This

PASSPORT

belongs to:

Geological Resources and Minerals

Your Passport to:
CENTER IN THE SQUARE
EXPLORATION!

Welcome to your Virtual Get Schooled Field Trip with:

HISTORY MUSEUM
OF WESTERN VIRGINIA

Did You Hear it?

What is a mineral?

_____

_____

How do we identify minerals?

Write your answers on the lines and then use those answers to unscramble the words below!

_____

_____

LAVAGECE _____

OHMS LECAS _____

ROCOL _____

KRITES ATELP _____

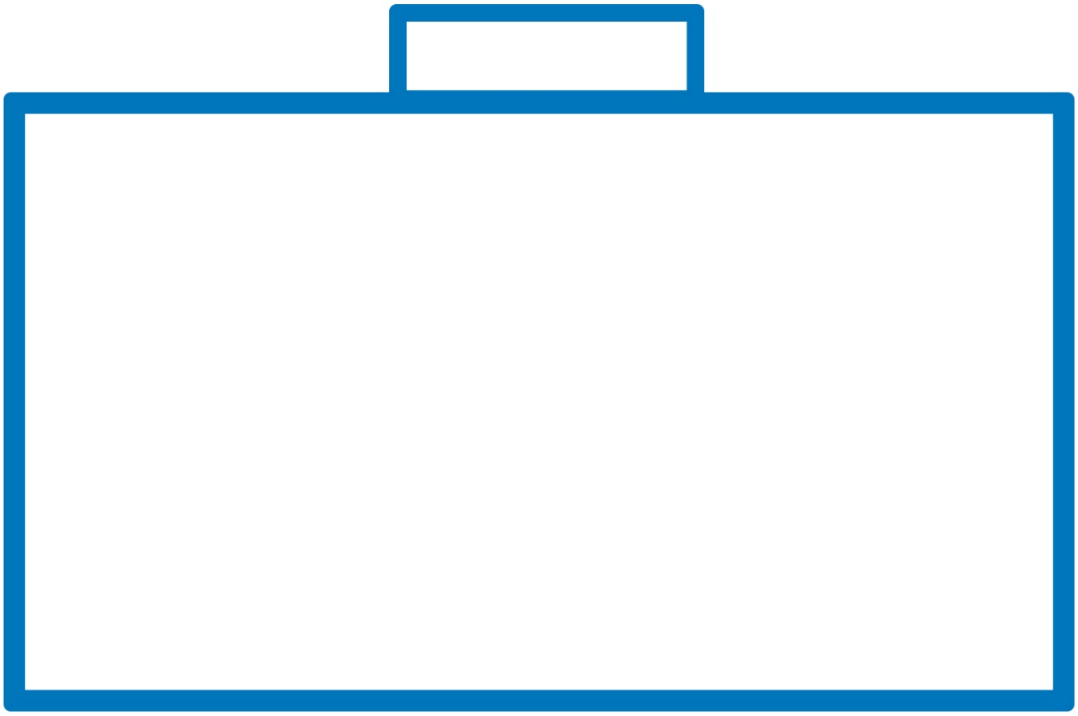
NESHARSD _____

TRUECARF _____

STEAKR _____

YESTIND _____

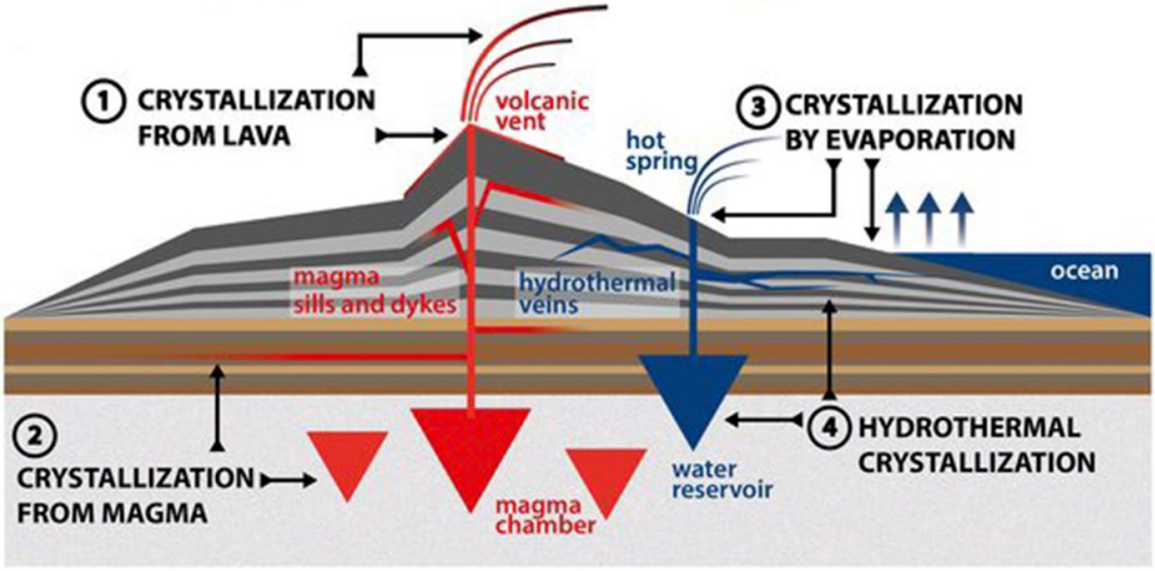
Pretend that you are a geologist trying to examine a potential mineral and the box below is your toolkit. What are some things that you need to put inside of it to figure out if your specimen is a mineral?
Draw or write them inside!



Rock V.S. Mineral

"A rock is a mass that contains a mixture of minerals."

Volcanoes and Minerals



Two Ways that Minerals Form:

1 Crystallization of melted materials found near:

_____

2 Crystallization of materials dissolved in:

_____

Did you hear me say it? Minerals form in two ways, label the map above with the two ways that I mentioned in the video.

What is crystallization?

_____

_____

Mineral Veins and Tasty Treats

Do You Remember?

How does Amanda describe mineral veins?
(There's a hint below!)

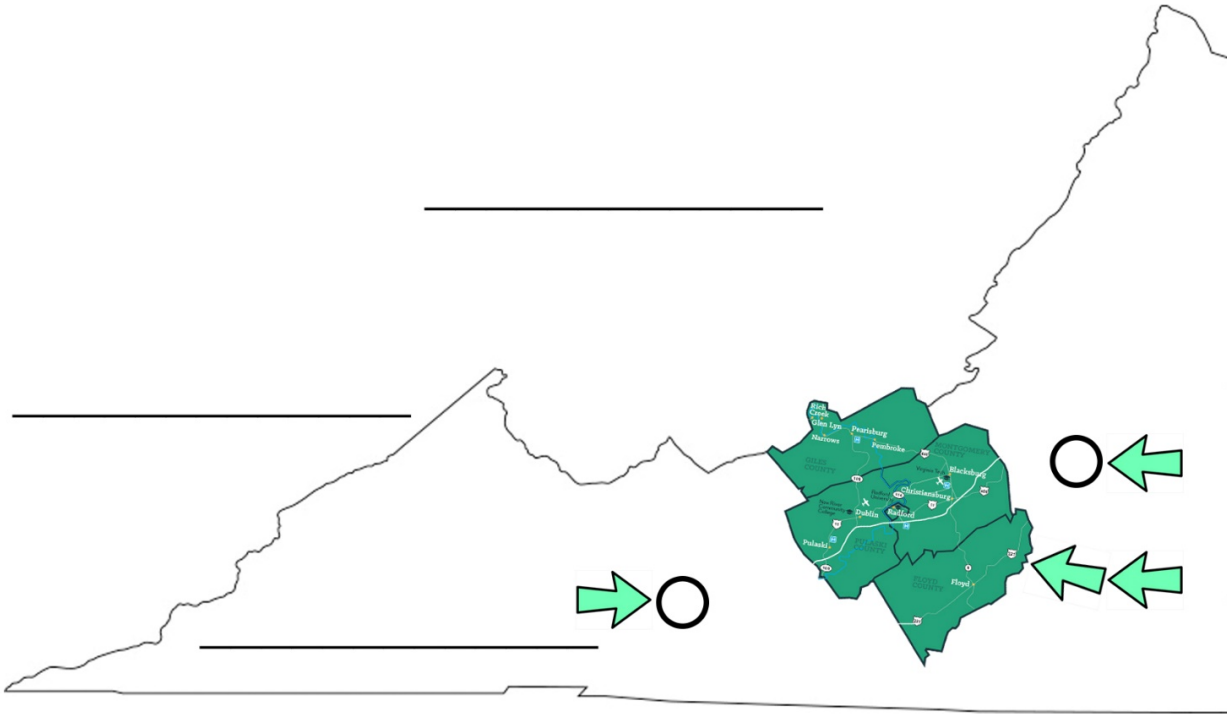
Rocky Road Anyone?
The Rock Monster's hungry!

The Rock Monster loves mineral veins, draw "mineral veins" on your ice cream cone above so your Rock Monster will be happy.

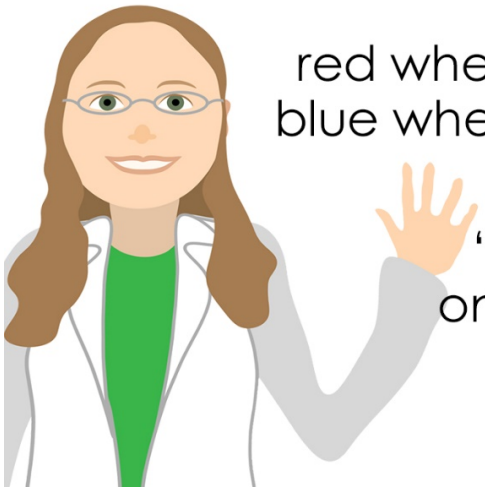
What's your new tasty creation called?

Welcome to:

HISTORY MUSEUM
OF WESTERN VIRGINIA



Color the map:

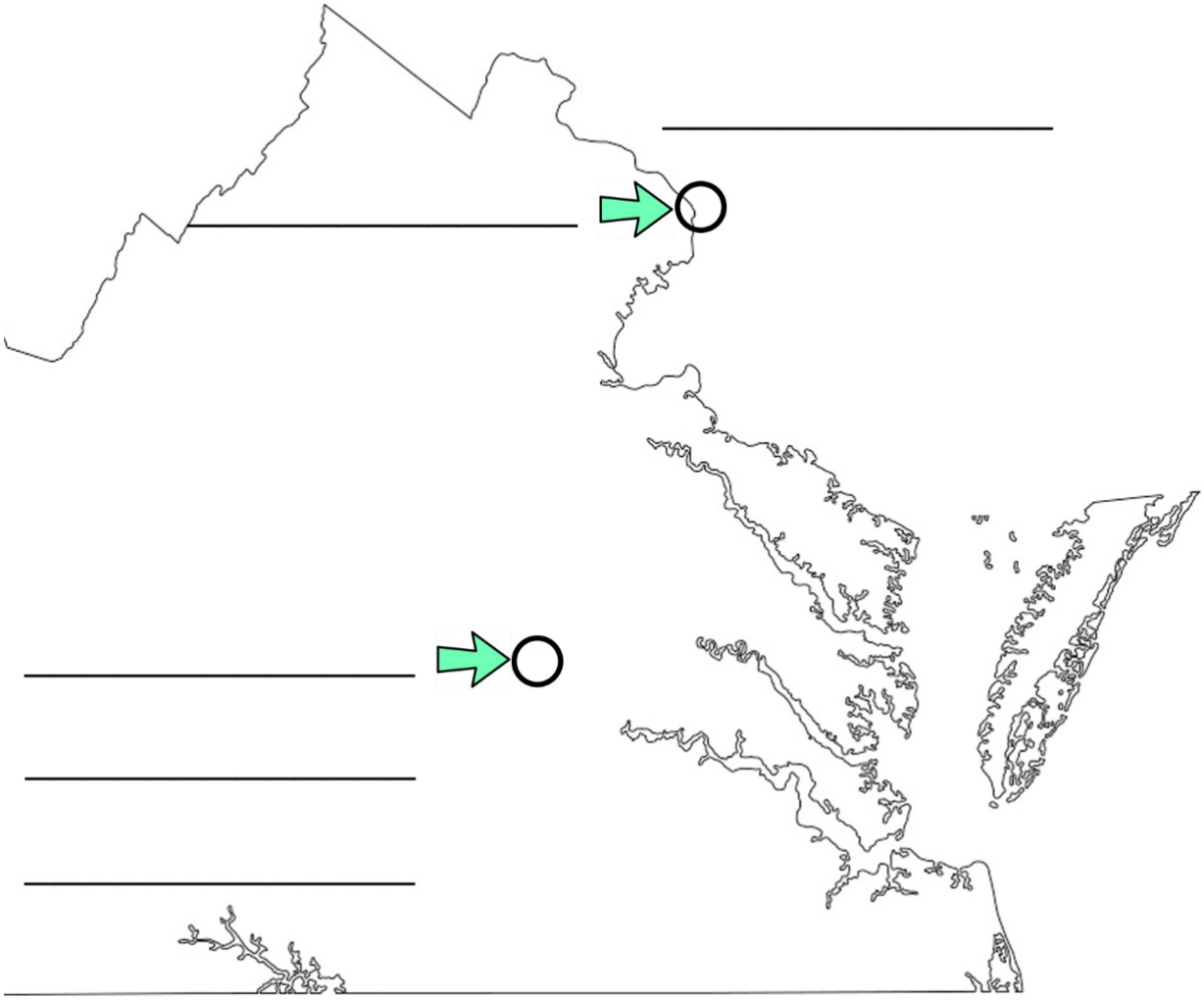


red where we can find iron
blue where we can find coal

"Did you know that iron is the only mineral that is mined in our region today?"

Exploring Virginia's Resources

Map



Fill in the missing places on on your map:

Washington D.C
Richmond
New River Valley
Roanoke
Wytheville
Maryland
West Virginia
Kentucky
North Carolina

What's so Great about Iron?

For starters, you have about 3 grams of iron inside of your body right now! It carries oxygen from your lungs to other parts of your body.

"Did you know that you have as much iron in your body as a penny weighs?"

Iron is one of the most abundant elements in Earth's crust, which is good news because we use it, mixed with other metals, to make steel.

Steel is used in many construction projects to make beams, sheets, reinforce concrete and more!

Exploring Architecture:

Ask and adult to help you look up different structures that use iron/steel. Use those creations to get ideas to help you draw your own steel structure below.

What's so Great about Coal?

The coal used today began forming about 300 million years ago. At that time swamps with giant ferns and other plants were common on Earth. When these plants died, they sank in the water. They did not completely decay, or break down. Instead they formed a substance called peat. Over time layers of rock and other materials built up over the peat. Heat and pressure hardened the peat into coal.

(from https://kids.britannica.com/kids/article/-coal/352974)

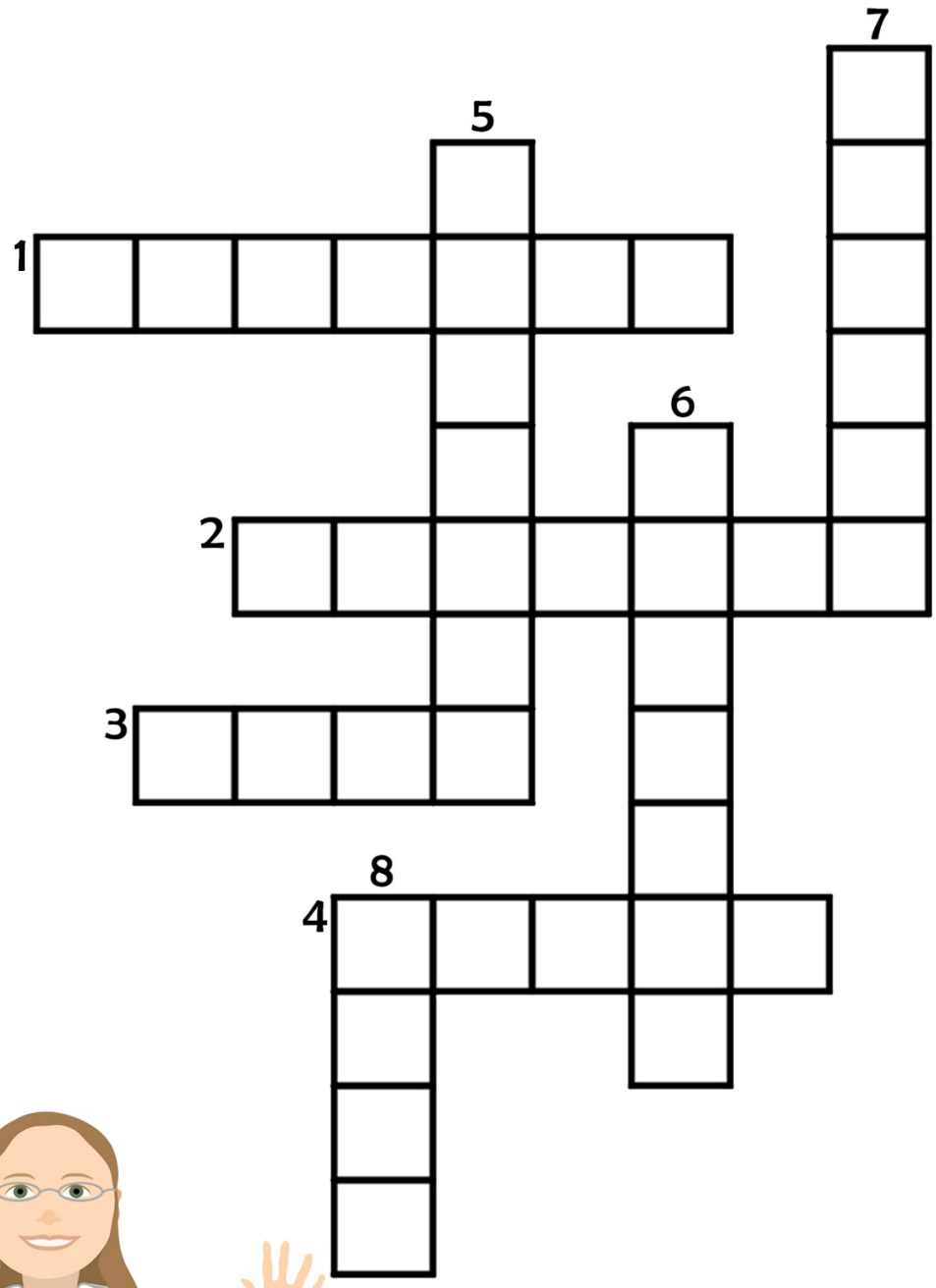
Now, we use coal in several ways. It can be burned intself to generate heat (which causes pollution), it can be used in power plants to generate electricity, and it can be used by companies to turn it into synthetic fuel (which, when burned, doesn't create as much pollution)

A Peek into the Past:

Draw a scene below from 300 million years ago that would eventually turn into the coal that we use today!

This Crossword Puzzle ROCKS!

What is a rock anyway?
A rock is any naturally occurring solid mass or aggregate of minerals or mineraloid matter



Mineral V.S. Crystal

"Minerals have crystal structure but not all crystals are minerals"

The Clues:

Across

1. A _____ is a naturally occurring, inorganic solid with a definite crystal structure and a definite chemical composition.

2. A characteristic of something not made by humans

3. Carbonized plant matter, not to be mistaken for a mineral! Also, something that a lot of children do not want to find in their stocking from Santa.

4. The the state of matter that is stable in shape

Down

5. A solid with an organized structure that can also be created artifically

6. Derived from living matter. Also, a word you will see in the produce section of a grocery store on crops that were grown without chemicals.

7. The remains of a prehistoric organism that have been cast in rock.

8. A mineral with a definite crystal shape that is found in most kitchens and in oceans

Do You Remember. . .

Why isn't coal a mineral?

_____

Where did the specimens come from that Amanda brought into Peyton's office?

_____

What color are the goggles on Amanda's head?

_____

How many squishy turtles were on Peyton's desk (plus in her hands) in the beginning of the video?

_____

What year is the map from at the History Museum of Western Virginia?

_____

Bonus Challenge:

How many words can you make from the letters in:
"m i n e r a l s"

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

With Special Thanks to:

Truist Foundation

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