.	**4.A.N.2 Students compare and order a set of 3 whole numbers between 10 and 15** **Students communicate the reasoning used in problem solving through comparison and ordering.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students compare and order a set of 5 numbers up to 15 and above.** .
		Level III *Students consistently perform in several familiar settings* **Students compare and order a set of 3 whole numbers between 10 and 15.** Ex. Given a set of 5 whole numbers from 0 to 15 on index cards, students compare and order the numbers from least to highest.
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students match a set of 3 whole numbers less than 10 which are presented in order.** Ex. Given the whole numbers 2, 5, and 7, presented in order, students match 2 blocks to the 2, 5 blocks to the 5, and 7 blocks to the 7.
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to how others order 3 whole numbers less than 15.**

Grade 4 Benchmark	Grade 4 Academic Benchmark	Levels of Complexity
3. Students use coins and bills to compare the values, make combinations up to $10.00, and make change from amounts up to $5.00.	4.A.N.3 Students identify the values of two coins as *more*, *less*, or *equal* using pennies, quarters and dimes.	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students identify and label the values of two coins as *more*, *less*, and *equal* using pennies, quarters, dimes, and nickels.**
		Level III *Students consistently perform in several familiar settings.* **Students identify the values of two coins as *more*, *less,* or *equal* using pennies, quarters, and dimes.** Ex. Given a collection of coins, students select coins that are *more or less* than a dime.
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students match the coin that has more value when given two coins.** Ex. Given a penny and a dime and presented with a penny and a dime, students match a dime to a dime when asked which coin is worth more.
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to the identifying the values of two coins as *more*, *less,* or *equal* using pennies, quarters, and dimes.**

Grade 4 Benchmark	Grade 4 Academic Benchmark	Levels of Complexity
4. Students demonstrate computational fluency with basic facts (add to 20, subtract from 20, multiply by 0-10).	**4.A.N.4 Students complete three addition problems using basic facts with sums up to 12 using manipulatives.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students complete more than three addition problems using basic facts with sums up to 15 using manipulatives.**
		Level III *Students consistently perform in several familiar settings.* **Students complete three addition problems using basic facts with sums up to 12 using manipulatives.** Ex. Given eight blocks, students represent the expression 4+4=8 using blocks.
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students match two addition problems using basic facts with sums up to 9 using manipulatives.**
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to how others match two addition problems using basic facts up to 9 using manipulatives.**

Grade 4 Benchmark	Grade 4 Academic Benchmark	Levels of Complexity
5. Students add and subtract to thousands and multiply hundreds by a single digit.	**4.A.N.5 Students complete one subtraction problem using single digit numbers up to 9 using manipulatives.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students complete more than one subtraction problem using single digit numbers up to 9.**
		Level III *Students consistently perform in several familiar settings.* **Students complete one subtraction problem using single digit numbers up to 9 and manipulatives.** Ex. Given 9 blocks, students subtract one block to make 8.
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students match one subtraction problem using single digit numbers.**
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to how others complete one subtraction problem using single digit numbers and manipulatives.**

Grade 4 Benchmark	Grade 4 Academic Benchmark	Levels of Complexity
6. Students explain their choice of problem-solving strategies and justify their results when performing whole number operations in problem-solving situations.	Addressed in 4.A.N.2 Students communicate the reasoning used in problem solving through comparison and ordering.	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Addressed in 4.A.N.2**
		Level III *Students consistently perform in several familiar settings.* **Addressed in 4.A.N.2**
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Addressed in 4.A.N.2**
		Level I *Students require external support and multiple prompts in a structured setting.* **Addressed in 4.A.N.2**

Grade 4 Benchmark	Grade 4 Academic Benchmark	Levels of Complexity
7. Students recognize commonly used fractions (halves, thirds, fourths) as parts of a whole using an area model.	**4.A.N.6 Students recognize a whole can be represented by parts using manipulatives.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students recognize 2 halves make a whole using manipulatives .** Ex. Students are given three half apples and are asked to select the number of halves which make a whole.
		Level III *Students consistently perform in several familiar settings.* **Students recognize a whole can be represented by parts using manipulatives.** Ex. Given a selection of half pieces of fruit, students select two parts that go together to make a whole.
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students match equivalent parts of a whole using manipulatives.**
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to a display of whole and parts of a whole using manipulatives.**

Grade 4 Benchmark	Grade 4 Academic Benchmark	Levels of Complexity
8. Students use estimation strategies to solve problems. *Note: Students communicate the reasoning used in solving these problems. They may use tools/technology to support learning.	4.A.N.7 Students use two quantitative labels (i.e., more/less, larger/smaller) when making an estimation.	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students use three quantitative labels (i.e., more/less, larger/smaller, heavier/lighter) when making estimations.**
		Level III *Students consistently perform in several familiar settings.* **Students use two quantitative labels (i.e., more/less, larger/smaller) when making an estimation.** Ex. Given two items, students label which is larger by matching a word card, a picture symbol, an A.T. device, etc.
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students use one quantitative label (i.e., more/less, larger/smaller) when making an estimation.** Ex. Given a very large block and a very small block, students identify the large block as being *larger*.
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to how others use one quantitative label (i.e., more/less, larger/smaller) when making an estimation.**

CONTENT STANDARD 2. GEOMETRY		
Students apply geometric concepts, properties, and relationships in a problem-solving situation.		
ACADEMIC CONTENT STANDARD 2. GEOMETRY		
Students recognize, sort, compare, and contrast geometric shapes and objects and relationships.		
Grade 4 Benchmark	**Grade 4 Academic Benchmark**	**Levels of Complexity**
1. Students classify and describe 2- and 3-dimensional geometric objects by their attributes (sides, edges, vertices, and faces).	4.A.G.1 Students identify two- or three-dimensional shapes of the same and/or different positions and sizes.	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students identify and name two- or three- dimensional shapes of the same and/or different positions and sizes.**
		Level III *Students consistently perform in several familiar settings.* **Students identify two- or three- dimensional shapes of the same and/or different positions and sizes.** Ex. Given an assortment of geometric shapes of different shapes and sizes, students select all the squares.
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students match two- or three- dimensional shapes of different sizes.**
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to how others match two- or three- dimensional shapes of the same size.**

Grade 4 Benchmark	Grade 4 Academic Benchmark	Levels of Complexity
2. Students understand the images resulting from reflections (flips).	**4.A.G.2 Students identify a reflection (flip).**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students create a reflection when given a pair of like images.** Ex. Given two cardboard cut-outs of lady bugs, students manipulate cut-outs to create a reflection.
		Level III *Students consistently perform in several familiar settings.* **Students identify a reflection (flip).** Ex. Given an example of a reflected pair and non-example, students select a reflected pair.
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students match a reflected pair.** Ex. Given a lady bug and a reflection of the same and a reflection of another object, students match the ladybug and the correct reflection.
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to a reflected image presented by others.**

Grade 4 Benchmark	Grade 4 Academic Benchmark	Levels of Complexity
3. Students select, use, and communicate organizational methods in problem-solving situations appropriate to grade level.	4.A.G.3 Students organize three different reflections (flips) of images with original images.	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students organize more than three different reflections (flips) of images with original images on a graph or grid system.**
		Level III *Students consistently perform in several familiar settings.* **Students organize three different reflections (flips) of images with original.** Ex. Students match three images to their reflections, such as a lady bug to a lady bug; a cup to a cup; and a flag to a flag.
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students match two different reflections (flips) of images with original images as presented by teacher on a graph or grid system.**
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to how others organize images with reflections of the original image on a graph or grid system.**

Grade 4 Benchmark	Grade 4 Academic Benchmark	Levels of Complexity
4. Students know characteristics of lines (parallel, perpendicular, and intersecting). *Note: Students communicate the reasoning used in solving these problems. They may use tools/technology to support learning.	4.A.G.4 Students identify one characteristic of lines (parallel, perpendicular, and intersecting).	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students identify two or more characteristics of lines (parallel, perpendicular, and intersecting).** **Level III** *Students consistently perform in several familiar settings.* **Students identify one characteristic of lines (parallel, perpendicular, and intersecting).** Ex. Given a set of parallel popsicle sticks, students identify that the sticks go the same way. Ex. Given a set of intersecting popsicle sticks, students identify that the sticks cross. **Level II** *Students require external support and multiple prompts in limited familiar settings.* **Students match a set of parallel lines.** **Level I** *Students require external support and multiple prompts in a structured setting.* **Students attend to how others match sets of parallel lines.**

CONTENT STANDARD 3. MEASUREMENT		
Students use a variety of tools and techniques of measurement in a problem-solving situation.		
ACADEMIC CONTENT STANDARD 3. MEASUREMENT		
Students use tools to apply numbers and concepts to length, capacity, time, and weight.		
Grade 4 Benchmark	**Grade 4 Academic Benchmark**	**Levels of Complexity**
1. Students select and apply appropriate U.S. customary units (half inch, quarter inch, feet, and yards) to the estimation and measurement of length in real-world problems using actual measuring devices.	**4.A.M.1 Students demonstrate measurement of length:** • **up to 12 one-inch increments** • **estimate up to 6 inches.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students label U.S. customary units of inch, foot, and yard.**
		Level III *Students consistently perform in several familiar settings.* **Students demonstrate measurement of length:** • **up to 12 one-inch increments** • **estimate up to 6 inches.** Ex. Given a ruler marked in one-inch increments, students use it to measure a set of up to 12 one-inch blocks. Ex. Given two objects, one which is slightly longer than six inches and one that is much longer than six inches, students estimate which one is closer to six inches.
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students match the measurement of items up to 12 one-inch increments.**
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to how others measure items up to 12 one-inch increments.**

Grade 4 Benchmark	Grade 4 Academic Benchmark	Levels of Complexity
2. Students select and apply appropriate U.S. customary units (ounces and pounds) to the estimation and measurement of weight in real-world problems using actual measuring devices.	**4.A.M.2 Students compare the relationship between U.S. customary units of weight (ounces and pounds).**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students identify *and* label heavy and light in measurement of weight.**
		Level III *Students consistently perform in several familiar settings.* **Students compare the relationship between U.S. customary units of weight (ounces and pounds).** Ex. Given a pencil and a book and asked which is heavy or light, students identify the correct item.
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students match heavy or light objects.** Ex. Given a heavy object, students match a like heavy object.
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to comparing the relationship between U.S. customary units of weight (ounces and pounds).**

Grade 4 Benchmark	Grade 4 Academic Benchmark	Levels of Complexity
3. Students select and apply appropriate U.S. customary units (teaspoons, tablespoons, cups, pints, quarts, and gallons) to the estimation and measurement of capacity in real-world problems using actual measuring devices.	4.A.M.3 Students compare the relationship between U.S. customary units of capacity (cups and gallons).	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students label and compare the relationship between U.S. customary units of capacity (cups and gallons).** Ex. When presented with 2 cups and 2 gallons, students compare, identify, and label which units have more capacity. **Level III** *Students consistently perform in several familiar settings.* **Students compare the relationship between U.S. customary units of capacity (cups and gallons).** Ex. When presented with 2 cups and 2 gallons, students compare and identify which units have more capacity. **Level II** *Students require external support and multiple prompts in limited familiar settings.* **Students match cups to cups and gallons to gallons.** **Level I** *Students require external support and multiple prompts in a structured setting.* **Students attend to how others match cups to cups and gallons to gallons.**

Grade 4 Benchmark	Grade 4 Academic Benchmark	Levels of Complexity
4. Students demonstrate relationships within the U.S. customary system, given an equivalence chart, in problem-solving situations.	**4.A.M.4 Students compare the relationship between the U.S. customary units of feet and yards.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students compare and label the relationship between the U.S. customary units of feet and yards.** Ex. Given an object, students label an object as having less length (being shorter) using units of feet and yards.
		Level III *Students consistently perform in several familiar settings.* **Students compare the relationship between the U.S. customary units of feet and yards.** Ex. Given a one-yard piece of string and a one-foot piece of string, students identify which is longer.
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students match feet to feet and yards to yards.**
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to how others match feet to feet and yards to yards.**

Grade 4 Benchmark	Grade 4 Academic Benchmark	Levels of Complexity
5. Students determine area and perimeter of rectangles and squares using models in problem-solving situations.	**4.A.M.5 Students determine the perimeter of a square up to 12 inches.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students determine and label the perimeter of a square up to 12 inches with the appropriate unit.**
		Level III *Students consistently perform in several familiar settings.* **Students determine the perimeter of a square up to 12 inches.** Ex. Given a square object whose perimeter is up to 12 inches and a cloth measuring tape, students outline the shape using the measuring tape and identify the length of perimeter.
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students match the perimeter of a square up to 12 inches.**
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to how others measure perimeter.** Ex. Students attend through eye gaze, body movement, vocalization, facial expression, etc.

Grade 4 Benchmark	Grade 4 Academic Benchmark	Levels of Complexity
6. Students use time, in problem-solving situations to: • compare relationships among seconds, minutes, and hours; and • use elapsed time to the nearest minute. ***Note: Students communicate the reasoning used in solving these problems. They may use tools/technology to support learning.**	4.A.M.6 Students identify time to the hour.	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students identify time to the hour and half hour.** Ex. Given two clocks, one showing 2:00 and one showing 3:30, students identify the clock that shows time to the hour and the clock that shows time to the half hour. **Level III** *Students consistently perform in several familiar settings.* **Students identify time to the hour.** Ex. Given two clocks, one showing 1:00 and one showing 4:00, students identify which clock shows 1:00. **Level II** *Students require external support and multiple prompts in limited familiar settings.* **Students match two clocks with like time to the hour.** Ex. Given a clock showing time to the hour and two other clocks, one with like time and one with a different time, students match the clocks with like time. **Level I** *Students require external support and multiple prompts in a structured setting.* **Students attend to identifying time to the hour.**

CONTENT STANDARD 4. <u>ALGEBRA</u>
Students use algebraic methods to investigate, model, and interpret patterns and functions involving numbers, shapes, data, and graphs in a problem-solving situation.
ACADEMIC CONTENT STANDARD 4. <u>ALGEBRA</u>
Students recognize and extend patterns and use numbers and symbols to solve problems.

Grade 4 Benchmark	Grade 4 Academic Benchmark	Levels of Complexity
1. Students recognize, describe, extend, create, and generalize patterns by using manipulatives, numbers, and graphic representations.	4.A.A.1 Students extend a four-element repeating pattern up to two places using graphic representation or numbers.	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students extend a four-element repeating pattern up to three places using graphic representation or numbers.**
		Level III *Students consistently perform in several familiar settings.* **Students extend a four-element repeating pattern up to two places using graphic representation or numbers.** Ex. Shown an example of a four-element repeating pattern followed by the next two elements, students extend the pattern by two places.
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students match a four-element repeating pattern which is extended by two places using numbers or graphic representations to a like pattern.**
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to how others copy a four-element repeating pattern which is extended by two places using graphic representation or numbers.**

Grade 4 Benchmark	Grade 4 Academic Benchmark	Levels of Complexity
2. Students apply knowledge of appropriate grade- level patterns when solving problems.	4.A.A.2 Students identify one missing element of a four-element repeating pattern using graphic representation or number.	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students identify two missing elements at the end of a four-element repeating pattern using graphic representation or numbers.** Ex. Given a 4 element, repeating pattern (AABB; AABB) and an incomplete repeating pattern (AABB; AA_,_), students complete the pattern.
		Level III *Students consistently perform in several familiar settings.* **Students identify one missing element at the end of a four-element repeating pattern using graphic representation or numbers.** Ex. Given a 4 element, repeating pattern (AABB; AABB) and an incomplete repeating pattern (AABB; AAB__), students complete the pattern.
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students complete a four-element repeating pattern missing one element given the same completed four-element repeating pattern.**
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to how others use patterns to complete an incomplete pattern using a given four- element repeating pattern.** Ex. Students attend to patterns to complete an incomplete pattern using a given four- element repeating pattern through manipulation, body movement, and eye gaze, etc.

Grade 4 Benchmark	Grade 4 Academic Benchmark	Levels of Complexity
3. Students explain a rule given a pattern or sequence. *Note: Students communicate the reasoning used in solving these problems. They may use tools/technology to support learning.	Addressed in 4.A.A.1	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Addressed in 4.A.A.1**
		Level III *Students consistently perform in several familiar settings.* **Addressed in 4.A.A.1**
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Addressed in 4.A.A.1**
		Level I *Students require external support and multiple prompts in a structured setting.* **Addressed in 4.A.A.1**

CONTENT STANDARD 5. **DATA ANALYSIS AND PROBABILITY**		
Students use data analysis and probability to analyze given situations and the results of experiments.		
ACADEMIC CONTENT STANDARD 5. DATA ANALYSIS AND PROBABILITY		
Students collect and organize data and make predictions based on given situations.		
Grade 4 Benchmark	**Grade 4 Academic Benchmark**	**Levels of Complexity**
1. Students collect, organize, and compare data in graphs, Venn diagrams, tables, and charts.	4.A.D.1 Students organize a group of objects into two sets according to one attribute each onto a provided graphic representation and make comparisons (up to 10 items per set).	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students organize a group of objects into two sets according to one attribute each on their own graphic representation and make comparisons (up to 10 items per set).** Ex. Given a set of objects, students organize the objects into groups based on one attribute onto their own graphic representation, and label which group has more.
		Level III *Students consistently perform in several familiar settings.* **Students organize a group of objects into two sets according to one attribute each onto a provided graphic representation and make comparisons (up to 10 items per set).** Ex. Given a group of objects, students organize a set of similar objects based on one attribute onto a provided graphic representation.
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students match a presented set of data containing up to 5 items onto a provided graphic representation.**
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to how others match a presented set of data containing up to 5 items onto a provided graphic representation.**

Grade 4 Benchmark	Grade 4 Academic Benchmark	Levels of Complexity
2. Students communicate conclusions about a set of data by interpreting information using graphs, Venn diagrams, tables, and charts.	4.A.D.2 Students compare two separate sets of teacher-collected data by identifying one similarity and one difference.	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students compare two separate sets of student-collected data by identifying one similarity and one difference.**
		Level III *Students consistently perform in several familiar settings.* **Students compare two separate sets of teacher-collected data by identifying one similarity and one difference.** Ex. Given a teacher-collected set of 5 green shapes and 5 red shapes, students identify 1 similarity among the sets (i.e., same number of shapes, both sets have shapes).
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students compare two separate sets of data by matching one similarity.** Ex. Given a set of 5 green shapes and 5 red sets, students match a shape which is similar to the teacher-presented similar shape.
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to the comparison of one similarity and one difference of two separate sets of teacher-collected data.**

Grade 4 Benchmark	Grade 4 Academic Benchmark	Levels of Complexity
3. Students predict, perform, and record results of probability experiments.	4.A.D.3 Students predict, perform, and record results of probability activities using a spinner with equally divided parts.	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students predict, perform, and record results of two probability activities using different tools of probability.** Ex. Given tools for probability (i.e., coins, number cube, spinners), students select a tool, guess a result, perform, and record results for two different activities.
		Level III *Students consistently perform in several familiar settings.* **Students predict, perform, and record results of probability activities using a spinner with equally divided parts.** Ex. Given a spinner with equally divided parts, students guess a result, perform, and record results.
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students predict the outcome of a probability activity.** Ex. Given two different colored blocks in a bag, students guess what color block will be selected.
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to how others use spinners with equally divided parts in probability activities.** Ex. Students attend to how others complete probability activities through eye gaze, vocalizations, body movement, etc.

Grade 4 Benchmark	Grade 4 Academic Benchmark	Levels of Complexity
4. Students predict all possible outcomes of a given situation or event. ***Note: Students communicate the reasoning used in solving these problems. They may use tools/technology to support learning.**	**Addressed in 4.A.D.3**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Addressed in 4.A.D.3**
		Level III *Students consistently perform in several familiar settings.* **Addressed in 4.A.D.3**
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Addressed in 4.A.D.3**
		Level I *Students require external support and multiple prompts in a structured setting.* **Addressed in 4.A.D.3**

Wyoming Mathematics Academic Content Standards
Grade 5

CONTENT STANDARD 1. NUMBER OPERATIONS AND CONCEPTS **Students use numbers, number sense, and number relationships in a problem-solving situation.** **ACADEMIC CONTENT STANDARD 1. NUMBER OPERATIONS AND CONCEPTS** **Students sequence numbers and use number operations and related concepts to solve problems.**		

Grade 5 Benchmark	Grade 5 Academic Benchmark	Levels of Complexity
1. Students use the concept of place value to read and write whole numbers (in words, standard, and expanded form) and decimals (10ths and 100ths).	**5.A.N.1 Students represent and order whole numbers between 15 and 20.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students represent whole numbers up to 20 and above.**
		Level III *Students consistently perform in several familiar settings.* **Students represent and order whole numbers between 15 and 20.** Ex. Given a presentation of values up to 20 on index cards, students represent shown values using objects.
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students match a presented representation of a whole number up to 15.**
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to how others represent whole numbers up to 15.**

Grade 5 Benchmark	Grade 5 Academic Benchmark	Levels of Complexity
2. Students demonstrate computational fluency with basic facts for all four operations, including identifying multiples and factors of designated numbers up to 100.	**5.A.N.2 Students count by twos to a total of 10.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students count by twos to a total greater than 10.**
		Level III *Students consistently perform in several familiar settings.* **Students count by twos to a total of 10.** Ex. Students recognize three pairs of shoes as a total of six shoes.
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students count by twos up to 6.**
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to how others count by twos up to 6.**

Grade 5 Benchmark	Grade 5 Academic Benchmark	Levels of Complexity

3. Students demonstrate an understanding of whole number operations by:
• **explaining the relationships between the operations of addition, subtraction, multiplication, and division; and**
• **multiplying by two-digit whole numbers and dividing by single-digit whole numbers.**
	5.A.N.3. Students complete 3 addition problems using basic facts up to 20 using manipulatives.
	
	5.A.N.3.B Students complete 3 subtraction problems using numbers no larger than 9 using manipulatives.
		Level IV *Students consistently and independently perform in unfamiliar settings using natural supports.*
		  A. Students complete more than 3 addition problems using basic facts up to 20 with manipulatives.
		  B. Students complete more than 3 subtraction problems using numbers no larger than 9 using manipulatives.

		Level III *Students consistently perform in several familiar settings.*
		  A. Students complete 3 addition problems using basic facts up to 20 using manipulatives.
		  B. Students complete 3 subtraction problems using numbers no larger than 9 using manipulatives.
		Ex. A. Given 7 popsicle sticks, students represent 3 number sentences with sums of 7.
		Ex. B. Given 7 popsicle sticks, students represent 3 subtraction number sentences.

		Level II *Students require external support and multiple prompts in limited familiar settings.*
		  A. Students match 2 addition problems using basic facts up to 12 using manipulatives.
		  B. Students match 2 subtraction problems using numbers no larger than 9 with manipulatives.

		Level I *Students require external support and multiple prompts in a structured setting.*
		  A. Students attend to how others complete 1 addition problem using basic facts up to 7 with manipulatives.
		  B. Students attend to how others complete 1 subtraction problem using numbers no larger than 7 with manipulatives.

Grade 5 Benchmark	Grade 5 Academic Benchmark	Levels of Complexity
4. Students explain their choice of estimation or problem-solving strategies and justify results when performing number operations in problem-solving situations.	**5.A.N.4 Students estimate an amount of a given collection of like objects given three number choices.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students estimate an amount of a given collection of like objects.**
		Level III *Students consistently perform in several familiar settings.* **Students estimate an amount of a given collection of like objects given three number choices.** Ex. Given a collection of twenty marbles, students choose an estimate given the values 5, 20, 100.
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students match an amount of a given collection of corresponding objects when given two number choices.**
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to others matching an amount of a given collection of corresponding objects to provided numbers.**

Grade 5 Benchmark	Grade 5 Academic Benchmark	Levels of Complexity
5. Students add and subtract decimals to hundredths and solve problems in the context of money.	**5.A.N.5 Students identify:** • **the value of various combinations of nickels and dimes up to 20 cents.** • **the value expressed as a dollar amount.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students identify** • **the value of the combination of three coins (penny, nickel and dime)** • **the value expressed as a dollar amount.** Ex. Given a penny, a nickel, and a dime, students identify a representation ($0.16 or 16 cent sign).
		Level III *Students consistently perform in several familiar settings.* **Students identify:** • **the value of various combinations of nickels and dimes up to 20 cents.** • **the value expressed as a dollar amount.** Ex. Given a dime and a nickel, students identify a representation ($0.15 or 15 cent sign).
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students match the presented amounts of a nickel and a dime with a nickel and a dime and match the value expressed as a dollar amount.**
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to how others combine two coins (dime and nickel).**

Grade 5 Benchmark	Grade 5 Academic Benchmark	Levels of Complexity
6. Students demonstrate an understanding of fractions as parts of wholes.	**5.A.N.6 Students recognize 2 equivalent halves make a whole.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students recognize 2 halves and 4 quarters make a whole.**
		Level III *Students consistently perform in several familiar settings.* **Students recognize 2 equivalent halves make a whole.** Ex. Given a whole piece of uniformly-shaped fruit (orange) cut into halves, students match the selection of 2 parts to make a whole.
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students identify half and whole.** Ex. When presented with a whole apple and a half apple, students choose the correct choice when asked to select one-half.
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to how others match halves.**

Grade 5 Benchmark	Grade 5 Academic Benchmark	Levels of Complexity
7. Students order, compare, add, and subtract fractions with like denominators. ***Note: Students communicate the reasoning used in solving these problems. They may use tools/technology to support learning.**	**5.A.N.7 Students compare two objects to identify which is *more*, *less* and *equal* using wholes and halves.*** ***Note: Students communicate the reasoning used in problem solving through comparison.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students compare three objects to identify which is *more*, *less* or *equal* using wholes and halves.**
		Level III *Students consistently perform in several familiar settings.* **Students compare two objects to identify which is *more*, *less* and *equal* using wholes and halves.** Ex. Given a whole candy bar and a half of a similar candy bar, students compare the selections and identify which is the greater piece.
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students match using wholes and halves.** Ex. Given a whole banana and a half banana, students match a whole object to the whole banana and a half object to a half of a banana.
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to how others match wholes and halves.**

CONTENT STANDARD 2. GEOMETRY
Students apply geometric concepts, properties, and relationships in a problem-solving situation.
ACADEMIC CONTENT STANDARD 2. GEOMETRY
Students recognize, sort, compare, and contrast geometric shapes and objects and relationships.

Grade 5 Benchmark	Grade 5 Academic Benchmark	Levels of Complexity
1. Students describe, draw, and classify two-dimensional geometric figures such as triangles, quadrilaterals, and circles.	**5.A.G.1 Students identify and name three two-dimensional geometric figures (triangle, squares, and circles).**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students recognize and name more than three, two dimensional geometric figures (triangles, squares, rectangles, diamonds, and circles).**
		Level III *Students consistently perform in several familiar settings.* **Students identify and name three two-dimensional geometric figures (triangle, squares, and circles).** Ex. Given a set of shapes, students identify and name the triangles.
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students recognize two two-dimensional geometric figures.** Ex. Given a circle and a square and asked if the square is a circle, students indicate that the square is not a circle.
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to how others use two-dimensional figures.**

Grade 5 Benchmark	Grade 5 Academic Benchmark	Levels of Complexity
2. Students describe, identify, and classify three-dimensional geometric figures such as cylinders, cones, pyramids, rectangular prisms, and spheres.	**5.A.G.2 Students recognize and name two three-dimensional geometric figures (cube, cylinder).**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students recognize and name more than two three-dimensional geometric figures (cube, cylinder, pyramid, cone).**
		Level III *Students consistently perform in several familiar settings.* **Students recognize and name two three-dimensional geometric figures (cube, cylinder).** Ex. Given a combination of cards showing a representation of a square and objects shaped like cubes, students identify which of these are cubes.
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students recognize one three-dimensional geometric figure.**
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to the presentation of a three-dimensional figure.**

Grade 5 Benchmark	Grade 5 Academic Benchmark	Levels of Complexity
3. Students describe and compare various geometric objects using congruency and lines of symmetry appropriate to grade level.	5.A.G.3 Students identify a pair of congruent geometric shapes and their lines of symmetry.	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students identify and select a pair of congruent geometric shapes and lines of symmetry.** Ex. Given a set of three common geometric figures, students identify and select the two congruent figures and then identify a correct line of symmetry of the congruent figures.
		Level III *Students consistently perform in several familiar settings.* **Students identify a pair of congruent geometric shapes and their lines of symmetry.** Ex. Given two common geometric figures, students identify if they are congruent figures and identify a correct line of symmetry within one of the figures.
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students match a pair of congruent geometric shapes and lines of symmetry.**
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to the identification of a pair of congruent geometric shapes and lines of symmetry.**

Grade 5 Benchmark	Grade 5 Academic Benchmark	Levels of Complexity
4. Students select, use, and communicate organizational methods in problem-solving situations appropriate to grade level. ***Note: Students communicate the reasoning used in solving these problems. They may use tools/technology to support learning.**	**5.A.G.4 Students organize a set of congruent geometric shapes and symmetrical lines as presented by the teacher on a graphic representation.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students organize a set of congruent geometric shapes and symmetrical lines on a graphic representation.**
		Level III *Students consistently perform in several familiar settings.* **Students organize a set of congruent geometric shapes and symmetrical lines as presented by the teacher on a graphic representation.** Ex. Given a small book, students identify a congruent shape on a presented graphic representation..
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students match a set of three congruent geometric shapes and symmetrical lines as presented and organized by the teacher on a graphic representation.**
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to others matching a set of three congruent geometric shapes and symmetrical lines on a graphic representation.**

CONTENT STANDARD 3. MEASUREMENT		
Students use a variety of tools and techniques of measurement in a problem-solving situation.		
ACADEMIC CONTENT STANDARD 3. MEASUREMENT		
Students use tools to apply numbers and concepts to length, capacity, time, and weight.		
Grade 5 Benchmark	Grade 5 Academic Benchmark	Levels of Complexity
1. Students apply estimation and measurement of length to content problems using actual measuring devices and express the results in U.S. customary units (parts of an inch-halves/fourths, eights inches, feet, yards, and miles).	**5.A.M.1 Students demonstrate measurement of length:** • **using a 1 foot standard measurement unit** • **estimating up to 6 feet** • **identify a 1 yard increment**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students demonstrate measurement of length:** • **using a 1 foot standard measurement unit** • **estimating up to 9 feet** • **identify and label a 1 yard increment**
		Level III *Students consistently perform in several familiar settings.* **Students demonstrate measurement of length:** • **using a 1 foot standard measurement unit** • **estimating up to 6 feet** • **identify a 1 yard increment**
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students demonstrate measurement of length:** • **matching the use of a 1 foot standard measurement unit** • **matching a 1 yard increment**
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend how others use a one foot standard unit of measurement and a one yard increment.**

Grade 5 Benchmark	Grade 5 Academic Benchmark	Levels of Complexity
2. Students apply estimation and measurement of weight to content problems using actual measuring devices and express the results in U.S. customary units (ounces and pounds).	**5.A.M.2 Students determine which U.S. customary unit of weight (ounces or pounds) is appropriate to measure an item.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students determine and label which U.S. customary unit of weight (ounces or pounds) is appropriate to measure an item.**
		Level III *Students consistently perform in several familiar settings.* **Students determine which U.S. customary unit of weight (ounces or pounds) is appropriate to measure an item.** Ex. Given a small notebook and a textbook, students choose the appropriate unit of measurement (ounces or pounds) for each item.
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students match light objects to light objects (ounces) and heavy objects to heavy objects.**
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to how others match light objects to light objects (ounces) and heavy objects to heavy objects (pounds).**

Grade 5 Benchmark	Grade 5 Academic Benchmark	Levels of Complexity
3. Students apply estimation and measurement of capacity in real-world problem-solving situations using actual measuring devices and express the results in U.S. customary units (teaspoons, tablespoons, cups, pints, quarts, and gallons).	**5.A.M.3 Students determine which U.S. customary unit of capacity (cups or gallons) is appropriate to measure a quantity.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students determine and label which U.S. customary unit of capacity (cups or gallons) is appropriate to measure a quantity.**
		Level III *Students consistently perform in several familiar settings.* **Students determine which U.S. customary unit of capacity (cups or gallons) is appropriate to measure a quantity.** Ex. Given actual items or representations, students choose the appropriate unit of measurement for liquids (small glass of milk or a large bucket of water).
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students match presented relationships of a cup for measuring a small volume and a gallon for measuring a large volume.**
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to how others match a cup for measuring a small volume and a gallon for measuring a large volume.**

Grade 5 Benchmark	Grade 5 Academic Benchmark	Levels of Complexity
4. Students demonstrate relationships within the U.S. customary units, given an equivalence chart, in problem-solving situations appropriate to grade level.	**5.A.M.4 Students compare the relationship between the U.S. customary units of feet and mile.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students compare and label the relationship between the U.S. customary units of feet and mile.** Ex. Given 2 scenarios, students compare which one represents a shorter distance (length of a jump rope) and label using feet, and which one represents a longer distance (between home and school) and label using miles.
		Level III *Students consistently perform in several familiar settings.* **Students compare the relationship between the U.S. customary units of feet and mile.** Ex. Given a picture of an object measured in feet, students identify that feet would be used to measure the object.
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students match presented pairs of pictures of objects measured in feet and pictures of objects measured in miles.**
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to how others match presented pairs of pictures of objects measured in feet and pictures of objects measured in miles.**

Grade 5 Benchmark	Grade 5 Academic Benchmark	Levels of Complexity
5. Students determine area and perimeter of triangles, rectangles, and squares using models in problem-solving situations using appropriate units.	**5.A.M.5 Students identify one side of a non-square rectangle as longer than another side using manipulatives.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students identify the short and long sides of two, different non-square rectangles using manipulatives.**
		Level III *Students consistently perform in several familiar settings.* **Students identify one side of a non-square rectangle as longer than another side using manipulatives.**
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students trace or copy the perimeter of a rectangle.**
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to the perimeter of a rectangle.**

Grade 5 Benchmark	Grade 5 Academic Benchmark	Levels of Complexity
6. Students use time in problem-solving situations to: **• compare relationships among seconds, minutes, hours, and days, and** **• use elapsed time to the nearest minute.** ***Note: Students communicate the reasoning used in solving these problems. They may use tools/technology to support learning.**	**5.A.M.6 Students pair an activity with today, tomorrow, and yesterday.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students pair an activity with today, tomorrow, and yesterday and identify the day of week.** Ex. Given a picture of a school-related activity which occurred yesterday, students pair the activity with a representation of yesterday and label the day of the week. **Level III** *Students consistently perform in several familiar settings.* **Students pair an activity with today, tomorrow, and yesterday.** Ex. Given a picture of a school-related activity which occurred yesterday, students pair the activity with a representation of yesterday. **Level II** *Students require external support and multiple prompts in limited familiar settings.* **Students match presented pairs of school-related activities with today and yesterday.** **Level I** *Students require external support and multiple prompts in a structured setting.* **Students attend to how others match school-related activities with today and tomorrow.**

CONTENT STANDARD 4. ALGEBRA		
Students use algebraic methods to investigate, model, and interpret patterns and functions involving numbers, shapes, data, and graphs in a problem-solving situation. **ACADEMIC CONTENT STANDARD 4. ALGEBRA** **Students recognize and extend patterns and use numbers and symbols to solve problems.**		
Grade 5 Benchmark	Grade 5 Academic Benchmark	Levels of Complexity
1. Students recognize, describe, extend, create, and generalize patterns by using manipulatives, numbers, and graphic representations, including charts and graphs.	**5.A.A.1 Students identify a four-element number pattern that is growing by twos containing elements ≤ 20.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students extend a four-element growing pattern (by twos) up to three or more places using graphic representations or numbers ≤ 20.** Ex. Given a four-element growing pattern (2,4,6,8,_,_,), students extend the pattern by four places (2,4,6,8,10,12,14,16).
		Level III *Students consistently perform in several familiar settings* **Students identify a four-element number pattern that is growing by twos containing elements ≤ 20.** Ex. Given a four-element pattern (6, 8, 10, 12), students identify that the pattern grows by 2's.
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students extend a four element growing pattern (by twos) up to two places by matching a presented, extended pattern ≤ 20.**
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to how others extend a four element growing pattern (by twos) up to two places by matching a presented, extended pattern ≤ 20.**

Grade 5 Benchmark	Grade 5 Academic Benchmark	Levels of Complexity
2. Students apply knowledge of patterns when solving problems appropriate to grade level.	**5.A.A.2 Students identify one missing element of a four-element growing pattern (by twos) using a graphic representation or number ≤ 20.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students identify two missing elements of a six-element growing pattern (by twos) using a graphic representation or number ≤ 20.** Ex. Given a four-element growing pattern (by two's) with a missing element (2, ,6,_,10,12), students identify the two missing elements**.**
		Level III *Students consistently perform in several familiar settings.* **Students identify one missing element of a four-element growing pattern (by twos) using a graphic representation or number ≤ 20.** Ex. Given a four-element growing pattern (by two's) with a missing element (2,4,_, 8), students identify the missing element.
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students match a presented, completed pattern using a graphic representation ≤ 10. with a four-element growing pattern (by twos) missing one element.** Ex. Given a four-element growing pattern (by twos) with a missing element (2,4,_, 8 objects) and the same completed pattern, (2,4,6,8 objects), students complete their pattern.
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to how others complete incomplete four-element growing patterns using geometric objects ≤ 10.**

Grade 5 Benchmark	Grade 5 Academic Benchmark	Levels of Complexity
3. Students represent the idea of a variable as an unknown quantity, a letter, or a symbol within addition and subtraction sentences using whole numbers. ***Note: Students communicate the reasoning used in solving these problems. They may use tools/technology to support learning.**	**5.A.A.3 Students replace a variable with a given value in an addition sentence using whole numbers ≤ 10.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students replace a variable with a given value in an addition sentence and a subtraction sentence using whole numbers containing sums or difference ≤ 10 using manipulatives.**
		Level III *Students consistently perform in several familiar settings.* **Students replace a variable with a given value in an addition sentence using whole numbers ≤ 10 using manipulatives.** Ex. Given 2 + X = 5, students replace the variable with 3.
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students match a provided value for a variable in an addition sentence using whole numbers or graphic representations ≤ 5 using manipulatives.**
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to how others match a provided value for a variable in an addition sentence using whole numbers or graphic representations ≤ 5.**

CONTENT STANDARD 5. <u>DATA ANALYSIS AND PROBABILITY</u> **Students use data analysis and probability to analyze given situations and the results of experiments.** ACADEMIC CONTENT STANDARD 5. <u>DATA ANALYSIS AND PROBABILITY</u> **Students collect and organize data and make predictions based on given situations.**		
Grade 5 Benchmark	**Grade 5 Academic Benchmark**	**Levels of Complexity**
1. Students systematically collect, organize, and describe/represent categorical data using bar graphs.	**5.A.D.1 Students are given three sets of data organized by one characteristic to place onto a provided graphic representation and make comparisons.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students systematically organize and compare categorical data onto their own graphic representation.** Ex. Students collect and identify a set of data and organize onto their own graphic representation.
		Level III *Students consistently perform in several familiar settings.* **Students are given three sets of data organized by one characteristic to place onto a provided graphic representation and make comparisons.** Ex. Given student data for the number of students who like pizza in kindergarten, second, and fifth grade, students place the data on a provided graphic representation to make comparisons.
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students match a presented organized group of objects based on one attribute.** Ex. Given two groups of objects sorted by color, students match the presented group containing red objects.
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to how others use categorized data.**

Grade 5 Benchmark	Grade 5 Academic Benchmark	Levels of Complexity
2. Students find and interpret mode for data sets in a problem-solving setting appropriate to grade level. Students communicate their findings.	**5.A.D.2 Students identify the mode for a given data set.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students identify and label the mode for a data set.** Ex. Students collect a set of data (i.e., most liked foods), identify, and label which item occurs the most frequently.
		Level III *Students consistently perform in several familiar settings.* **Students identify the mode for a given data set.** Ex. Given a set of data (i.e., most liked foods), students identify which item occurs the most frequently.
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students match the mode for a given data set.** Ex. Given a set of data, students match the given mode with the item which occurs most frequently.
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to how others identify the most frequently occurring item in a data set.**

Grade 5 Benchmark	Grade 5 Academic Benchmark	Levels of Complexity
3. Students predict and record outcomes of probability experiments or simulations. ***Note: Students communicate the reasoning used in solving these problems. They may use tools/technology to support learning.**	**5.A.D.3 Students predict and record outcomes of probability activities using an unequally divided spinner and other probability tools (i.e., coins, number cubes).**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students predict and record outcomes and results of probability activities using an unequally divided spinner and other probability tools (i.e., coins, number cubes).** Ex. Given a number cube, students predict and record a possible outcome and results of a given number of trials (i.e., how many times will the number face 6 occur in 15 trials). **Level III** *Students consistently perform in several familiar settings:* **Students predict and record outcomes of probability activities using an unequally divided spinner and other probability tools (i.e. coins, number cubes).** Ex. Given an unequally divided spinner, students predict a possible outcome of a given number of trials (i.e., how many times will the spinner land on the green wedge). **Level II** *Students require external support and multiple prompts in limited familiar settings.* **Students match a given predicted outcome and spin an unequally divided spinner or use another probability tool.** Ex. Given a number cube, students match a prediction for a possible outcome (i.e., how many times will the number face 6 occur in 5 trials). **Level I** *Students require external support and multiple prompts in a structured setting.* **Students attend to how others make a prediction and use a probability tool.**

Wyoming Mathematics Academic Content Standards
Grade 6

CONTENT STANDARD 1. NUMBER OPERATIONS AND CONCEPTS Students use numbers, number sense, and number relationships in a problem-solving situation. ACADEMIC CONTENT STANDARD 1. NUMBER OPERATIONS AND CONCEPTS Students sequence numbers and use number operations and related concepts to solve problems.		
Grade 6 Benchmark	**Grade 6 Academic Benchmark**	**Levels of Complexity**
1. Students use the concept of place value to read and write decimals (to 1000ths) in words, standard, and expanded form.	**6.A.N.1 Students represent and order a set of 5 whole numbers between 20 and 30.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students represent a set of 10 whole numbers up to 30 and above.**
		Level III *Students consistently perform in several familiar settings.* **Students represent and order a set of 5 whole numbers between 20 and 30.** Ex. Given {21, 25, 27, 30, 28} verbally, students represent and order the set using manipulatives.
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students represent a whole number up to 20.**
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to how others represent a whole number up to 20.**

Grade 6 Benchmark	Grade 6 Academic Benchmark	Levels of Complexity
2. Students multiply decimals (10ths & 100ths) and divide whole numbers by 2-digit divisors and divide decimals by whole numbers.	**6.A.N.2 Students count by twos and fives up to 30.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students count by twos, fives, and tens up to 30.**
		Level III *Students consistently perform in several familiar settings.* **Students count by twos and fives up to 30.** Ex. Given cubes, students arrange blocks into equal groups of two or five to equal a given amount.
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students count by twos and fives up to 10 by matching presented groupings.**
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to how others count by twos and fives.**

Grade 6 Benchmark	Grade 6 Academic Benchmark	Levels of Complexity
3. Students represent the number line using integers.	**Addressed in 7.A.A.4 to achieve vertical alignment.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Addressed in 7.A.A.4 to achieve vertical alignment.**
		Level III *Students consistently perform in several familiar settings.* **Addressed in 7.A.A.4 to achieve vertical alignment.**
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Addressed in 7.A.A.4 to achieve vertical alignment.**
		Level I *Students require external support and multiple prompts in a structured setting.* **Addressed in 7.A.A.4 to achieve vertical alignment.**

Grade 6 Benchmark	Grade 6 Academic Benchmark	Levels of Complexity
4. Students explain their choice of estimation and problem- solving strategies and justify results when performing number operations with fractions and decimals in problem-solving situations.	**Addressed in 6.A.N.1** **Students communicate the reasoning used in problem solving through ordering.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Addressed in 6.A.N.1**
		Level III *Students consistently perform in several familiar settings.* **Addressed in 6.A.N.1**
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Addressed in 6.A.N.1**
		Level I *Students require external support and multiple prompts in a structured setting.* **Addressed in 6.A.N.1**

Grade 6 Benchmark	Grade 6 Academic Benchmark	Levels of Complexity
5. Students identify prime and composite numbers and apply prime factorization to numbers less than 100.	**The cognitive complexity of prime and composite numbers requires further development of other math benchmarks.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Not addressed**
		Level III *Students consistently perform in several familiar settings.* **Not addressed**
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Not addressed**
		Level I *Students require external support and multiple prompts in a structured setting.* **Not addressed**

Grade 6 Benchmark	Grade 6 Academic Benchmark	Levels of Complexity
6. Students demonstrate an understanding of fractions and decimals by: • representing fractions as division of whole numbers; • converting between mixed numbers and improper fractions; • simplifying fractions and mixed numbers; • writing fractions in equivalent forms; • using parts of a set; • rounding decimal numbers to 10ths, 100ths, and whole numbers (units) place; and • converting between decimals (from .01 to .99), fractions and representing percentages.	6.A.N.3 Students demonstrate an understanding of fractions and decimals by: • recognizing the equivalency of two halves and a whole. • recognizing the equivalency 4 quarters and a whole. • recognizing the equivalency 4 quarters and a dollar.	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students demonstrate an understanding of fractions and decimals by:** • **identifying equivalent halves, 4 equivalent quarters, and 3 thirds make a whole.** • **recognizing the equivalency 4 quarters equal a dollar.** **Level III** *Students consistently perform in several familiar settings.* **Students demonstrate an understanding of fractions and decimals by:** • **recognizing the equivalency of two halves and a whole.** • **recognizing the equivalent 4 quarters make a whole.** • **recognizing the equivalency 4 quarters equal a dollar.** Ex. Given a picture of a pizza, model or real object, students divide the pizza into 2 parts when asked to show halves or 4 parts when asked to show fourths. **Level II** *Students require external support and multiple prompts in limited familiar settings.* **Students recognize and match 2 equivalent halves and 4 equivalent quarters make a whole.** Ex. Given two halves of an apple and a whole apple, students match the halves to gather to match the whole. **Level I** *Students require external support and multiple prompts in a structured setting.* **Students attend to others that match 2 equivalent halves and 4 equivalent quarters to make a whole.**

Grade 6 Benchmark	Grade 6 Academic Benchmark	Levels of Complexity
7. Students add and subtract mixed numbers with like denominators.	**6.A.N.4 Students recognize the sum of three halves as greater than a whole.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students recognize the sum of three halves and/or five quarters as greater than a whole.**
		Level III *Students consistently perform in several familiar settings.* **Students recognize the sum of three halves as greater than a whole.** Ex. Students recognize that 3 pizza halves are more than one whole pizza.
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students match three equivalent halves.**
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to/interact with how others display that three halves are greater than a whole.**

Grade 6 Benchmark	Grade 6 Academic Benchmark	Levels of Complexity
8. Students represent repeated multiplication in exponential form. ***Note: Students communicate the reasoning used in solving these problems. They may use tools/technology to support learning.**	**The cognitive complexity of exponential form requires further development of other math benchmarks.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Not addressed**
		Level III *Students consistently perform in several familiar settings.* **Not addressed**
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Not addressed**
		Level I *Students require external support and multiple prompts in a structured setting.* **Not addressed**

CONTENT STANDARD 2. __GEOMETRY__

CONTENT STANDARD 2. __GEOMETRY__
Students apply geometric concepts, properties, and relationships in a problem-solving situation.
ACADEMIC CONTENT STANDARD 2. __GEOMETRY__
Students recognize, sort, compare, and contrast geometric shapes and objects and relationships.

Grade 6 Benchmark	Grade 6 Academic Benchmark	Levels of Complexity
1. Students classify, describe, compare, and draw representations of 1- and 2- dimensional objects and angles.	**6.A.G.1 Students classify and compare angles of different acuity (small/large).**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students classify, compare, and label angles of different acuity (small/large).**
		Level III *Students consistently perform in several familiar settings.* **Students classify and compare angles of different acuity (small/large).** Ex. Using ramps and spheres, students compare different slopes of various angles with the distance traveled by the sphere.
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students match line to line and angle to angle.**
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to how others match lines to lines and angles to angles.**

Grade 6 Benchmark	Grade 6 Academic Benchmark	Levels of Complexity
2. Students identify and classify congruent objects by properties appropriate to grade level.	**6.A.G.2 Students identify congruent geometric shapes when presented with a group of similar shapes on a grid system.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students select and classify the shapes on a grid system.**
		Level III *Students consistently perform in several familiar settings.* **Students identify congruent geometric shapes when presented with a group of similar shapes on a grid system.** Ex. Given a group of 6 shapes, 3 congruent shapes and 3 similar shapes, students identify the 3 shapes that are congruent.
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students match congruent geometric shapes provided on a grid system.**
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to congruent geometric shapes provided on a grid system.**

Grade 6 Benchmark	Grade 6 Academic Benchmark	Levels of Complexity
3. Students communicate the reasoning used in identifying geometric relationships in problem-solving situations appropriate to grade level. ***Note: Students communicate the reasoning used in solving these problems. They may use tools/technology to support learning.**	**6.A.G.3 Students organize a set of geometric shapes into groups based on congruency on a grid system as identified by the teacher.** ***Note: Students communicate the reasoning used in solving these problems.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students organize a set of geometric shapes into groups based on congruency on a grid system**. **Level III** *Students consistently perform in several familiar settings.* **Students organize a set of geometric shapes into groups based on congruency on a grid system as identified by the teacher**. Ex. Given a set of small, medium, and large squares, students organize the squares into sets based on congruency. **Level II** *Students require external support and multiple prompts in limited familiar settings.* **Students match a set of geometric shapes on a grid system.** **Level I** *Students require external support and multiple prompts in a structured setting.* **Students attend to how others group a set of geometric shapes on a grid system.**

CONTENT STANDARD 3. MEASUREMENT
Students use a variety of tools and techniques of measurement in a problem-solving situation.

CONTENT STANDARD 3. <u>MEASUREMENT</u>
Students use a variety of tools and techniques of measurement in a problem-solving situation.
ACADEMIC CONTENT STANDARD 3. <u>MEASUREMENT</u>
Students use tools to apply numbers and concepts to length, capacity, time, and weight.

Grade 6 Benchmark	Grade 6 Academic Benchmark	Levels of Complexity
1. Students apply estimation and measurement of length to content problems and express the results in metric units (centimeters and meters).	**6.A.M.1 Students determine which U.S. customary unit (inches or feet) is appropriate to measure a given item.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students determine and label which U.S. customary unit (inches or feet) is appropriate to measure an item.**
		Level III *Students consistently perform in several familiar settings.* **Students determine which U.S. customary unit (inches or feet) is appropriate to measure a given item.** Ex. Given a pencil and a chalkboard, students choose the appropriate unit of measurement (inches or feet) for each item.
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students match presented objects measured in inches and objects measured in feet.**
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to how others match presented objects measured in inches and objects measured in feet.**

Grade 6 Benchmark	Grade 6 Academic Benchmark	Levels of Complexity
2. Students apply estimation and measurement of weight to content problems and express the results in U.S. customary units (ounces, pounds, and tons).	**6.A.M.2 Students apply estimation of weight to content problems comparing objects which are much less than a pound to objects which are much more than a pound.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students determine and label which U.S. customary unit is appropriate for measuring weight (ounce and pound).**
		Level III *Students consistently perform in several familiar settings.* **Students apply estimation of weight to content problems comparing objects which are much less than a pound to objects which are much more than a pound.** Ex. Given a picture or description of a empty jug of milk and a full jug of milk, students estimate which is more or less than a pound.
		Level II *Students require external support and multiple prompts in limited familiar settings* **Students match presented relationships of an ounce for measuring a light object and a pound for measuring a heavy object.**
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to how others match presented relationships of a ounce for measuring a light object and a pound for measuring a heavy object.**

Grade 6 Benchmark	Grade 6 Academic Benchmark	Levels of Complexity
3. Students apply estimation and measurement of capacity to content problems and express the results in U.S. customary units (teaspoons, tablespoons, cups, pints, quarts, gallons).	**6.A.M.3 Students determine which U.S. customary unit of capacity (teaspoon or cup) is appropriate to measure a quantity.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students determine and label which U.S. customary unit of capacity (teaspoon or cup) is appropriate to measure a quantity.**
		Level III *Students consistently perform in several familiar settings.* **Students determine which U.S. customary unit of capacity (teaspoon or cup) is appropriate to measure a quantity.** Ex. Given a small quantity of sand and a large quantity of sand, students identify the appropriate measuring tool.
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students match presented relationships of a teaspoon for measuring a small amount and a cup for measuring a larger amount.**
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to how others measure using teaspoons and cups.**

Grade 6 Benchmark	Grade 6 Academic Benchmark	Levels of Complexity
4. Students demonstrate relationships within the U.S. customary units for weight and capacity and within the metric system (centimeters to meters) in problem-solving situations.	**6.A.M.4 Students compare the relationship between U.S. customary units of capacity (cup and gallon).**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students determine and label which U.S. customary unit of capacity (cup and gallon) is appropriate to measure a quantity.**
		Level III *Students consistently perform in several familiar settings.* **Students compare the relationship between U.S. customary units of capacity (cup and gallon).** Ex. Presented with a cup and gallon, students identify which is more.
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students match presented relationships of a cup for measuring a small amount and a gallon for measuring a larger amount.**
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to how others match presented pairs of cup to cup and gallon to gallon as the same amount.**

Grade 6 Benchmark	Grade 6 Academic Benchmark	Levels of Complexity
5. Students determine the area and perimeter of regular polygons and the area of parallelograms, with and without models. ***Note: Students communicate the reasoning used in solving these problems. They may use tools/technology to support learning.**	**6.A.M.5 Students identify the concept of area using squares and rectangles with manipulatives.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students use squares and rectangles to identify the term and the concept of area.**
		Level III *Students consistently perform in several familiar settings.* **Students identify the concept of area using squares and rectangles with manipulatives.** Ex. Given an outline of a square, students use smaller squares to fill in the area of the square.
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students identify representation of area.** Ex. Given a colored square and the outline of a square, students identify the colored square as filled in.
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend how others represent area.**

CONTENT STANDARD 4. ALGEBRA
Students use algebraic methods to investigate, model, and interpret patterns and functions involving numbers, shapes, data, and graphs in a problem-solving situation.
ACADEMIC CONTENT STANDARD 4. ALGEBRA
Students recognize and extend patterns and use numbers and symbols to solve problems.

Grade 6 Benchmark	Grade 6 Academic Benchmark	Levels of Complexity
1. Students recognize, describe, extend, create, and generalize patterns such as numeric sequences, by using manipulatives, numbers, graphic representations, including charts and graphs.	6.A.A.1 Students extend a four-element growing pattern (by twos) up to two places using graphic representations or numbers ≤ 30.	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students identify the pattern in a four-element pattern that is growing by twos and a pattern that is growing by fives with elements ≤ 30.** Ex. Given a four-element pattern (5,10,15,20) and a four-element pattern (6,8,10,12), students identify that the first pattern grows by 5s and the second pattern grows by 2s.
		Level III *Students consistently perform in several familiar settings.* **Students extend a four-element growing pattern (by twos) up to two places using graphic representations or numbers ≤ 30.** Ex. Given a four-element growing pattern (2,4,6,8,_,_), students extend the pattern by two places (2,4,6,8,10,12).
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students match a four-element pattern that is growing by twos to a presented four-element pattern that is growing by twos using graphic representations with elements ≤ 20.** Ex. Presented with a four-element pattern that is growing by 2s using graphic representations and 2 other patterns (one which grows by 2s and one that grows by 5s), student match the 2 patterns which grow by 2s.
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to how others match a pattern that is growing by twos using graphic representations to a presented pattern that is growing by twos using graphic representations with elements ≤ 20.**

Grade 6 Benchmark	Grade 6 Academic Benchmark	Levels of Complexity
2. Students apply their knowledge of patterns to describe a constant rate of change when solving problems.	**6.A.A.2 Students identify one missing element of a four-element growing pattern by fives using numbers ≤ 30.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students identify two missing elements of a four-element growing pattern (by twos or fives) using numbers ≤ 30.**
		Level III *Students consistently perform in several familiar settings* **Students identify one missing element of a four-element growing pattern by fives using numbers ≤ 30.** Ex. Given a four-element pattern missing one element (10,15,_,25), students identify the missing element.
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students indicate a missing element of a four-element growing pattern (by twos) using graphic representations ≤ 20.** Ex. Given a set of 2 objects, 4, objects, no objects, and 8 objects on a graphic representation, students indicate where there are missing objects.
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to how others indicate a missing element of a four-element growing pattern (by twos) using graphic representations ≤ 20.**

Grade 6 Benchmark	Grade 6 Academic Benchmark	Levels of Complexity
3. Students represent the idea of a variable as an unknown quantity, a letter, or a symbol within any whole number operation. ***Note: Students communicate the reasoning used in solving these problems. They may use tools/technology to support learning.**	**6.A.A.3 Students replace a variable with a given value in a subtraction sentence using whole numbers.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students replace a variable with a given value in an addition sentence and a subtraction sentence using whole numbers containing sums or differences up to 30.** **Level III** *Students consistently perform in several familiar settings.* **Students replace a variable with a given value in a subtraction sentence using whole numbers.** Ex. Given 20 - X= 15, students replace the variable with 5. **Level II** *Students require external support and multiple prompts in limited familiar settings.* **Students match a provided value for a variable in a subtraction sentence using whole numbers or graphic representations.** **Level I** *Students require external support and multiple prompts in a structured setting.* **Students attend to how others match a provided value for a variable in a subtraction sentence using whole numbers or graphic representations.**

CONTENT STANDARD 5. DATA ANALYSIS AND PROBABILITY		
Students use data analysis and probability to analyze given situations and the results of experiments. ACADEMIC CONTENT STANDARD 5. DATA ANALYSIS AND PROBABILITY Students collect and organize data and make predictions based on given situations.		
Grade 6 Benchmark	Grade 6 Academic Benchmark	Levels of Complexity
1. Students systematically collect, organize, and describe/represent numeric data using line graphs.	6.A.D.1 Students are provided with up to 15 items to organize into three sets on a provided graphic representation and make comparisons between the sets.	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students are provided with up to 15 items to organize into three sets on their own graphic representation and make comparisons between the sets.**
		Level III *Students consistently perform in several familiar settings.* **Students are provided with up to 15 items to organize into three sets on a graphic representation and make comparisons between the sets.** Ex. Given the categories of *pet, cat, dog*, students separate members of their class into the three categories and make comparisons between sets.
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students match teacher presented sets of up to 5 items as presented on a graphic representation.**
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to how others match teacher presented sets of up to 5 items as presented on a graphic representation.**

Grade 6 Benchmark	Grade 6 Academic Benchmark	Levels of Complexity
2. Students, given a scenario, recognize and communicate the likelihood of events using concepts from probability (i.e., impossible, equally likely, certain) appropriate to grade level. ***Note: Students communicate the reasoning used in solving these problems. They may use tools/technology to support learning.**	**6.A.D.2 Students recognize the likelihood of events given a school-related scenario.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students recognize the likelihood of events given a scenario.** Ex. Students identify one event which is likely to happen and one event which is not likely to happen. **Level III** *Students consistently perform in several familiar settings.* **Students recognize the likelihood of events given a school-related scenario.** Ex. Students identify if a presented event is likely or not likely to happen (i.e., an elephant coming to school, the classroom being full of babies). **Level II** *Students require external support and multiple prompts in limited familiar settings* **Students match the presented likelihood of a school-related scenario.** Ex. Given 8 blue blocks and 1 red block and asked, "What color block will likely be selected?", and presented with a blue block, students match the blue block. **Level I** *Students require external support and multiple prompts in a structured setting.* **Students attend to others' descriptions of unlikely events.**

Wyoming Mathematics Academic Content Standards
Grade 7

<table>
<tr><td colspan="3">CONTENT STANDARD 1. NUMBER OPERATIONS AND CONCEPTS
Students use numbers, number sense, and number relationships in a problem-solving situation.
ACADEMIC CONTENT STANDARD 1. NUMBER OPERATIONS AND CONCEPTS
Students sequence numbers and use number operations and related concepts to solve problems.</td></tr>
<tr><td>Grade 7
Benchmark</td><td>Grade 7
Academic Benchmark</td><td>Levels of Complexity</td></tr>
<tr>
<td>1. Students represent and order rational numbers that are greater than or equal to 0 in a variety of equivalent forms in problem-solving situations.</td>
<td>7.A.N.1 Students represent and order a set of 5 whole numbers between 30 and 50.

*Note: Students communicate the reasoning used in problem solving through ordering.</td>
<td>Level IV
<i>Students consistently and independently perform in unfamiliar settings using natural supports.</i>
Students represent and order a set of 10 whole numbers up to 50 and above.

Level III
<i>Students consistently perform in several familiar settings.</i>
Students represent and order a set of 5 whole numbers between 30 and 50.
Ex. Given verbally the number set of {31, 35, 37, 40, 38}, students represent and order the set using manipulatives.

Level II
<i>Students require external support and multiple prompts in limited familiar settings.</i>
Students represent two whole numbers up to 25.

Level I
<i>Students require external support and multiple prompts in a structured setting.</i>
Students attend to how others represent whole numbers up to 25.</td>
</tr>
</table>

Grade 7 Benchmark	Grade 7 Academic Benchmark	Levels of Complexity
2. Students use basic operations with integers in problem-solving situations.	**7.A.N.2 Students count by fives and/or tens up to 50.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students count by fives and tens up to 50.**
		Level III *Students consistently perform in several familiar settings:* **Students count by fives and/or tens up to 50.** Ex. Given base ten blocks, students arrange blocks into a given amount.
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students match group of fives or tens totaling up to 50.**
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to how others group items by fives and tens.**

Grade 7 Benchmark	Grade 7 Academic Benchmark	Levels of Complexity
3. Students divide decimal numbers by decimal numbers.	**7.A.N.3 Students recognize the equivalence of one dollar in terms of 10 dimes and as 4 quarters using real money.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students recognize the equivalence of one dollar in terms of 20 nickels, 10 dimes and 4 quarters using real money.**
		Level III *Students consistently perform in several familiar settings.* **Students recognize the equivalence of one dollar in terms of 10 dimes and as 4 quarters using real money.** Ex. Given more than 4 quarters or more than 10 dimes, students group the coins into sums equaling one dollar.
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students match a group of up to 20 objects into presented equivalent sets**.
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to how others group up to 10 items into 2 equivalent sets.**

Grade 7 Benchmark	Grade 7 Academic Benchmark	Levels of Complexity
4. Students explain their choice of estimation and problem-solving strategies and justify results when performing number operations with fractions and decimals in problem-solving situations appropriate to grade level. Students add and subtract fractions and mixed numbers.	**7.A.N.4 Students use estimation to determine which number is closer to the amount necessary in a given problem up to 50.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students use estimation to determine which number is closer to the solution in a given problem up to 50.**
		Level III *Students consistently perform in several familiar settings.* **Students use estimation to determine which number is closer to the solution given a problem up to 50 and three choices.** Ex. Student use estimation to solve: Mrs. Jones is taking 12 students to the movies. If she estimates how many tickets she needs to buy, will her guess be closer to 10, 20, or 30?
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students use estimation to determine which of two presented sets of objects is closer to a given quantity up to 10 given two choices.**
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to activities using estimation up to 10.** Ex. Students use eye gaze, eye movement, or vocalization to attend to two groups of different size.

Grade 7 Benchmark	Grade 7 Academic Benchmark	Levels of Complexity
5. Students multiply and divide fractions and mixed numbers.	**7.A.N.5 Students recognize the quantity of one and one half as the sum of three halves.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students combine the correct quantities up to one and one half.**
		Level III *Students consistently perform in several familiar settings.* **Students recognize the quantity of one and one half as the sum of three halves.** Ex. Students recognize an image of two halves of a pizza as a whole pizza and three half pizzas as the same as one and a half pizzas.
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students recognize the sum of three halves as greater than a whole.**
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to how others show that three halves are greater than a whole.**

Grade 7 Benchmark	Grade 7 Academic Benchmark	Levels of Complexity
6. Students evaluate whole numbers expressed in exponential form.	**The cognitive complexity of this benchmark requires development of specific content of other benchmarks, which is not addressed.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Not addressed**
		Level III *Students consistently perform in several familiar settings.* **Not addressed**
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Not addressed**
		Level I *Students require external support and multiple prompts in a structured setting.* **Not addressed**

Grade 7 Benchmark	Grade 7 Academic Benchmark	Levels of Complexity
7. Students apply the order of operations (whole numbers including grouping symbols and operations, excluding roots and powers) in problem-solving situations. ***Note: Students communicate the reasoning used in solving these problems. They may use tools/technology to support learning.**	**Addressed in 7.A.N.2 & 7.A.N.3**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Addressed in 7.A.N.2 & 7.A.N.3**
		Level III *Students consistently perform in several familiar settings.* **Addressed in 7.A.N.2 & 7.A.N.3**
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Addressed in 7.A.N.2 & 7.A.N.3**
		Level I *Students require external support and multiple prompts in a structured setting.* **Addressed in 7.A.N.2 & 7.A.N.3**

CONTENT STANDARD 2. GEOMETRY
Students apply geometric concepts, properties, and relationships in a problem-solving situation.
ACADEMIC CONTENT STANDARD 2. GEOMETRY
Students recognize, sort, compare, and contrast geometric shapes and objects and relationships.

Grade 7 Benchmark	Grade 7 Academic Benchmark	Levels of Complexity
1. Students classify and describe one- and two-dimensional geometric objects, including: • lines, rays, segments, and angles; • parallel and perpendicular relationships; and • regular polygon types.	7.A.G.1 Students identify the angles and the parallel lines in a four-sided figure.	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students recognize, label, and compare parallel and perpendicular lines to angles**.
		Level III *Students consistently perform in several familiar settings.* **Students identify the angles and the parallel lines in a four-sided figure.** Ex. Given a parallelogram, students identify the angles and the parallel lines.
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students pair parallel and perpendicular lines and angles**. Ex. Given 2 parallel lines, 2 perpendicular lines, and 2 angles in a group, students match parallel line to parallel line, perpendicular line to perpendicular line, and angle to angle.
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to how others match parallel and perpendicular lines and angles.**

Grade 7 Benchmark	Grade 7 Academic Benchmark	Levels of Complexity
2. Students make conjectures about geometric figures based on knowledge of congruence and similarity.	**7.A.G.2 Students identify and organize a pair of congruent and a pair of similar geometric shapes when presented on a grid system.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students select a pair of congruent and a pair of similar geometric shapes when presented on a grid system.**
		Level III *Students consistently perform in several familiar settings.* **Students identify and organize a pair of congruent and a pair of similar geometric shapes when presented on a grid system.** Ex. Given 6 shapes (two that are congruent squares and two others that are square in shape but not congruent), students match the two congruent shapes and the two shapes that are similar (squares), but not congruent.
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students match a pair of congruent and a pair of similar geometric shapes when presented on a grid system.**
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to a pair of congruent and a pair of similar geometric shapes when presented on a grid system.**

Grade 7 Benchmark	Grade 7 Academic Benchmark	Levels of Complexity
3. Students communicate the reasoning used in identifying geometric relationships in problem-solving situations appropriate to grade level. ***Note: Students communicate the reasoning used in solving these problems. They may use tools/technology to support learning.**	**Addressed in 7.A.G.2** ***Note: Students communicate the reasoning used in solving these problems. They may use tools/technology to support learning.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Addressed in 7.A.G.2** **Level III** *Students consistently perform in several familiar settings.* **Addressed in 7.A.G.2** **Level II** *Students require external support and multiple prompts in limited familiar settings.* **Addressed in 7.A.G.2** **Level I** *Students require external support and multiple prompts in a structured setting.* **Addressed in 7.A.G.2**

CONTENT STANDARD 3. MEASUREMENT
Students use a variety of tools and techniques of measurement in a problem-solving situation.

ACADEMIC CONTENT STANDARD 3. MEASUREMENT
Students use tools to apply numbers and concepts to length, capacity, time, and weight.

Grade 7 Benchmark	Grade 7 Academic Benchmark	Levels of Complexity
1. Students apply estimation and measurement of length to content problems and convert within the U.S. customary (in, ft, yd, mi) and within the metric system (mm, cm, m, km).	**7.A.M.1 Students determine which U.S. customary units (inches, feet or miles) are appropriate to measure given items/examples.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students determine which U.S. customary unit (inches, feet, yards or miles) is appropriate to measure given items/examples**.
		Level III *Students consistently perform in several familiar settings.* **Students determine which U.S. customary units (inches, feet or miles) are appropriate to measure given items/examples.** Ex. Given the distance between two walls in the classroom and their classroom and home, students determine which unit is appropriate.
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students match an item shorter in length to the customary unit of inch and an item longer in length to a foot.**
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to how others compare lengths of items using the customary units of inch and foot.**

Grade 7 Benchmark	Grade 7 Academic Benchmark	Levels of Complexity
2. Students apply estimation and measurement of weight to content problems expressing the results in metric units (g, kg).	**7.A.M.2 Students demonstrate an understanding of the relationship between pounds and tons.** .	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students determine which U.S. customary unit (ounces, pounds, or tons) is appropriate to weigh given items.**
		Level III *Students consistently perform in several familiar settings.* **Students demonstrate an understanding of the relationship between pounds and tons.** Ex. Given a picture or a description of a school bus and their own weight, students choose the appropriate unit of measurement (tons or pounds) for each item.
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students select a heavier/lighter item.** Ex. Presented with a feather and a shoe, students indicate that the feather is lighter.
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to how others compare heavy and light items.**

Grade 7 Benchmark	Grade 7 Academic Benchmark	Levels of Complexity
3. Students apply estimation and measurement of capacity to content problems expressing the results in metric units (liters).	**7.A.M.3 Students order U.S. customary units of capacity (teaspoon, cup, and gallon).**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students order and label U.S. customary units of capacity (teaspoon, cup, and gallon).** Ex. Given a teaspoon, cup, and gallon filled with a liquid, students order and label the units from least to most.
		Level III *Students consistently perform in several familiar settings.* **Students order U.S. customary units of capacity (teaspoon, cup, and gallon).** Ex. Given a teaspoon, cup, and gallon filled with a liquid, students order the units from least to most.
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students select full/empty item.**
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to the selection of full and empty measuring cups.**

Grade 7 Benchmark	Grade 7 Academic Benchmark	Levels of Complexity
4. Students determine the circumference of a circle using models.	**7.A.M.4 Students outline the distance around a circle to identify circumference.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students identify the concept and term circumference as the distance around a circle.** Ex. Students use a string to outline a circle and label the result as circumference.
		Level III *Students consistently perform in several familiar settings.* **Students outline the distance around a circle to identify circumference.** Ex. Students use a string to outline a circle.
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students match circumference of a circle to its model.** Ex. Given a colored-in circle and three different size rings made of string, students match the ring to the provided circle.
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to how others match circumference of a circle to its model.**

Grade 7 Benchmark	Grade 7 Academic Benchmark	Levels of Complexity
5. Students calculate the areas of triangles and trapezoids.	**7.A.M.5 Students identify the area of a triangle using manipulatives.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students identify the concept and the term of area for a given 2-D and 3-D triangle.**
		Level III *Students consistently perform in several familiar settings.* **Students identify the area of a triangle using manipulatives.** Ex. Given a triangle, students represent the area of the triangle by filling it in with cotton balls or sand to represent the concept of area.
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students identify a representation of area.** Ex. Given a colored triangle and the outline of a triangle, students identify the colored triangle as filled in.
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to how others represent area.**

Grade 7 Benchmark	Grade 7 Academic Benchmark	Levels of Complexity
6. Students measure angles with a protractor. ***Note: Students communicate the reasoning used in solving these problems. They may use tools/technology to support learning.**	**Addressed in 7.A.G.1**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Addressed in 7.A.G.1**
		Level III *Students consistently perform in several familiar settings.* **Addressed in 7.A.G.1**
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Addressed in 7.A.G.1**
		Level I *Students require external support and multiple prompts in a structured setting.* **Addressed in 7.A.G.1**

CONTENT STANDARD 4. <u>ALGEBRA</u>

Students use algebraic methods to investigate, model, and interpret patterns and functions involving numbers, shapes, data, and graphs in a problem-solving situation.

ACADEMIC CONTENT STANDARD 4. <u>ALGEBRA</u>

Students recognize and extend patterns and use numbers and symbols to solve problems.

Grade 7 Benchmark	Grade 7 Academic Benchmark	Levels of Complexity
1. Students translate word phrases which involve addition and subtraction into mathematical expressions.	**7.A.A.1 Students translate and represent a word phrase into a simple addition problem using manipulatives ≤ 10.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students translate and represent a word phrase into a simple addition problem using numbers ≤ 20.** Ex. Given the prompt, "Three plus two is five," students represent the problem with numbers.
		Level III *Students consistently perform in several familiar settings.* **Students translate and represent a word phrase into a simple addition problem using manipulatives ≤ 10.** Ex. Given the prompt "Three plus two is five," students represent problem with manipulatives.
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students pair a presented word phrase with a presented simple addition problem using manipulatives ≤ 5.**
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to how others pair a presented word phrase with a presented simple addition problem using manipulatives ≤ 5.**

Grade 7 Benchmark	Grade 7 Academic Benchmark	Levels of Complexity
2. Students solve one-step linear equations.	**7.A.A.2 Students solve one-step linear equations involving addition <u>or</u> subtraction of whole numbers.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students solve one-step linear equations involving addition and subtraction of whole numbers ≤ 20.** Ex. Given the equation 20 – X = 15, students solve for X .If you have one object, how many more do you need to have 5 objects?
		Level III *Students consistently perform in several familiar settings.* **Students solve one-step linear equations involving addition <u>or</u> subtraction of whole numbers less than or equal to 10.** Ex. Student solve, "If you have one object, how many more do you need to have 5 objects?"
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students select a one-step linear equation involving addition to match a given scenario using numbers ≤ 10.**
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to how others solve one-step linear equations involving addition <u>or</u> subtraction using numbers ≤ 10.**

Grade 7 Benchmark	Grade 7 Academic Benchmark	Levels of Complexity
3. Students evaluate algebraic expressions and formulas, using order of operations, given positive integer values for variables.	**7.A.A.3 Students evaluate the perimeter of a four-sided figure using the provided formula: L + L + W+ W, given positive, whole numbers for variables.** **NOTE: These problems will not include regrouping.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students evaluate algebraic expressions when given one variable and one constant using whole numbers up to 25.** **Level III** *Students consistently perform in several familiar settings.* **Students evaluate the perimeter of a four-sided figure using the provided formula: L + L + W+ W, given positive, whole numbers for variables.** Ex. Given a rectangle with a length of five and a width of 3, students substitute 5 = L and 3 = W and solve. **Level II** *Students require external support and multiple prompts in limited familiar settings.* **Students substitute value for unknown when rewriting algebraic expressions when given one constant and one unknown using whole numbers ≤ 10.** **Level I** *Students require external support and multiple prompts in a structured setting.* **Students attend while others evaluate algebraic expressions when given one constant and one unknown using whole numbers ≤ 10.**

Grade 7 Benchmark	Grade 7 Academic Benchmark	Levels of Complexity
4. Students understand and use basic concepts of the coordinate system, including plotting points in all four quadrants. ***Note: Students communicate the reasoning used in solving these problems. They may use tools/technology to support learning.**	**7.A.A.4 Students recognize placement of three positive whole number values up to 15 on a number line.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students recognize placement of three positive whole number values up to 30 on a number line.**
		Level III *Students consistently perform in several familiar settings.* **Students recognize placement of three positive whole number values up to 15 on a number line.**
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students demonstrate understanding of direction *or* distance between 2 locations using a graphic representation.** Ex. Move your pencil from its current location to the left.
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to demonstration of direction *or* distance between 2 locations using a graphic representation.**

CONTENT STANDARD 5. __DATA ANALYSIS AND PROBABILITY__ Students use data analysis and probability to analyze given situations and the results of experiments. ACADEMIC CONTENT STANDARD 5. __DATA ANALYSIS AND PROBABILITY__ Students collect and organize data and make predictions based on given situations.		
Grade 7 Benchmark	**Grade 7 Academic Benchmark**	**Levels of Complexity**
1. Students systematically collect, organize, describe, and analyze data using histograms.	**7.A.D.1 Students identify sets of given data on a teacher presented bar graph.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students identify sets of given data on their own bar graph.**
		Level III *Students consistently perform in several familiar settings.* **Students identify sets of given data on a teacher presented bar graph.** Ex. Given a bar graph showing the categories of *no pet, cat, dog* for members of the students' class, students identify the numbers of students who have a pet cat.
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students match sets of given data on a teacher presented bar graph.**
		Level I *Students require external support and multiple prompts in a structured setting.* Students select preferred items to contribute data to graph. **Students attend to/interact with how others identify sets of given data on a bar graph.**

Grade 7 Benchmark	Grade 7 Academic Benchmark	Levels of Complexity
2. Students calculate mean, median, mode, and range for data sets and use in real- world setting.	**7.A.D.2 Students identify median and mode *or* minimum/maximum given an ordered set.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students identify median and mode *and* minimum/maximum given an ordered set.** Ex. Given an ordered set of (1,3,5,7,9), students identify the median as *5*, the minimum as *1*, and the maximum as *9*.
		Level III *Students consistently perform in several familiar settings.* **Students identify median and mode *or* minimum/maximum given an ordered set.** Ex. Given an ordered set of (1,3,5,7,9), students identify the median as 5.
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students match a small set of objects to a like small set of objects and a large set of objects to a like set of objects.**
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to how others match sets of different amounts.**

Grade 7 Benchmark	Grade 7 Academic Benchmark	Levels of Complexity
3. Students predict, compare, and report as ratios probable outcomes of experiments or simulations (i.e., impossible, equally likely, certain). ***Note: Students communicate the reasoning used in solving these problems. They may use tools/technology to support learning.**	**7.A.D.3 Students identify events that are impossible and certain.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students identify events that are impossible, possible and certain.** Ex. Student describes an event that is possible on the given day. **Level III** *Students consistently perform in several familiar settings.* **Students identify events that are impossible and certain.** Ex. Teacher prompts, "Tell me something that will certainly happen today." Students respond, "I will go to lunch." **Level II** *Students require external support and multiple prompts in limited familiar settings.* **Students match events that are presented by the teacher as impossible and certain.** Ex. Given a picture of an impossible event, students match the picture with the same event. **Level I** *Students require external support and multiple prompts in a structured setting.* **Students attend to how others match events that are impossible and certain.**

Wyoming Mathematics Academic Content Standards
Grade 8

CONTENT STANDARD 1. NUMBER OPERATIONS AND CONCEPTS		
Students use numbers, number sense, and number relationships in a problem-solving situation.		
ACADEMIC CONTENT STANDARD 1. NUMBER OPERATIONS AND CONCEPTS		
Students sequence numbers and use number operations and related concepts to solve problems.		
Grade 8 Benchmark	**Grade 8 Academic Benchmark**	**Levels of Complexity**
1. Students represent and apply numbers in a variety of equivalent forms (such as changing from percent to decimal to fraction, etc.) and in a problem-solving context: • prime factors, factors, and multiples; • rational numbers and proportions; and • square roots and powers.	8.A.N.1 Students represent and order a set of whole numbers between 50 and 75. ***Note: Students communicate the reasoning used in problem solving through ordering.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students represent and order a set of 10 whole numbers up to 75 and above.**
		Level III *Students consistently perform in several familiar settings.* **Students represent and order a set of 5 whole numbers between 50 and 75.** Ex. Given verbally the set of {53, 78, 65, 55, 70), students represent and order the set using manipulatives.
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students represent a whole number up to 50.**
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to presentation of a whole number up to 50.**

Grade 8 Benchmark	Grade 8 Academic Benchmark	Levels of Complexity
2. Students extend understanding and use of basic arithmetic operations on rational numbers. **● Simplify numerical expressions using the order of operations;** **● Order rational numbers expressed in a variety of forms.**	**8.A.N.2 Students multiply by twos to products no greater than 20.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students multiply by twos and other numbers to products no greater than 20.**
		Level III *Students consistently perform in several familiar settings.* **Students multiply by twos to products no greater than 20.** Ex. Given that each bicycle has two tires, students calculate the number of tires on 8 bikes.
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students match multiplying by twos up to products no greater than 20.**
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to how others multiply twos up to 20.**

Grade 8 Benchmark	Grade 8 Academic Benchmark	Levels of Complexity
3. Students explain their choice of estimation and problem- solving strategies and justify results of solutions in problem-solving situations involving rational numbers.	8.A.N.3 Students use estimation to determine which number is closer to the amount necessary in a given problem up to 75.	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students use estimation to determine which number is closest to the solution in a given problem ≥ 75 and explain the problem-solving process.**
		Level III *Students consistently perform in several familiar settings.* **Students use estimation to determine which number is closest to the solution in a given problem up to 75 given three or more choices.** Ex. Students used estimation to solve the problem, "Mrs. Jones wants to buy a dress that costs $68.00. When she goes to the bank, estimate how much money Mrs. Jones needs - $10, $50, or $70?"
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students use estimation to determine which of two presented sets of objects is closer to a given quantity up to 15.**
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to activities using estimation up to 15.**

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Grade 8 Benchmark	Grade 8 Academic Benchmark	Levels of Complexity
4. Students understand properties of operations with rational numbers. ***Note: Students communicate the reasoning used in solving these problems. They may use tools/technology to support learning.**	**8.A.N.4 Students demonstrate an understanding of fractions and decimals by:** • **identifying the sum of 5 equivalent fourths as greater than a whole.** • **recognizing the sum of 5 quarters is greater than one dollar.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students demonstrate an understanding of fractions and decimals by:** • **identifying the sum of 5 equivalent fourths as equivalent to a whole plus one fourth.** • **recognizing the sum of 5 quarters is equivalent to one dollar and a quarter.**
		Level III *Students consistently perform in several familiar settings.* **Students demonstrate an understanding of fractions and decimals by:** • **identifying the sum of 5 equivalent quarters as greater than a whole.** • **recognizing the sum of 5 quarters is greater than one dollar.** Ex. Students want to buy candy bars which cost 25 cents each for 5 friends. Students calculate the total cost of the candy bars.
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students match five equivalent quarters.**
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to how others display that five equivalent quarters are greater than a whole.**

CONTENT STANDARD 2. GEOMETRY
Students apply geometric concepts, properties, and relationships in a problem-solving situation.
ACADEMIC CONTENT STANDARD 2. GEOMETRY
Students recognize, sort, compare, and contrast geometric shapes and objects and relationships.

Grade 8 Benchmark	Grade 8 Academic Benchmark	Levels of Complexity
1. Students classify and describe one-, two-, and three-dimensional geometric objects, including: • lines, rays, segments, and angles; • parallel and perpendicular relationships; • circles and spheres; • regular polygon types; • right prisms, cylinders, cones, and pyramids	8.A.G.1 Students identify and compare the angles and the parallel and perpendicular lines in a four-sided figure.	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students recognize, compare, and label angles as larger, smaller, or equal in size.**
		Level III *Students consistently perform in several familiar settings.* **Students identify and compare the angles and the parallel and perpendicular lines in a four-sided figure.** Ex. Given a square, students identify the angles and the parallel and perpendicular lines.
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students match two same-sized angles.**
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to how others match two same-sized angles.**

Grade 8 Benchmark	Grade 8 Academic Benchmark	Levels of Complexity
2. Students make conjectures about geometric objects based on knowledge of geometric transformations, congruence, and similarity.	**8.A.G.2 Students identify a pair of congruent geometric objects and a pair of similar geometric objects when presented without a grid system.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students select a pair of geometric objects which appear to be congruent and a pair which appears to be similar when presented without a grid system.**
		Level III *Students consistently perform in several familiar settings.* **Students identify a pair of congruent geometric objects and a pair of similar geometric objects when present without a grid system.** Ex. Given a minimum of 5 similar and 5 congruent objects, students identify objects that are congruent and similar.
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students match a pair of geometric objects which appear to be congruent and a pair which appears to be similar when presented without a grid system.**
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to how others match a pair of geometric objects which appear to be congruent and a pair which appears to be similar when presented without a grid system.**

Grade 8 Benchmark	Grade 8 Academic Benchmark	Levels of Complexity
3. Students use geometric formulas including the Pythagorean Theorem.	**8.A.G.3 Students find the perimeter up to 20 units around a rectangle given the length of all four sides and the formula L + L + W + W.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students find the perimeter up to 20 units of a rectangle given the length of 3 sides and the formula L + L + W + W.**
		Level III *Students consistently perform in several familiar settings.* **Students find the perimeter up to 20 units around a rectangle given the length of all four sides and the formula L + L + W + W.** Ex. Given a graphic representation of a rectangle with the length of the sides indicated, students calculate the perimeter.
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students match the perimeter around a rectangle.**
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to others finding the perimeter of a rectangle with the use of manipulatives.**

Grade 8 Benchmark	Grade 8 Academic Benchmark	Levels of Complexity
4. Students communicate the reasoning used in identifying geometric relationships in problem-solving situations appropriate to grade level.	**8.A.G.4 Students communicate the reasoning used in comparing geometric relationships in problem-solving situations.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students label groups on a graphic representation as alike, different, same, or changed.**
		Level III *Students consistently perform in several familiar settings.* **Students communicate the reasoning used in comparing geometric relationships in problem-solving situations.** Ex. Given two geometric shapes (a circle and a triangle), students select or sign the symbol for *different* and signs that they are not *alike*.
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students match groups on a graphic representation as alike, different; same, or changed.**
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to how others matching of groups on a graphic representation as alike, different, same or changed.**

Grade 8 Benchmark	Grade 8 Academic Benchmark	Levels of Complexity
5. Students represent geometric figures using a rectangular coordinate plane. ***Note: Students communicate the reasoning used in solving these problems. They may use tools/technology to support learning.**	**8.A.G.5 Students represent a geometric figure resulting from reflections (flips) on a provided coordinate system.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students represent a new geometric figure in a different position on a provided coordinate system given a presented geometric figure and identify coordinates as being up/down, left/right, above/below.**
		Level III *Students consistently perform in several familiar settings.* **Students represent a geometric figure resulting from reflections (flips) on a provided coordinate system.** Ex. Using a geometric board, students represent a flip of a geometric object about an axis and calculate the number of points the figure moved up, down, left, or right.
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students match a new geometric figure presented in a different position on a provided coordinate system given a presented geometric figure.**
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to representing a geometric figure resulting from reflections on a provided coordinate system.**

CONTENT STANDARD 3. MEASUREMENT		
Students use a variety of tools and techniques of measurement in a problem-solving situation.		
ACADEMIC CONTENT STANDARD 3. MEASUREMENT		
Students use tools to apply numbers and concepts to length, capacity, time, and weight.		
Grade 8 Benchmark	**Grade 8 Academic Benchmark**	**Levels of Complexity**
1. Students apply estimation and measurement of weight/mass to content problems and convert within U.S. customary and within metric units (mg, g, kg).	**8.A.M.1. Students make same-number comparisons based on U.S. customary units of length or volume.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students make comparisons based within the following: length, weight, and volume.** Ex. Students compare which is heavier: 5 pounds or 8 ounces.
		Level III *Students consistently perform in several familiar settings.* **Students make same-number comparisons based on U.S. customary units of length or volume.** Ex. Students compare and identify which is longer: 8 inches or 8 feet.
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students make same-number comparisons based within the following: weight <u>or</u> volume.** Ex. Students compare and identify which is more: 2 cups or 2 gallons.
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to the comparison of objects of different weight or volume based on U.S. customary units.**

Grade 8 Benchmark	Grade 8 Academic Benchmark	Levels of Complexity
2. Students apply estimation and measurement of capacity/volume to content problems and convert within metric units (ml, l).	**Addressed in 8.A.M.1**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Addressed in 8.A.M.1**
		Level III *Students consistently perform in several familiar settings.* **Addressed in 8.A.M.1**
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Addressed in 8.A.M.1**
		Level I *Students require external support and multiple prompts in a structured setting.* **Addressed in 8.A.M.1**

Grade 8 Benchmark	Grade 8 Academic Benchmark	Levels of Complexity
3. Students select and use the appropriate methods, tools, and units to solve problems involving angle measure, perimeter, circumference, area (including circles), and volume of rectangular solids. ***Note: Students communicate the reasoning used in solving these problems. They may use tools/technology to support learning.**	**8.A.M.2 Students identify the appropriate tool used to measure U.S. customary units of length, weight, and volume.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students identify appropriate tools used to measure U.S. customary units of length, weight, and volume.** Ex. Given the task of measuring the length of their desks, students request a ruler.
		Level III *Students consistently perform in several familiar settings.* **Students identify the appropriate tool used to measure U.S. customary units of length, weight, and volume when given a choice of three measuring tools.** Ex. Given the task of measuring the length of their desks and a choice of three measuring tools, students select a ruler.
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students identify tools used to measure length given a choice of three tools.** Ex. Given a set of measuring objects used to measure different units, students select a ruler to measure length.
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to an activity using measurement tools.**

CONTENT STANDARD 4. ALGEBRA
Students use algebraic methods to investigate, model, and interpret patterns and functions involving numbers, shapes, data, and graphs in a problem-solving situation.
ACADEMIC CONTENT STANDARD 4. ALGEBRA
Students recognize and extend patterns and use numbers and symbols to solve problems.

Grade 8 Benchmark	Grade 8 Academic Benchmark	Levels of Complexity
1. Students translate word phrases, which involve the four basic operations to mathematical expressions.	**8.A.A.1 Students translate and represent word phrases into simple addition and subtraction problems using whole numbers ≤ 20.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students represent and translate word phrases into simple addition and subtraction problems with sums ≤ 30 using manipulatives.**
		Level III *Students consistently perform in several familiar settings.* **Students represent and translate word phrases into simple addition and subtraction problems with sums ≤ 20 using manipulatives.** Ex. Given the prompt "eighteen minus ten is eight," students represent the problem with a number sentence.
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students represent a simple addition problem with a sum less than or equal to ten using manipulatives.**
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to a simple addition problem with a sum less than or equal to ten using manipulatives.**

Grade 8 Benchmark	Grade 8 Academic Benchmark	Levels of Complexity
2. Students solve one- and two- step linear equations each with an integer coefficient and integer solutions.	**8.A.A.2 Students solve one-step linear equations involving addition and subtraction of whole numbers ≤ 30.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students solve one-step linear equations involving addition and subtraction of whole numbers greater than or equal to 30.**
		Level III *Students consistently perform in several familiar settings.* **Students solve one-step linear equations involving addition and subtraction of whole numbers ≤ 30.** Ex. Given the equation, 25 – X = 19, students solve for X.
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students select a one-step linear equation involving addition or subtraction to match a given scenario using numbers ≤ 10 using manipulative.** Ex. Shown a group of 10 blocks and taking away 4 blocks, students choose 10 – 4 = 6.
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend while others solve one-step linear equations involving subtraction using numbers ≤ 10.**

Grade 8 Benchmark	Grade 8 Academic Benchmark	Levels of Complexity
3. Students evaluate algebraic expressions and formulas given integer values for variables.	**8.A.A.3 Students evaluate algebraic expressions involving sums and differences ≤ 20, given a variable ≤ 9, and one constant.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students evaluate an addition and subtraction expression given a variable whose value is greater than 9 and one constant.**
		Level III *Students consistently perform in several familiar settings.* **Students evaluate algebraic expressions involving sums and differences ≤ 20, given a variable ≤ 9, and one constant.** Ex. Presented with X – 9 and given than X = 20, students solve the expression.
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students evaluate an addition and subtraction expression given a variable whose value is no greater than 1 and one constant using numbers ≤ 5 paired with manipulatives.** Ex. Presented with 4 + □ = 3, and □ = 1, students evaluate if the sum is correct.
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to algebraic expressions when given one constant and one unknown.**

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Grade 8 Benchmark	Grade 8 Academic Benchmark	Levels of Complexity
4. Using simple linear equations, students create a table, and graph the solutions on the coordinate system. ***Note: Students communicate the reasoning used in solving these problems. They may use tools/technology to support learning.**	**8.A.A.4 Students recognize placement of three positive whole number values up to 15 on a vertical scale using a graphic representation.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students recognize placement of three positive whole number values up to 30 on a vertical scale using a graphic representation.**
		Level III *Students consistently perform in several familiar settings.* **Students recognize placement of three positive whole number values up to 15 on a vertical scale using a graphic representation.** Ex. Given a thermometer, students indicate the three given temperature values of 5, 10, or 15 degrees.
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students match the placement of three positive whole number values up to 15 on a vertical scale using a graphic representation to a presented graphic representation.**
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to the placement of three positive whole number values up to 15 on a vertical scale using a graphic representation to a presented graphic representation.**

CONTENT STANDARD 5. __DATA ANALYSIS AND PROBABILITY__ Students use data analysis and probability to analyze given situations and the results of experiments. ACADEMIC CONTENT STANDARD 5. __DATA ANALYSIS AND PROBABILITY__ Students collect and organize data and make predictions based on given situations.		
Grade 8 Benchmark	**Grade 8 Academic Benchmark**	**Levels of Complexity**
1. Students systematically collect, organize, describe, analyze, and represent data using tables, charts, diagrams, and graphs.	**8.A.D.1 Students organize, represent, and compare up to 15 objects into two separate sets based on one attribute on a teacher-provided graphic representation.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Student organizes a group of up to 15 objects into two sets according to one given attribute each onto his/her bar graph and make comparisons (up to 10 items per set).**
		Level III *Students consistently perform in several familiar settings.* **Students organize, represent, and compare up to 15 objects into two separate sets based on one attribute on a teacher-provided graphic representation.** Ex. Given that 8 students in the class have no pets and five students in the class have a pet, students represent and compare this scenario on a teacher-provided graphic representation.
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students match a group of up to 15 objects into two sets according to one given attribute each onto a teacher provided bar graph and make comparisons (up to 10 items per set).**
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to how others match a group of up to 15 objects into two sets according to one given attribute each onto a teacher provided bar graph.**

Grade 8 Benchmark	Grade 8 Academic Benchmark	Levels of Complexity
2. Students calculate mean, median, mode, and range for data sets and use in a real-world setting appropriate to grade level.	**8.A.D.2 Students identify mean, mode and minimum/maximum given an ordered set.** **NOTE: <u>Median</u> is limited to sets with an odd number of members.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students identify mean, mode and minimum/maximum given an unordered set.** **Level III** *Students consistently perform in several familiar settings.* **Students identify mean, mode and minimum/maximum given an ordered set.** Ex. Given an ordered set of (1, 3, 5, 7, 9), students identify that the median is 5, and the minimum and maximum. **Level II** *Students require external support and multiple prompts in limited familiar settings.* **Students identify the minimum/maximum given a set of five ordered numbers.** **Level I** *Students require external support and multiple prompts in a structured setting.* **Students attend to the middle number or middle object in a given set of numbers and objects.**

Grade 8 Benchmark	Grade 8 Academic Benchmark	Levels of Complexity
3. Students predict, compare, and calculate probable outcomes of experiments or simulations.	**8.A.D.3 Students identify one possible and one impossible outcome of probability activities.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students identify more than one possible and/or more than one impossible outcome of probability activities.** Ex. Given a yellow/blue/red/green spinner, students identify all four colors as possible outcomes.
		Level III *Students consistently perform in several familiar settings.* **Students identify one possible and one impossible outcome of probability activities.** Ex. Given a number cube, students name "1" as possible outcome and "8" as an impossible outcome.
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students match a possible outcome of probability activities.**
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to the identification of possible outcomes of probability activities.**

Grade 8 Benchmark	Grade 8 Academic Benchmark	Levels of Complexity
4. Students communicate about the likelihood of events using concepts from probability such as impossible, equally likely, and certain appropriate to grade level. ***Note: Students communicate the reasoning used in solving these problems. They may use tools/technology to support learning.**	**Addressed in 8.A.D.3**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Addressed in 8.A.D.3**
		Level III *Students consistently perform in several familiar settings.* **Addressed in 8.A.D.3**
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Addressed in 8.A.D.3**
		Level I *Students require external support and multiple prompts in a structured setting.* **Addressed in 8.A.D.3**

Wyoming Mathematics Academic Content Standards
Grade 11

	CONTENT STANDARD 1. NUMBER OPERATIONS AND CONCEPTS	
	CONTENT STANDARD 1. NUMBER OPERATIONS AND CONCEPTS **Students use numbers, number sense, and number relationships in a problem-solving situation.** **ACADEMIC CONTENT STANDARD 1. NUMBER OPERATIONS AND CONCEPTS** **Students sequence numbers and use number operations and related concepts to solve problems.**	
Grade 11 Benchmark	**Grade 11 Academic Benchmark**	**Levels of Complexity**
1. Students represent and apply real numbers in a variety of forms.	**11.A.N.1 Students represent and order a set of 5 whole numbers between 75 and 100.** ***Note: Students communicate the reasoning used in problem solving through ordering.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students represent and order a set of 10 whole numbers up to 100 and above.** **Level III** *Students consistently perform in several familiar settings.* **Students represent and order a set of 5 whole numbers between 75 and 100.** Ex. Given {81, 78, 95, 75, 90}, students represent and order the set using numbered blocks. **Level II** *Students require external support and multiple prompts in limited familiar settings.* **Students represent a whole number up to 75.** **Level I** *Students require external support and multiple prompts in a structured setting.* **Students attend to a presentation of a whole number up to 75.**

Grade 11 Benchmark	Grade 11 Academic Benchmark	Levels of Complexity
2. Students apply the structure and properties of the real number system.	**11.A.N.2 Students divide a value no greater than 20 by twos.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students divide a value no greater than 20 by twos and other numbers.**
		Level III *Students consistently perform in several familiar settings.* **Students divide a value no greater than 20 by twos.** Ex. Given 20 items, students divide the group into two equal groups.
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students match dividing a value no greater than 20 by twos.** Ex. Students match how dividing by two is demonstrated by another.
		Level I *Students require external support and multiple prompts in a structured setting.* **Students will attend to how others divide a value no greater than 20 by twos.**

Grade 11 Benchmark	Grade 11 Academic Benchmark	Levels of Complexity
3. Students explain their choice of estimation and problem solving strategies and justify results of solutions in problem-solving situations involving real numbers.	**11.A.N.3 Students use estimation to determine the sum of two values up to 100 given three choices.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students use estimation to determine the product of two values up to 100 given three choices.** Ex. Students solve, "There are 8 students. Each student will drink 8 ounces of water. Estimate how many ounces of water you will need."
		Level III *Students consistently perform in several familiar settings.* **Students use estimation to determine the sum of two values up to 100 given three choices.** Ex. Students solve, "Mrs. Jones wants to buy a hat and a pair of earrings. The hat cost $35 and the earring $20. Estimate the amount of money Mrs. Jones will need to pay for the items."
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students use estimation to match a provided set up to 75 with a like set given two choices.**
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to estimation activities up to 75.**

Grade 11 Benchmark	Grade 11 Academic Benchmark	Levels of Complexity
4. Students use proportional reasoning to solve problems. ***Note: Students communicate the reasoning used in solving these problems. They may use tools/technology to support learning.**	**11.A.N.4 Students use 1 to 1 proportions to solve problems using money.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students make same-number comparisons using a 2 to 1 proportion using money.** Ex. Students solve, "If 2 candies cost a quarter, how many can you buy with 2 quarters?" **Level III** *Students consistently perform in several familiar settings.* **Students use 1 to 1 proportions to solve problems using money.** Ex. Students solve, "If you can buy 1 piece of candy for a quarter, how many can you buy with 2 quarters?" **Level II** *Students require external support and multiple prompts in limited familiar settings.* **Students match same-number comparisons using a 1 to 1 proportion.** **Level I** *Students require external support and multiple prompts in a structured setting.* **Students attend to demonstration of proportions.**

CONTENT STANDARD 2. GEOMETRY
Students apply geometric concepts, properties, and relationships in a problem-solving situation.
ACADEMIC CONTENT STANDARD 2. GEOMETRY
Students recognize, sort, compare, and contrast geometric shapes and objects and relationships.

Grade 11 Benchmark	Grade 11 Academic Benchmark	Levels of Complexity
1. Students use transformations, congruency, symmetry, similarity, perpendicularity, parallelism, and the Pythagorean Theorem to solve problems.	**11.A.G.1 Students identify the correct change in position in a one-step geometric transformation (reflection, translate, or rotation) of geometric shapes when presented on a grid system.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students identify multi-step geometric transformations of geometric shapes when presented on a grid system.**
		Level III *Students consistently perform in several familiar settings.* **Students identify the correct change in position in a one-step geometric transformation (reflection, translate, or rotation) of geometric shapes when presented on a grid system.** Ex. Given a representation of a geometric object and its transformation of one unit to the left on a grid, students identify the correct change in position.
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students match one-step geometric transformations of geometric shapes when presented on a grid system.** Ex. Students match a shape to its one-step transformation when presented.
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to one-step geometric transformations of geometric shapes when presented on a grid system.**

Grade 11 Benchmark	Grade 11 Academic Benchmark	Levels of Complexity
2. Students communicate, using mathematical language, to: **• Interpret, represent, or create geometric figures;** **• Draw or build figures from a mathematical description;** **• Analyze properties and determine attributes of 2- and 3- dimensional objects.**	**11.A.G.2 Students select a geometric figure based on a mathematical description.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students identify line segments and angles to label a two-dimensional figure.**
		Level III *Students consistently perform in several familiar settings.* **Students select a geometric figure based on a mathematical description.** Ex. Given a choice of a square, triangle, and a circle and a description of a figure with no parallel lines and three angles, students select the triangle.
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students match lines in one two-dimensional object.**
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to line segments in a two-dimensional object.**

Grade 11 Benchmark	Grade 11 Academic Benchmark	Levels of Complexity
3. Students communicate the reasoning used in identifying geometric relationships in problem-solving situations.	**Addressed in 11.A.G.1**	Level IV *Students consistently and independently perform in unfamiliar settings using natural supports.* **Addressed in 11.A.G.1** .
		Level III *Students consistently perform in several familiar settings.* **Addressed in 11.A.G.1**
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Addressed in 11.A.G.1**
		Level I *Students require external support and multiple prompts in a structured setting.* **Addressed in 11.A.G.1**

Grade 11 Benchmark	Grade 11 Academic Benchmark	Levels of Complexity
4. Students solve problems involving the coordinate plane such as the distance between two points, the midpoint, and slope.	**11.A.G.3 Students differentiate distance between two pairs of points presented on a graph or a coordinate plane.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students distinguish lengths as longer or shorter between two pairs of points presented on a graph or a coordinate plane.**
		Level III *Students consistently perform in several familiar settings.* **Students differentiate distance between two pairs of points presented on a graph or a coordinate plane.** Ex. Students solve, "Given two pairs of points, students determine whether the distances between the points are the same or different.
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students match line segments on a graph or coordinate plane.**
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to change in position of a specific item.**

Grade 11 Benchmark	Grade 11 Academic Benchmark	Levels of Complexity
5. Students connect geometry with other mathematical topics. ***Note: Students communicate the reasoning used in solving these problems. They may use tools/technology to support learning.**	**11.A.G.4 Students recognize geometric shapes and/or objects in their environment.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students recognize and label geometric objects in their environment.** Ex. Students recognize and label parallel lines, perpendicular lines, and angles in a doorway. **Level III** *Students consistently perform in several familiar settings.* **Students recognize geometric shapes and/or objects in their environment.** Ex. Students recognize parallel lines, perpendicular lines, and angles in a doorway. **Level II** *Students require external support and multiple prompts in limited familiar settings.* **Students recognize geometric shapes or objects in their environment.** **Level I** *Students require external support and multiple prompts in a structured setting.* **Students attend to others recognizing geometric shapes in the environments.**

CONTENT STANDARD 3. **MEASUREMENT**			
Students use a variety of tools and techniques of measurement in a problem-solving situation.
ACADEMIC CONTENT STANDARD 3. MEASUREMENT
Students use tools to apply numbers and concepts to length, capacity, time, and weight.

Grade 11 Benchmark	Grade 11 Academic Benchmark	Levels of Complexity
1. Students apply estimation and measurement using the appropriate methods and units to solve problems involving length, weight/mass, area, surface area, volume, and angle measure.	**11.A.M.1 Students recognize an equivalency using customary units of length, weight, or volume to solve measurement problems.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students make comparisons based upon different units of length, weight, and volume.** Ex. Students compare to solve, "Which is greater, 3 cups or 1 gallon?"
		Level III *Students consistently perform in several familiar settings.* **Students recognize an equivalent equivalency using customary units of length, weight, or volume to solve measurement problems.** Ex. Students recognize 12 inches as equivalent to 1 foot vs. 8 inches as equivalent to 1 foot given models of each.
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students match same-number comparisons based on length, volume, or weight.** Ex. Given a teaspoon and a cup, gallon, and teaspoon, students match the teaspoon to the teaspoon.
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to presented differences in length, weight and volume.**

Grade 11 Benchmark	Grade 11 Academic Benchmark	Levels of Complexity
2. Students demonstrate an understanding of both metric and U.S. customary systems. Students are able to convert within each system.	**11.A.M.2 Students associate the metric unit of liter to capacity.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students associate and label the metric unit of liter to capacity.** Ex. Given a liter of water, students identify and label quart as a like unit of capacity.
		Level III *Students consistently perform in several familiar settings.* **Students associate the metric unit of liter to capacity.** Ex. Given a liter of water, student identify gallon as a like unit of capacity.
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students match liter to liter and gallon to gallon.**
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to a comparison of a metric unit of liter to gallon.**

Grade 11 Benchmark	Grade 11 Academic Benchmark	Levels of Complexity
3. Students identify and apply scale, ratios, and proportions in solving measurement problems.	**Addressed in 11.A.N.4**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Addressed in 11.A.N.4**
		Level III *Students consistently perform in several familiar settings.* **Addressed in 11.A.N.4**
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Addressed in 11.A.N.4**
		Level I *Students require external support and multiple prompts in a structured setting.* **Addressed in 11.A.N.4**

Grade 11 Benchmark	Grade 11 Academic Benchmark	Levels of Complexity
4. Students solve problems of angle measure including those involving polygons or parallel lines cut by a transversal.	**Addressed in 11.A.G.2**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Addressed in 11.A.G.2**
		Level III *Students consistently perform in several familiar settings.* **Addressed in 11.A.G.2**
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Addressed in 11.A.G.2**
		Level I *Students require external support and multiple prompts in a structured setting.* **Addressed in 11.A.G.2**

Grade 11 Benchmark	Grade 11 Academic Benchmark	Levels of Complexity
5. Students solve indirect measurement problems. ***Note: Students communicate the reasoning used in solving these problems. They may use tools/technology to support learning.**	**The cognitive complexity of this benchmark requires further development of specific content of earlier benchmarks, which was not addressed.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Not addressed**
		Level III *Students consistently perform in several familiar settings.* **Not addressed**
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Not addressed**
		Level I *Students require external support and multiple prompts in a structured setting.* **Not addressed**

CONTENT STANDARD 4. __ALGEBRA__
Students use algebraic methods to investigate, model, and interpret patterns and functions involving numbers, shapes, data, and graphs in a problem-solving situation.
ACADEMIC CONTENT STANDARD 4. __ALGEBRA__
Students recognize and extend patterns and use numbers and symbols to solve problems.

Grade 11 Benchmark	Grade 11 Academic Benchmark	Levels of Complexity
1. Students use algebraic concepts, symbols, and skills to represent and solve real-world problems.	**11.A.A.1 Students model and evaluate an expression from a given story problem using numbers ≤ 75.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students model and evaluate an expression from a given story problem using numbers greater than 75.**
		Level III *Students consistently perform in several familiar settings.* **Students model and evaluate an expression from a given story problem using numbers ≤ 75.** Ex. Students model and evaluate, "Mary went to the store. She bought 40 items. If she bought ten plates and fifteen bowls, how many glasses did she buy?"
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students match a presented expression to a given story from a field of two choices using manipulatives less than or equal to 10.**
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to an expression given a story problem represented with manipulatives.**

Grade 11 Benchmark	Grade 11 Academic Benchmark	Levels of Complexity
2. Students write, model, and evaluate expressions, functions, equations, and inequalities.	**11.A.A.2 Students evaluate an algebraic expression involving multiplication given a whole number value for a variable and one constant with a product ≤ 20.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students evaluate an algebraic expression involving multiplication given a whole number value for a variable and one constant with a product ≤ 30.**
		Level III *Students consistently perform in several familiar settings.* **Students evaluate an algebraic expression involving multiplication given a whole number value for a variable and one constant with a product ≤ 20.** Ex. Presented with 3X – 9 and given that X = 4, students solve the expression.
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students match the answer to a provided algebraic expression involving multiplication given a whole number value for a variable and one constant with a product ≤ 10 to a representation using objects.**
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to multiplication problems involving twos using manipulatives.**

Grade 11 Benchmark	Grade 11 Academic Benchmark	Levels of Complexity
3. Students graph linear equations and interpret the results in solving algebraic problems.	**11.A.A.3 Students describe a trend (increasing or decreasing) given a graph of a linear equation.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Given two graphs of different linear equations, students describe and compare the trends.**
		Level III *Students consistently perform in several familiar settings.* **Students describe a trend (increasing or decreasing) given a graph of a linear equation.** Ex. Presented with a graph of the number of tickets sold and the amount of money earned showing a positive slope, students describe an increasing trend.
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students match two graphs of linear equations which show the same trend.**
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to a line represented on a graph.**

Grade 11 Benchmark	Grade 11 Academic Benchmark	Levels of Complexity
4. Students solve, graph, or interpret systems of linear equations.	**11.A.A.4 Students solve one-step linear equations involving multiplication of whole numbers given one variable and one constant ≤ 20.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students solve two-step linear equations involving multiplication of whole numbers given one variable and one constant and adding one constant.**
		Level III *Students consistently perform in several familiar settings.* **Students solve one-step linear equations involving multiplication of whole numbers given one variable and one constant.** Ex. Presented with 4X = 20, students solve for X.
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students match a one-step linear equation involving multiplication of whole numbers given one variable and one constant to a representation using objects.** Ex. Students match 2 X = 6 to 2 groups of 3 blocks
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to how others match a one-step linear equation involving multiplication of whole numbers given one variable and one constant to a representation using objects.**

Grade 11 Benchmark	Grade 11 Academic Benchmark	Levels of Complexity
5. Students connect algebra with other mathematical topics. ***Note: Students communicate the reasoning used in solving these problems. They may use tools/technology to support learning.**	**11.A.A.5 Students identify the coordinates of a point (x and y values) represented on a graph.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Student identify a point (x and y-values) and plot a point given x and y-values represented on a graph.**
		Level III *Students consistently perform in several familiar settings.* **Students identify the coordinates of a point (x and y values) represented on a graph.**
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students match an object to an identified point (x and y-values) represented on a graph.** Ex. Given a graph with an identified point, students place an object on the point.
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to others working with points on a graph.**

CONTENT STANDARD 5. DATA ANALYSIS AND PROBABILITY Students use data analysis and probability to analyze given situations and the results of experiments. ACADEMIC CONTENT STANDARD 5. DATA ANALYSIS AND PROBABILITY Students collect and organize data and make predictions based on given situations.		
Grade 11 Benchmark	**Grade 11 Academic Benchmark**	**Levels of Complexity**
1. Students apply knowledge of mean, median, mode, and range to interpret and evaluate information and data.	**11.A.D.1 Students determine each of the following: median, mode, minimum and maximum values given an unordered set.** **NOTE: Median is limited to sets with an odd number of members.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students calculate the median, mode, minimum and maximum of a set with an even number of members unordered set of up to six numbers.**
		Level III *Students consistently perform in several familiar settings.* **Students determine each of the following: median, mode, minimum and maximum values given a set of an odd number of unordered numbers.** Ex. Given an ordered set {5,3,1,9,7}, students identify the mode as 5, the median as 5, and the minimum and maximum.
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students identify the middle object in a set of five objects.**
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to the middle object in a set of five objects.**

Grade 11 Benchmark	Grade 11 Academic Benchmark	Levels of Complexity
2. Students draw reasonable inferences from statistical data and/or correlation/best fit line to predict outcomes.	**Addressed in 11.A.D.3**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Addressed in 11.A.D.3**
		Level III *Students consistently perform in several familiar settings.* **Addressed in 11.A.D.3**
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Addressed in 11.A.D.3**
		Level I *Students require external support and multiple prompts in a structured setting.* **Addressed in 11.A.D.3**

Grade 11 Benchmark	Grade 11 Academic Benchmark	Levels of Complexity
3. Students communicate about the likelihood of events using concepts from probability. **• sample space** **• evaluate simple probabilities** **• evaluate experimental vs. theoretical**	**11.A.D.2 Students identify a presented event as likely or unlikely and communicate their reasoning.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students identify situations and their likelihood and justify their reasoning.**
		Level III *Students consistently perform in several familiar settings.* **Students identify a presented event as likely or unlikely and communicate their reasoning.** Ex. Given that most of the students like pizza, students explain if it is more likely that the lunchroom will sell more hamburgers or pizzas at lunch.
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students match events that are presented as impossible, possible, or certain.** Ex. Students match an event that is possible on the given day.
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to events that are presented as possible or impossible.**

Grade 11 Benchmark	Grade 11 Academic Benchmark	Levels of Complexity
4. Students determine, collect, organize, and analyze relevant data needed to make conclusions. ***Note: Students communicate the reasoning used in solving these problems. They may use tools/technology to support learning.**	**11.A.D.3 Students organize, represent, and compare up to 45 objects into three separate sets based on one attribute on a teacher-provided graphic representation.**	**Level IV** *Students consistently and independently perform in unfamiliar settings using natural supports.* **Students are provided with up to 45 items to organize into three sets on their bar graphs and make comparisons between the sets.**
		Level III *Students consistently perform in several familiar settings.* **Students organize, represent, and compare up to 45 objects into three separate sets based on one attribute on a teacher-provided graphic representation**. Ex. Given that 8 students in the class have not pets, 15 students in the class have a dog, and 3 students in the class have a cat, students represent and make comparisons of this scenario on a teacher-provided graphic representation.
		Level II *Students require external support and multiple prompts in limited familiar settings.* **Students match three sets of organized data given up to 15 items represented on to a teacher- provided bar graph.**
		Level I *Students require external support and multiple prompts in a structured setting.* **Students attend to three sets of data given up to 15 items on a teacher-provided bar graph.**