Have the Geology 2 Packet FINISHED by: _____

KEY: bold items = required, self-paced *italicized = all together* regular = optional/enrichment

Geology 2 - Minerals

I. Intro to Minerals

_____ *A. Chapter Starter Transparency – Gems*
_____ *B. Minerals in Sports Jigsaw*
_____ **C. Bellringer Ch. 3.1 *(PT)***

II. What is a Mineral?

_____ **A. What is a Mineral Vodcast**
_____ B. Rocks and Minerals Video Segment – Finding Jade and Gold in nature
_____ **C. Guided Reading Chapter 3.1**
_____ **D. Mineral Classes Presentation**
_____ **E. Minerals blog response**

III. How do you identify minerals?

_____ **A. Identifying Minerals Vodcast**
_____ *B. Chapter 3.2 Jigsaw* **(PP)**
_____ *C. Chapter 3.2 Practice Quiz (Ediscio/Senteo)*
_____ D. BrainPop "Mineral Identification"
_____ **E. Scratch Test and Identifying Minerals Quick Labs, fluorescence and double image samples**
_____ **F. Mineral ID PowerPoint (PP)**
_____ **G.** *Mineral ID – actual minerals* **(PP)**
_____ *H. Minerals Eyewitness Video*
_____ **I. "Minerals" Ediscio Flash Cards/Quizlet**
_____ **J. Minerals Standard Check** **Percent Score _____**
_____ K. Identifying Minerals Blog Response

IV. What else should we know about minerals?

_____ **A. Chapter 3.3 Reading Guide**
_____ *B. Planet Earth "Caves" Video*
_____ C. *Articles (How do Gems Form and Diamonds and Dinosaurs) Reflections*

V. Unit Review

_____ **A.** *Review SMART Games*
_____ **B. Ediscio flash cards/Quizlet**
_____ **C. Rocks, Minerals, Weathering, Erosion, Deposition Unit Quiz** **Percent Score _____**

I. Intro to Minerals

I. A. Chapter Starter Transparency – Gems

As you can tell (it's *italicized*), this activity will be done in class. Don't worry about doing anything here.

I. B. Minerals in Sports Jigsaw

Select an article. Read it. Answer these questions after you read.

A. Sport or topic: _____

B. 4+ interesting facts:

1. _____
2. _____
3. _____
4. _____
5. _____

C. Minerals related to the topic and how they are related (the mineral ___ is used in ___…)

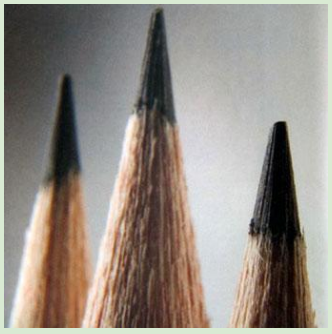
1. _____ is used in _____

2. _____ is used in _____

3. _____ is used in _____

4. _____ is used in _____

I. C. Bellringer Chapter 3.1 *(PT)*



Compare the pictures of the pencil lead and a diamond. Both substances are composed of carbon.

1. How can the same element form two substances with such different properties? Please explain your answer below:

_____

_____

2. Sand and glass are also composed of the same elements, silicon and oxygen. Can you think of any other substances that are composed of the same elements? Please explain your answer below:

_____

_____

II. What is a Mineral?

II. A. What is a Mineral? Vodcast

Notes from Vodcast:	Questions you still have:

II. B. Rocks and Minerals Video Segment – Finding Jade and Gold in nature

Go to the science vodcasts web site to watch the video segment about Jade and Gold. Write down 3 ideas that you learn while watching the short video clip.

1. _____

2. _____

3. _____

II. C. Guided Reading Chapter 3.1

Read chapter 3, section 1 (red textbook) and answer these questions while you read.

_____ **1.** Which of the following statements is true about *minerals*?

a. All minerals look like gems.
b. Minerals are made of rocks.
c. Mineral is just another term for Rocks.
d. Rocks are made of minerals.

MINERAL STRUCTURE

_____ **2.** Which of the following is NOT a characteristic of a mineral?

a. It is a solid. **c.** It is nonliving material.
b. It has a crystalline structure. **d.** It is formed in a laboratory.

Match the correct definition with the correct term. Write the letter in the space provided.

_____ **3.** the smallest part of an element that has all the properties of that element

_____ **4.** a substance that cannot be broken down into a simpler substance by chemical means

_____ **5.** a substance made of two or more elements that have been chemically bonded

_____ **6.** a solid whose atoms, ions, or molecules are arranged in a definite pattern

_____ **7.** a mineral that is composed of only one element

a. crystal
b. atom
c. element
d. compound
e. native element

TWO GROUPS OF MINERALS

_____ **8.** Minerals are divided into two groups based on their chemical composition. What are the two groups?

a. sulfides and nonsulfides
b. halides and non-halides
c. carbonates and noncarbonates
d. silicates and nonsilicates

_____ **9.** Minerals that contain silicon and oxygen are called

a. silicates
b. sulfides
c. carbonates
d. sulfates

_____ **10.** Which silicate minerals are the main component of most of Earth's rocks?

a. quartz
b. mica
c. feldspar
d. magnetite

_____ **11.** Which silicate minerals separate easily into sheets when they break?

a. quartz
b. mica
c. feldspar
d. magnetite

_____ **12.** What silicate mineral is the basic building block of many rocks?

a. quartz
b. mica
c. feldspar
d. magnetite

Match the correct description with the correct term. Write the letter in the space provided.

a. native elements
b. carbonates
c. halides
d. oxides
e. sulfates
f. sulfides

_____**13.** minerals that contain sulfur and oxygen
_____**14.** copper, gold, and silver
_____**15.** minerals that contain one or more elements like lead or iron combined with sulfur
_____**16.** minerals that contain carbon and oxygen

_____**17.** minerals that form when an element such as aluminum or iron combine with oxygen

_____**18.** minerals that are compounds containing fluorine, chlorine, iodine, or bromine

****Now that you have finished this reading assignment, correct your answers with an answer key.****

II. D. Mineral Classes Presentation

Use chapter 3.1 to help you describe each mineral class. Then open the Mineral classes presentation using the link above (in the title). Use the presentation to practice identifying the classes of minerals.

Silicates: _____

Non-silicates: _____

Types of Nonsilicates

Sulfates: _____

Sulfides: _____

Carbonates: _____

Native elements: _____

Halides: _____

Oxides: _____

II. E. Minerals Blog Response

Go to your science blog site to respond to the following 3 prompts:

Crazy 8 Gator 8 V8

1. **Four things a mineral must be**:
2. **Two groups of minerals:**
3. **One tough concept:**

III. How do you identify minerals?

III. A. Identifying Minerals Vodcast

Notes:	Questions:

III. B. Chapter 3.2 Jigsaw - Identifying Minerals

Please see your Geology-2 Paper Packet (PP), III-B. Chapter 3.2 Jigsaw, for the directions for the poster and graphic organizer for the gallery walk.

III. C. Chapter 3.2 Practice Quiz (Ediscio/Senteo)

What was your score on this practice quiz? _____

Which questions did you answer incorrectly? _____

How did/can you master the concepts in this standard check? _____

_____

III. D. BrainPop "Mineral Identification"

Go to www.brainpop.com and log in. Username is memmiddle and password is brainpop. Find the video called "Mineral Identification", then watch it and learn. When finished, take the review quiz. Record the score you got on this practice quiz right here:_____

III. E. Scratch Test & Identifying Minerals Quick Labs, Fluorescence and Double Images

a. Follow the instructions on pg. 72 to complete the Scratch Test Quick Lab.

1.

Softest:	Middle:	Hardest:

2. How you decided:

_____

b. Examine the items provided and decide which items are minerals and which are not. *Add reasons* for why some of the items do not qualify as minerals.

Minerals:	Non-minerals:

c. Use the black light to observe fluorescent minerals. Then place the calcite on top of text. What happens when you look at the text through the calcite?

_____

_____

III. F. Mineral ID PowerPoint

Open the PowerPoint link above. **THEN, please see your Geology-2 Paper Packet (PP), III-F. Mineral ID PowerPoint, for the directions and data collection graphic organizer for this assignment**

You will also need a printed reference sheet for this activity, available with the answer keys for this packet.

III. G. *Mineral ID – Actual Minerals*

Please see your Geology-2 Paper Packet (PP), III-G. Mineral ID--Actual Minerals, for the directions for this assignment.

You will also need a printed reference sheet for this activity, available with the answer keys for this packet.

III. H. Minerals Eyewitness Video (more info to come when the time comes!)

III. I. "Minerals" Ediscio Flash Cards/Quizlet

Statistics:

# of flashcards known: _____ # of flashcards unknown: _____

III. J. Minerals Standard Check

What was your score on this standard check? _____

Which questions did you answer incorrectly? _____

Will you be retaking this standard check? _____

How did/can you master the concepts in this standard check? _____

_____

_____

III. K. Identifying Minerals Blog Response

On your class's science web site, respond to the blog question that is posted.

Crazy 8 Gator 8 V8

IV. What else should we know about minerals?

IV. A. Chapter 3.3 Reading Guide

Read the following pages and answer the questions.

After reading the content from pages 74-75: List and describe six ways that minerals are formed.

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____

Pages 78-79: After reading the content of each blue heading, give two examples of minerals AND their uses (for a total of six examples).

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____

IV. B. Planet Earth "Caves" Video

1. What is limestone composed of?

_____

2. What happens when limestone is subjected to rainwater over a long period of time?

_____

3. The rainwater collects CO2 from the soil, making the water more acidic. What effect does this have on limestone?

_____

4. How is calcite formed?
_____

5. Explain in detail how calcite stalactites, stalagmites, and columns are formed.
_____
_____
_____

6. What was the most interesting fact that you saw/learned about on Planet Earth?
_____

IV. C. *Articles (How do Gems Form and Diamonds and Dinosaurs) Reflections*

Find a partner. Read one of the articles while your partner reads the other article. Summarize yours, then share what you learned with your partner.

A. 3+ factors that help gems/diamonds form:

1. _____
2. _____
3. _____
4. _____
5. _____

B. 2+ examples of where/when they are formed:

1. _____
2. _____
3. _____
4. _____

C. 2+ other interesting details:

1. _____
2. _____
3. _____
4. _____

Name of Person from whom you heard a summary: _____

V. Unit Review

V. A. *Review SMART Games*

V. B. Ediscio Flash Cards/Quizlet

Go back and review the geology Ediscio flash cards. This will refresh your memory of what you've been learning so far this quarter.

Flash card set	Weathering & Erosion	Rocks	Minerals
Statistics **(how much you knew)**			

V.-C. Rocks, Minerals, Weathering, Erosion, Deposition UNIT Quiz (Covers both Geology I & Geology II)

What was your score on this standard check? _____

Which questions did you answer incorrectly? _____

Will you be retaking this standard check? _____

How did/can you master the concepts in this standard check? _____

_____