Wyoming

DEPARTMENT OF EDUCATION

PAWS
Reading
Grade 6

Released Items
With Data

2015

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Reading Released Items with Data
Introduction Page / Data Definitions

This Released Items with Data document provides a subset of items from the 2014 administration of the PAWS test. The data for an item is on the page that follows that item. The following provides definitions for the data fields on the data page.

Passage Information:

Passage Accnum: Vendor identification code assigned to the passage

Title: Title of the passage/stimulus

Passage Ext. ID: Identification code assigned to the passage

Passage/Text Type: Mode or genre of passage (i.e.: informational/expository)

Item Information

Title: Title of the passage/stimulus the item belongs to

Passage/Text Type: Mode or genre of passage

2012 WyCPS Domain: Reporting category of the state content standards

2012 WyCPS Standard: State content standard

Item Code: Identification code assigned to the item

Admin: The year an item is administered

Item Type: The mode in which a student responds (MC means multiple-choice)

Correct Answer: The option letter (A, B, C, or D) that corresponds to the correct answer

Item Dok: The item's Depth of Knowledge designation, also called Cognitive Complexity;
1 - Recall and reproduction
2 - Skills and concepts
3 - Strategic and extended thinking

Total N-count: Number of students counted as taking the test in which the item appears during the listed administration (Includes item omissions)

Pvalue/Mean Score: For a multiple-choice item, the percent of students choosing the correct answer

Score Analysis

MC Row: Answer options available for students to choose from (including those who do not choose any option); an asterisk designates the correct answer

%Choosing Row: Percent of students choosing an option (or omitting)

Item Notes: Area where user can make notes

Passage Accnum:	VF656844	Title:	Make Your Own Battery - Using a Lemon!	Passage Ext. ID:	WYR26P20
Passage/Text Type:	Informational/Functional				

Make Your Own Battery—Using a Lemon!

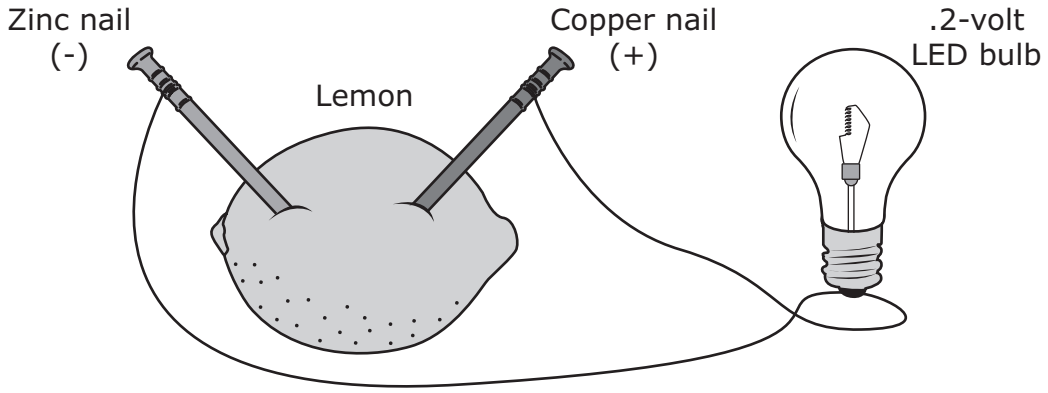
Batteries generate electricity. They are often used to power portable objects, such as flashlights and cell phones. Traditional batteries are filled with chemicals. However, it is possible to make a different kind of battery at home. All that is needed is a piece of fruit, a few supplies from a hardware store, and a desire to conduct a fascinating experiment. This battery will not fit into a flashlight or a cell phone, but it will create enough electricity to power a small light bulb.

How Do Batteries Provide Electricity to Devices?

Batteries create electricity by changing chemical energy into electrical energy. These chemical reactions release tiny particles called electrons. When electrons course into a device such as a light bulb, they provide the necessary power for electricity.

Supplies for the Lemon Battery

- a lemon
- a nail made of copper
- a nail made of zinc
- a small .2-volt LED bulb
- a roll of electrical tape
- 2 copper wires



Directions for Setting up the Lemon Battery

1. Squeeze the lemon, or roll it around on a hard surface. Both approaches will loosen the pulp inside of the lemon and let the juice inside flow freely. Do not smash the lemon. Doing so would allow juice to escape.

2. Place the lemon on a flat surface. Insert the zinc nail into one end of the lemon and the copper nail into the other end. Make sure the nails do not poke through the other side of the lemon. (NOTE: There will be bubbling around the spot where the zinc nail has been inserted. The lemon will also begin to turn black in that spot.)

3. Wrap the end of one of the copper wires around the top of the zinc nail and the end of the other copper wire around the top of the copper nail. Use electrical tape to keep the wires in place.

4. Attach the other end of each of the copper wires to the bottom of the light bulb. Use electrical tape to keep the wires in place.

5. Watch the bulb light up!

How the Experiment Works

During this experiment, chemical energy is converted into electrical energy. The juice inside of the lemon contains acid. When the acid in the lemon juice touches the zinc nail, it causes a chemical reaction. The zinc in the nail releases electrons.

The acid from the lemon also causes a chemical reaction when it touches the copper nail. Copper is different from zinc, so the reaction is not the same. When the acid touches the copper, instead of releasing electrons, the copper pulls in electrons.

The wire from the light bulb forms a circuit that connects the nails and gives the electrons a path to follow. The electrons that are released from the zinc nail travel across the wire to the copper nail. Then they flow back into the lemon. The electrical current that runs from one nail to the other flows to the light bulb and lights it up.

Using Other Items for Homemade Batteries

Oranges, apples, vinegar, and coffee can all be used to make homemade batteries. Some substances will provide more power than others. The more acid that is contained in a liquid, the more powerful the battery will be. The amount of acid in a substance is called a pH level. The lower the pH number is, the higher the concentration of acid in a substance.

Item	pH Level
Battery acid	0
Lemon juice	2–3
Vinegar	2–3
Orange juice	3–4
Black coffee	5
Pure water	7

Which item will produce more power? Conduct the light bulb experiment using the items listed in the chart above. Do the results reflect the chart?

00 **Read this sentence from the document.**

When electrons <u>course</u> into a device such as a light bulb, they provide the necessary power for electricity.

What does "course" mean in the sentence?

A) Pull

B) Flow

C) Drop

D) Burst

Item Information	
Title:	Make Your Own Battery - Using a Lemon!
Passage/Text Type:	Informational/Functional
2012 WyCPS Domain:	Vocabulary Acquisition and Use
2012 WyCPS Standard:	L.6.4 Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on grade 6 reading and content, choosing flexibly from a range of strategies.
Item Code:	VF804261

Admin:	Item Type:	Correct Answer:	Item Dok:	Total N-count:	Pvalue/Mean Score:
Spring 2014	MC	B	2	645	0.871

Score Analysis					
MC	**A**	**B***	**C**	**D**	**Omit**
%Choosing	4.806	87.132	3.411	4.341	0.31

Item Notes

00 **Read these sentences from the document.**

The amount of acid in a substance is called a pH level. The lower the pH number is, the higher the concentration of acid in a substance.

Which word from the sentences best helps the reader understand the meaning of "concentration"?

A) Amount

B) Substance

C) Higher

D) Acid

Item Information	
Title:	Make Your Own Battery - Using a Lemon!
Passage/Text Type:	Informational/Functional
2012 WyCPS Domain:	Vocabulary Acquisition and Use
2012 WyCPS Standard:	L.6.4a Use context (e.g., the overall meaning of a sentence or paragraph; a word's position or function in a sentence) as a clue to the meaning of a word or phrase.
Item Code:	VF804276

Admin:	Item Type:	Correct Answer:	Item Dok:	Total N-count:	Pvalue/Mean Score:
Spring 2014	MC	A	2	679	0.455

Score Analysis					
MC	**A***	**B**	**C**	**D**	**Omit**
%Choosing	45.508	23.859	17.231	13.108	0.295

Item Notes

00 **According to the document, what causes a chemical reaction?**

A) The electrical tape makes a connection.

B) The pH levels flow to the zinc or copper.

C) Acid comes in contact with zinc or copper.

D) Lemon juice creates a change in electrons.

Item Information	
Title:	Make Your Own Battery - Using a Lemon!
Passage/Text Type:	Informational/Functional
2012 WyCPS Domain:	Key Ideas and Details
2012 WyCPS Standard:	RI.6.1 Cite textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.
Item Code:	VF804289

Admin:	Item Type:	Correct Answer:	Item Dok:	Total N-count:	Pvalue/Mean Score:
Spring 2014	MC	C	2	645	0.664

Score Analysis					
MC	**A**	**B**	**C***	**D**	**Omit**
%Choosing	4.186	11.008	66.357	18.14	0.31

Item Notes

00 **For what could the lemon battery <u>best</u> be used?**

A) As a science fair project

B) To reduce electrical bills

C) As a way to recycle fruit

D) To permanently light a room

Item Information	
Title:	Make Your Own Battery - Using a Lemon!
Passage/Text Type:	Informational/Functional
2012 WyCPS Domain:	Key Ideas and Details
2012 WyCPS Standard:	RI.6.1 Cite textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.
Item Code:	VF805047

Admin:	Item Type:	Correct Answer:	Item Dok:	Total N-count:	Pvalue/Mean Score:
Spring 2014	MC	A	3	679	0.756

Score Analysis					
MC	**A***	**B**	**C**	**D**	**Omit**
%Choosing	75.552	12.96	4.566	6.627	0.295

Item Notes

00 **Based on the document, which statement is true about using vinegar for the battery experiment?**

A) The amount of power will increase if lemon juice is used instead.

B) The light bulb will be brighter than if black coffee is used instead.

C) The vinegar will not require two nails in order to produce electricity.

D) The vinegar will not be able to generate enough power to light the bulb.

Item Information	
Title:	Make Your Own Battery - Using a Lemon!
Passage/Text Type:	Informational/Functional
2012 WyCPS Domain:	Key Ideas and Details
2012 WyCPS Standard:	RI.6.1 Cite textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.
Item Code:	VF805049

Admin:	Item Type:	Correct Answer:	Item Dok:	Total N-count:	Pvalue/Mean Score:
Spring 2014	MC	B	2	645	0.408

Score Analysis					
MC	**A**	**B***	**C**	**D**	**Omit**
%Choosing	24.806	40.775	15.194	18.915	0.31

Item Notes

00 What is the central idea of the document?

A) A battery is a difficult device to assemble.

B) Batteries are often made from different types of fruits.

C) A battery can be made using a lemon and a few supplies.

D) Batteries can be used to power flashlights and cell phones.

Item Information	
Title:	Make Your Own Battery - Using a Lemon!
Passage/Text Type:	Informational/Functional
2012 WyCPS Domain:	Key Ideas and Details
2012 WyCPS Standard:	RI.6.2 Determine a central idea of a text and how it is conveyed through particular details; provide a summary of the text distinct from personal opinions or judgments.
Item Code:	VF805052

Admin:	Item Type:	Correct Answer:	Item Dok:	Total N-count:	Pvalue/Mean Score:
Spring 2014	MC	C	2	645	0.777

Score Analysis					
MC	**A**	**B**	**C***	**D**	**Omit**
%Choosing	3.876	13.953	77.674	4.031	0.465

Item Notes

00 **Which sentence is the <u>best</u> summary of the section titled "How the Experiment Works"?**

A) Acid in the lemon juice is responsible for the electrical current.

B) Electrons are part of a chemical reaction that lights up the bulb.

C) Electrons travel between two nails stuck in a lemon, and the result is an electrical current that lights up a bulb.

D) Copper has different properties from zinc, and the result is a different type of reaction on one side of the lemon.

Item Information	
Title:	Make Your Own Battery - Using a Lemon!
Passage/Text Type:	Informational/Functional
2012 WyCPS Domain:	Key Ideas and Details
2012 WyCPS Standard:	RI.6.2 Determine a central idea of a text and how it is conveyed through particular details; provide a summary of the text distinct from personal opinions or judgments.
Item Code:	VF805054

Admin:	Item Type:	Correct Answer:	Item Dok:	Total N-count:	Pvalue/Mean Score:
Spring 2014	MC	C	2	679	0.586

Score Analysis					
MC	**A**	**B**	**C***	**D**	**Omit**
%Choosing	16.348	10.457	58.616	14.286	0.295

Item Notes

00 **What is the main purpose of the first paragraph in the section titled "Using Other Items for Homemade Batteries"?**

A) To help the reader understand the use of fruit in battery acid

B) To explain how to measure the amount of acid in a battery

C) To explain how to create a pH level from common fruit

D) To help the reader understand the effect of a pH level

Item Information	
Title:	Make Your Own Battery - Using a Lemon!
Passage/Text Type:	Informational/Functional
2012 WyCPS Domain:	Craft and Structure
2012 WyCPS Standard:	RI.6.5 Analyze how a particular sentence, paragraph, chapter, or section fits into the overall structure of a text and contributes to the development of the ideas.
Item Code:	VF805055

Admin:	Item Type:	Correct Answer:	Item Dok:	Total N-count:	Pvalue/Mean Score:
Spring 2014	MC	D	2	645	0.429

Score Analysis					
MC	**A**	**B**	**C**	**D***	**Omit**
%Choosing	18.45	7.752	30.543	42.946	0.31

Item Notes

00 **In the section titled "Directions for Setting up the Lemon Battery," what does the "NOTE" contribute to Step 2?**

A) It provides the reason a flat surface is needed.

B) It explains that the lemon will change around the nail.

C) It shows readers where to place the copper and zinc nails.

D) It cautions against the nails going all the way through the lemon.

Item Information	
Title:	Make Your Own Battery - Using a Lemon!
Passage/Text Type:	Informational/Functional
2012 WyCPS Domain:	Craft and Structure
2012 WyCPS Standard:	RI.6.5 Analyze how a particular sentence, paragraph, chapter, or section fits into the overall structure of a text and contributes to the development of the ideas.
Item Code:	VF805061

Admin:	Item Type:	Correct Answer:	Item Dok:	Total N-count:	Pvalue/Mean Score:
Spring 2014	MC	B	2	679	0.664

Score Analysis					
MC	**A**	**B***	**C**	**D**	**Omit**
%Choosing	8.542	66.421	12.371	12.371	0.295

Item Notes

00 What is the author's purpose for writing the document?

A) To inform readers about the various uses for lemons

B) To persuade readers to conduct experiments using fruit

C) To instruct readers how to create a homemade battery

D) To teach readers how to build batteries without using electricity

Item Information	
Title:	Make Your Own Battery - Using a Lemon!
Passage/Text Type:	Informational/Functional
2012 WyCPS Domain:	Craft and Structure
2012 WyCPS Standard:	RI.6.6 Determine an author's point of view or purpose in a text and explain how it is conveyed in the text.
Item Code:	VF805822

Admin:	Item Type:	Correct Answer:	Item Dok:	Total N-count:	Pvalue/Mean Score:
Spring 2014	MC	C	3	679	0.577

Score Analysis					
MC	**A**	**B**	**C***	**D**	**Omit**
%Choosing	3.829	9.131	57.732	28.866	0.442

Item Notes

00 **How does the illustration of the lemon battery support the document?**

A) It helps the reader understand the concept of the experiment.

B) It helps the reader identify the correct brand of bulb.

C) It shows the reader which type of wire should be used.

D) It shows the reader how to produce reusable power.

Item Information	
Title:	Make Your Own Battery - Using a Lemon!
Passage/Text Type:	Informational/Functional
2012 WyCPS Domain:	Integration of Knowledge and Ideas
2012 WyCPS Standard:	RI.6.7 Integrate information presented in different media or formats (e.g., visually, quantitatively) as well as in words to develop a coherent understanding of a topic or issue.
Item Code:	VF805824

Admin:	Item Type:	Correct Answer:	Item Dok:	Total N-count:	Pvalue/Mean Score:
Spring 2014	MC	A	2	645	0.695

Score Analysis					
MC	**A***	**B**	**C**	**D**	**Omit**
%Choosing	69.457	4.961	2.791	22.481	0.31

Item Notes