

Name: \_\_\_\_\_

**Math 7/Science Checklist: Q3 W 1-2 January 16th- January 25th**

**Big Ideas:**

• Math: Algebraic Reasoning	• Science: Rock Cycle
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**Upcoming Dates:**

Week 1	Week 2
<input type="checkbox"/> 1/16: - English MAP Assessment <input type="checkbox"/> 1/16: - Cycle 3 Kick-Off, Identity <input type="checkbox"/> 1/18: - Math MAP Assessment <input type="checkbox"/> 1/19: - Seminar (____%)	<input type="checkbox"/> 1/22: - Teacher Work Day (No School) <input type="checkbox"/> 1/23: - Rock Journey Check-in (____✓, M, 0) <input type="checkbox"/> 1/25: - Advisory <input type="checkbox"/> 1/25: - Rock Journey Presentation (____%)

**Shelfwork: Show All Work. Explore work is to be checked against the control and then marked complete. Complete individually unless noted with a "G"**

Lesson	Explore	Expand	Extend
<input type="checkbox"/> Rock Cycle Video Homework <input type="checkbox"/> Check In 1/19	<input type="checkbox"/> Rock Cycle Domino Card Sort (G) (____✓, M, 0)	<input type="checkbox"/> Rock Journey Project (____%)	<input type="checkbox"/> Rock Cycle Foldable(____%) <input type="checkbox"/> Ask a Rock or Ask an Ice Core Station #4(____%)

Work plan:

Time Estimate:

<input type="checkbox"/> Evaluating Expressions Video <input type="checkbox"/> Check In 1/23	<input type="checkbox"/> Expressions Stations 1-4 (G) (____✓, M, 0) <input type="checkbox"/> Good Value Versatile (____✓, M, 0)	<input type="checkbox"/> Purple Book p. 125-126(____%)	<input type="checkbox"/> Create AND teach a green product card (use Extend rubric)(____%) <b>OR</b> <input type="checkbox"/> Choice Appyl, p. 137, 147, or 159(____%)
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Work plan:

Time Estimate:

<input type="checkbox"/> Solving 1 Step equations Video <input type="checkbox"/> Check In 1/23	<input type="checkbox"/> 1 Step Equations Card Sort (G) (____✓, M, 0) <input type="checkbox"/> Which One Do I Use Versatile (____✓, M, 0)	<input type="checkbox"/> Expression and Equations Stations (____%)	<input type="checkbox"/> Create AND teach a green product card (use Extend rubric (____%) <b>OR</b> <input type="checkbox"/> Choice Appyl, p. 137, 147, or 159(____%)
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Work plan:

Time Estimate:

<input type="checkbox"/> Solving 2 Step Equations Video <input type="checkbox"/> Check In 1/24	<input type="checkbox"/> Doing the Two - Step (____✓, M, 0) <b>AND</b> it's In The Formula Versatile (____✓, M, 0) <input type="checkbox"/> <b>OR</b> Multi-Step Equations Square Puzzle	<input type="checkbox"/> Purple Book p. 157-158 (____%)	<input type="checkbox"/> Create AND teach a green product card (use Extend rubric (____%) <b>OR</b> <input type="checkbox"/> Choice Appyl, p. 137, 147, or 159(____%)
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Work plan:

Time Estimate:

**Homework:** *(All assignments are to be done independently and are due the next day unless noted):*

- Monday 1/15: No School. Martin Luther King Jr. Holiday
- Tuesday 1/16: Relax, eat a good dinner and get to sleep early
- Wednesday 1/17: Relax, eat a good dinner and get to sleep early
- Thursday 1/18: **Rock Cycle video** on EdPuzzle with guided notes (Check in on Tuesday the 23rd)
- Friday 1/19: Review and organize binder and complete missing work as needed
- Monday 1/22: Teacher Work Day (No school)
- Tuesday 1/23: **Evaluating Expressions AND Solving One Step Equations Video** on EdPuzzle with guided notes
- Wednesday 1/24: **Solving Two Step Equations Video** on EdPuzzle with guided notes
- Thursday 1/25: **Plate Tectonics Video** on EdPuzzle Video with guided notes (check in on Monday)
- Friday 1/26: Review and organize (Math and Science) and/or complete missing assignments

Lesson Requests:

<input type="checkbox"/>	_____
<input type="checkbox"/>	_____
<input type="checkbox"/>	_____
<input type="checkbox"/>	_____
<input type="checkbox"/>	_____

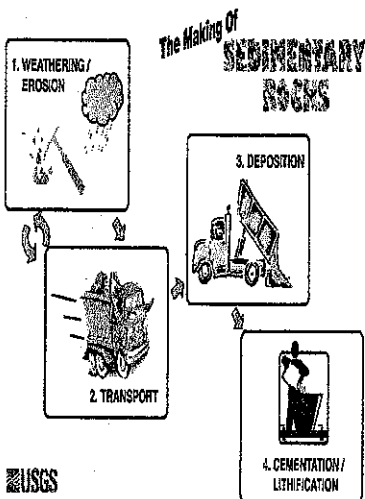
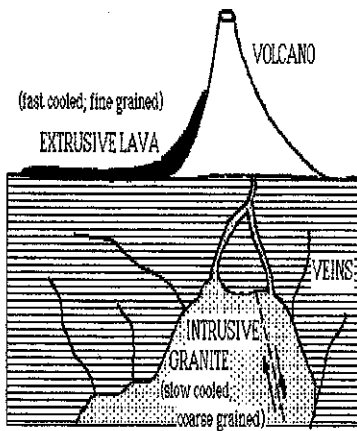
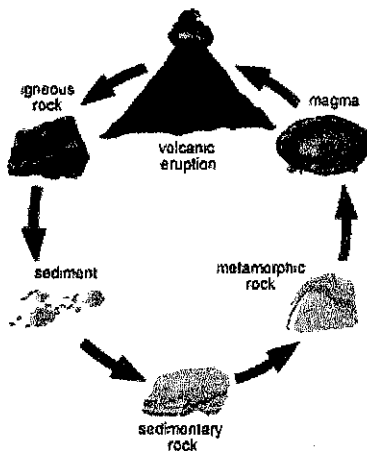
Notes and formulas:

Name: \_\_\_\_\_ Unit: \_\_\_\_\_

Date: \_\_\_\_\_

## Rock Cycle Guided Notes

### Cues:



### Rock Classification:

- A rock is any solid mass of \_\_\_\_\_ that occur naturally as a part of our planet.
- Rocks can be composed of just one mineral, or they can be made of a \_\_\_\_\_ of minerals.
- Rocks are classified into 3 groups based on HOW THEY \_\_\_\_\_
- The 3 major rock types are:
  1. Igneous Rocks
  2. Sedimentary Rocks
  3. Metamorphic Rocks
- All of the energy for Earth's rock cycle comes from \_\_\_\_\_ inside the Earth and the Sun's heat and \_\_\_\_\_.

### Igneous Rocks:

- Energy source=Earth's interior
- Formed as \_\_\_\_\_ cools
- Magma=below earth's surface
- Lava=on earth's surface (rocks form when lava cools)
- Intrusive (IN) vs. Extrusive (OUT)
- Fine Grained: Form when magma cools at a \_\_\_\_\_ rate
- Course Grained: Form when magma cools slowly

### Sedimentary Rocks:

- Sun's heat and light are energy source for sedimentary rocks
- Order of Formation:
  1. Weathering
  2. Erosion
  3. Deposition
  4. Compaction
  5. Cementation
- \_\_\_\_\_ away of materials
- Physical (Mechanical) and Chemical
- Factors affecting:
  1. Amount of rock exposed
  2. Climate
  3. \_\_\_\_\_ Composition

### Metamorphic Rocks:

- Energy source=Earth's interior
- Formed when existing rocks are changed by heat and \_\_\_\_\_ deep within Earth

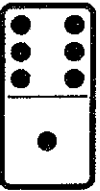
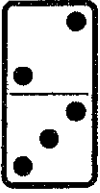
### The Rock Cycle:

1. Magma \_\_\_\_\_ and crystallizes to form IGNEOUS rock
2. Igneous rock undergoes weathering to form sediment.
3. The sediment then becomes \_\_\_\_\_ and is then transported and deposited.
4. The deposited sediments are then compacted and cemented together to form \_\_\_\_\_ ROCK.
5. As sedimentary rock is buried under more and more sediment, the heat and \_\_\_\_\_ of burial causes metamorphism to occur. This transforms the sedimentary rock into METAMORPHIC ROCK.
6. Metamorphic rock is buried and exposed to high temperatures that melt the rock, turning it back into MAGMA and the rock cycles starts all over.

Name: \_\_\_\_\_

Date: \_\_\_\_\_

# Science Domino Review: Rocks



**Directions:** Record your answers below after completing the Domino Review Activity.

1. Rock - \_\_\_\_\_
2. Rock Cycle - \_\_\_\_\_
3. Mineral - \_\_\_\_\_
4. Igneous Rock - \_\_\_\_\_
5. Sedimentary Rock - \_\_\_\_\_
6. Metamorphic Rock - \_\_\_\_\_
7. Intrusive - \_\_\_\_\_
8. Extrusive - \_\_\_\_\_
9. Sediments - \_\_\_\_\_
10. Texture - \_\_\_\_\_
11. Geologist - \_\_\_\_\_
12. True or False? – All rocks follow the same path through the rock cycle.
13. True or False? – A rock's grain size, shape, and pattern can be used to identify the rock.

14. Igneous, Sedimentary, or Metamorphic? – Sandstone is formed from the cementing of grains of sand.
15. Igneous, Sedimentary, or Metamorphic? – Basalt is formed from the cooling and hardening of lava.
16. Igneous, Sedimentary, or Metamorphic? – Gneiss is formed from extreme heat and pressure.
17. List an example of an igneous rock.
18. List an example of a sedimentary rock.
19. List an example of a metamorphic rock.
20. Identify a use for an igneous rock.
21. Identify a use for a sedimentary rock.
22. Identify a use for a metamorphic rock.
23. Identify the 3 types of rocks.
24. Identify 3 ways rocks can be classified.
25. All rocks originally come from what material?
26. What 2 factors drive the processes of the rock cycle?

# Evaluating Expressions Notes

Name \_\_\_\_\_

## Steps:

- 1) Write your expression.
- 2) Substitute in your value(s).
- 3) Solve using your order of operations

**Don't forget that your integer rules still apply!**

**Examples:** Evaluate  $k + (-9)$  for each value of  $k$ .

1)  $k = 5$

2)  $k = -2$

3)  $k = 14$

**Evaluate each expression for the given value of the variable.**

4)  $4x - 3$  for  $x = 2$

5)  $5x^2 + 3x$ , for  $x = (-3)$



**Pause the video and try problems # 1- 6 on your own!  
Then press play and check your answers with a color pen.**

**Examples:** Evaluate  $k + 8$  for each value of  $k$ .

1)  $k = -5$

2)  $k = 2$

3)  $k = -8$

**Evaluate each expression for the given value of the variable.**

4)  $-5x - 3$  for  $x = -2$

5)  $5x^3 + 3x$ , for  $x = 4$

By the end of this lesson you will be able to \_\_\_\_\_

Example 1 - Which of the following equations are true?

What is an equation? - \_\_\_\_\_

What does it mean for an equation to be true? \_\_\_\_\_

Create three equations that are true.

1) \_\_\_\_\_ 2) \_\_\_\_\_ 3) \_\_\_\_\_

Example 2 - Solve for the variable  $x$  in the equation.

$$3 + x = 29$$

What do I need to do?

\_\_\_\_\_

1. \_\_\_\_\_

\_\_\_\_\_

2. \_\_\_\_\_

Example 3 - Solve for the variable  $x$  in the equation.

$$x - 12 = -15$$

What do I need to do?

\_\_\_\_\_

1. \_\_\_\_\_

\_\_\_\_\_

2. \_\_\_\_\_

Example 4 - Solve for the variable  $x$  in the equation.

$$-3x = -18$$

What do I need to do?

\_\_\_\_\_

1. \_\_\_\_\_

\_\_\_\_\_

2. \_\_\_\_\_

Example 5 - Solve for the variable  $x$  in the equation.

$$\frac{x}{7} = 21$$

What do I need to do?

1. \_\_\_\_\_
2. \_\_\_\_\_

What operation will you need to do in order to solve for the variable in each equation below?

What will the solution for  $x$  be?

1)  $\frac{x}{9} = 3$

3)  $11x = 6$

2)  $12x = 144$

4)  $x = 32 - 9$

SHOWTIME - You Try!

Which of the following values for  $x$  will satisfy the equation.  $4x + 2 = -x + 17$

a)  $x = -3$

b)  $x = 2$

c)  $x = 3$

d)  $x = 4$

Solve for the variable  $x$  in each equation. Make sure to check your work

1)  $x = 31 - 55$

2)  $15x = 60$

3)  $10x = 19$

4)  $\frac{x}{4} = 8$

By the end of this lesson you will be able to \_\_\_\_\_.

Which operation can you perform to undo the following operations?

- 1) Addition can be reversed with \_\_\_\_\_.
- 2) Multiplication can be reversed with \_\_\_\_\_.
- 3) Subtraction can be reversed with \_\_\_\_\_.
- 4) Division can be reversed with \_\_\_\_\_.

Example 1 - Solve for the variable  $x$  in the equation.

$$2x - 11 = 33$$

What do I need to do?

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

What two operations did you use to solve this equation? \_\_\_\_\_ and \_\_\_\_\_

Example 2 - Solve for the variable  $x$  in the equation.

$$4x + 5 = 11$$

What do I need to do?

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

What two operations did you use to solve this equation? \_\_\_\_\_ and \_\_\_\_\_

Example 3 - Solve for the variable  $x$  in the equation.



$$\frac{x}{5} + 23 = 32$$

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What do I need to do?

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

What two operations did you use to solve this equation? \_\_\_\_\_ and \_\_\_\_\_

Example 4 - Solve for the variable  $x$  in the equation.

$$5 - \frac{x}{2} = 21$$

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What do I need to do?

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

What two operations did you use to solve this equation? \_\_\_\_\_ and \_\_\_\_\_

SHOWTIME - You Try!

Solve for the variable  $x$  in each equation.

1)  $12x + 18 = 6$

2)  $\frac{x}{4} + 9 = 12$

3)  $8 - 5x = 18$

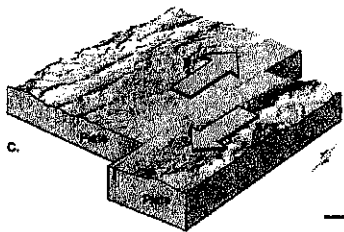
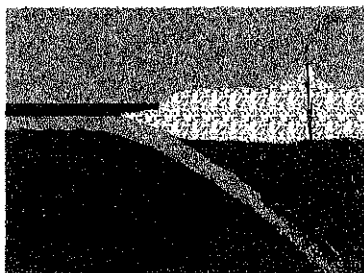
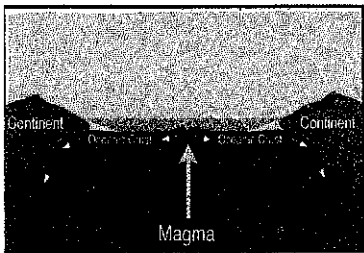
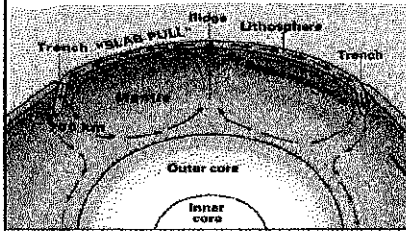
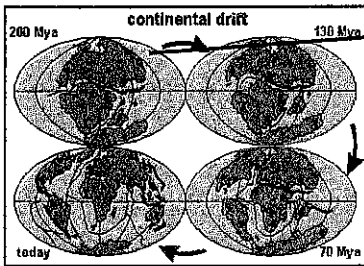
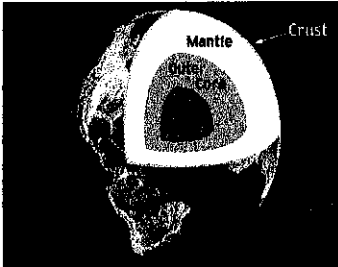
4)  $4 - \frac{x}{9} = 12$

Name: \_\_\_\_\_

Community: \_\_\_\_\_

## Plate Tectonic Guided Notes

### Cues:



### Layers of the Earth:

- The Earth is divided into \_\_\_\_\_ main layers
  - 1. \_\_\_\_\_: Innermost layer that is divided into inner (solid) and outer core (molten rock)
  - 2. Mantle: The middle layer that is divided into upper and lower mantle
  - 3. Crust: The outermost layer; the layer that we \_\_\_\_\_ on
- \* \_\_\_\_\_ = Upper Mantle & Crust

### Continental Drift:

- Continents were once joined together to form one large supercontinent called \_\_\_\_\_

### Evidence of Continental Drift:

1. Continental Puzzle: Continents appear to fit together because of the \_\_\_\_\_ of the coastlines
2. Matching Fossils: Found matching \_\_\_\_\_ in S. America and Africa
3. Rock Types and Structures: Matching rock types and mountain belts.
4. Ancient Climates: Certain \_\_\_\_\_ found that can only grow in specific climates.

### Plate Tectonics Theory:

1. The lithosphere is divided into 7 major plates and 6 smaller plates (13 total) that constantly \_\_\_\_\_ and change shape.
2. The plates move because of the unequal \_\_\_\_\_ distribution within Earth.

### Convection Currents:

- Plate motion is caused by convection currents in the mantle from heat within the Earth.
- As molten rock is heated, it rises because it is less \_\_\_\_\_. It then cools, becomes more dense and \_\_\_\_\_. This change in temperature and density causes the currents.

### Plate Boundaries:

- All major interactions among individual plates occur along their boundaries
- 3 main types of plate boundaries:

1. \_\_\_\_\_: 2 plates move apart
  - As plates move apart, the seafloor spreads and \_\_\_\_\_
  - The age of the seafloor is \_\_\_\_\_ at the mid ocean ridge, where spreading starts, and gets older as you move away
2. Convergent Boundaries: 2 plates move together (crust \_\_\_\_\_)
  - Mountains and volcanoes form
  - Subduction: Heavier plate \_\_\_\_\_ below less dense plate and \_\_\_\_\_
3. Transform Boundaries: 2 plates grind past each other ( \_\_\_\_\_ occur) and does not create or destroy crust.



By Katherine Hobson JANUARY 26, 2017

Girls in the first few years of elementary school are less likely than boys to say that their own gender is “really, really smart,” and less likely to opt into a game described as being for super-smart kids, research finds.

The study, which appears Thursday in *Science*, comes amid a push to figure out why women are underrepresented in science, technology, engineering and mathematics, or STEM, fields.

One line of research involves stereotypes, and how they might influence academic and career choices.

Andrei Cimpian, a professor of psychology at New York University and an author of the study, says his lab’s previous work showed that women were particularly underrepresented in both STEM and humanities fields whose members thought you needed to be brilliant — that is, to have innate talent — to succeed.

“You might think these stereotypes start in college, but we know from a lot of developmental work that children are incredibly attuned to social signals,” Cimpian says. So they decided to look at kids from ages 5 to 7, the period during which stereotypes seem to start to take hold.

The researchers conducted a series of experiments that included 400 children. In one, they took 96 kids and asked them a series of questions about brilliance and gender. For example, they were told a brief story about a person who was “really, really smart” and then asked to pick the protagonist from four photos, two of men and two of women.

Across the various questions, 5-year-old boys said their own gender was smart 71 percent of the time, compared to 69 percent of the time for girls. Among 6-year-olds, the numbers were 65 percent for boys and 48 percent for girls. And among 7-year-olds, it was 68 percent for boys and 54 percent for girls.

“The surprising thing is that already, by age 6, girls and boys are saying different things,” says Sapna Cheryan, an associate professor of psychology at the University of Washington who wasn’t involved with the research. “Before they’ve heard of physics or computer science they are getting these messages.”

Another experiment showed that even as older girls were less likely to associate their own gender with brilliance, they (correctly) assessed that at their age, girls were more likely to get good grades in school.

And another experiment asked 6- and 7-year-olds about the appeal of two similar imaginary games, one intended for “children who are really, really smart,” and one for “children who try really, really hard.” Girls were less interested than boys in the game aimed at smart kids but interest was similar in the game for hard workers.

The research can't explain how these messages are getting to kids or how they could be changed, says Cimpian. He is planning a long-term study of young children that would measure environmental factors, including media exposure and parental beliefs. That would give a better idea of what factors predict the emergence of stereotypes, and what levers are available to change attitudes.

Research does suggest that role models might "inoculate" women and members of other underrepresented groups. So the movie *Hidden Figures*, about female African-American mathematicians at NASA during the late 1950s and early 1960s, could inspire girls and teens of color to pursue STEM fields.

But it's also important to step back and ask what the goal of any intervention should be, says Cheryan.

Girls, after all, were split about evenly in associating brilliance with their gender, she notes. The boys were more likely to make the association with their own gender. So do girls need help in thinking more like the boys, or vice versa? Cimpian says it's important not to fall into the trap of always assuming it's the girls who need to change. But he says that girls at this age are usually overwhelmingly positive about their own gender, so any deviation from that baseline may suggest the beginning of negative attitudes.

Another approach is to change the characterization of the academic fields themselves, namely that certain areas require inborn brilliance rather than hard work.

"Stereotypes are all about who has an innate ability," says Cimpian. If kids were instead exposed to the idea that success comes not because of fixed ability, but because of hard work over time (a so-called "growth mindset," the idea developed by Stanford psychologist Carol Dweck,) maybe those stereotypes would lose their punch.

Kids might also benefit from being exposed early on to fields like engineering, which aren't typically studied in high school, to demystify them, says Cheryan.

*Katherine Hobson is a freelance health and science writer based in Brooklyn, N.Y. She's on Twitter: @katherinehobson.*

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Name: \_\_\_\_\_ Date: \_\_\_\_\_ Class: \_\_\_\_\_  
 Rock Journey Project Brainstorming Sheet 25 points Process

- Section 1: Circle Rock Type Starting With: Magma Igneous Sedimentary Metamorphic
- Section 2: Circle Project Option Choice: Story Storybook Comic
- Section 3: Rock Description

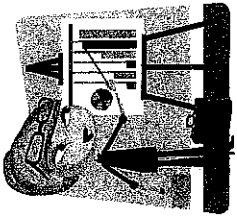
How were you created? Why are you this type of rock? \_\_\_\_\_  
 \_\_\_\_\_  
 Color(s): \_\_\_\_\_  
 Other Features (wardrobe, special powers etc.): \_\_\_\_\_

Section 4: Brief Description of Project Idea

Story/Storybook/Comic	
1. INTRO: The rock you are starting as.	
2.	Rock Cycle Pathway: _____
3.	Rock Cycle Pathway: _____
4.	Rock Cycle Pathway: _____
5.	Rock Cycle Pathway: _____
6. END: Back to the rock, you started as.	

Name: \_\_\_\_\_ Date: \_\_\_\_\_ Class: \_\_\_\_\_  
 Rock Journey Project Presentation Guide 25 points

Directions:  
 Read the presentation pointers below to help you make a solid presentation, then complete the sections below to help you present your project to the class. Fill out as much detail as possible so that everything is covered in your presentation.



Presentation Pointers:

1. Speak loud and clear.
2. Don't be nervous everyone has to come up and present.
3. Speak to your audience not the floor.
4. Make good eye contact.
5. Don't rush to get it done.
6. Explain all of your information.
7. Ask for questions when completed.

Presentation Guide:

-My project choice is \_\_\_\_\_

-I chose this type of project because \_\_\_\_\_

\_\_\_\_\_

-The type of rock I chose was \_\_\_\_\_

-I chose this type of rock because \_\_\_\_\_

\_\_\_\_\_

-I drew the pictures because \_\_\_\_\_

\_\_\_\_\_

-What rock cycle facts will you share? \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Name: \_\_\_\_\_ Date: \_\_\_\_\_ Class: \_\_\_\_\_

## Rock Journey Project

**Directions:**

Pick one of the types of rocks igneous, sedimentary, or metamorphic or even magma. Once you have picked your type of rock, I want you to use your imagination and pretend you are the rock. Use what you have learned in this unit to guide you and your notes. Use the Inside Earth book Chapter 5 pages 146-169 if you have misplaced your notes.

Next, from the rocks point of view, tell us about your journey through the rock cycle and how you ended up the type of rock that you are today. Use what you have learned about the three types of rocks and the rock cycle. You will choose one of the options below, work on it in class and at home, and make a small presentation to the class. Mr. Gallo will give you a template based on your option choice. Use the rubric to guide your creations. Have fun and use your imagination!

**Option 1:** Write a 2 page minimum story from the rocks point of view telling about the journey you have taken through the rock cycle to become the type of rock you are today. It must include:

- 2 page minimum.
- Description of your rock.
- Storyline from the rocks point of view.
- Neatly hand written or computer generated at home.
- Cover page with pictures of your rock and color.
- Can be humorous, informative, or action packed.

**Option 2:** Create a comic strip showing/explaining your journey through the rock cycle to become the type of rock you are today. It must include:

- At least 6 scenes, but can be up to 12.
- Description of your rock.
- Storyline from the rocks point of view.
- Pictures of your rock and color.
- Neatly hand written or computer generated at home.
- Can be humorous, informative, or action packed.

**Option 3:** Create a storybook showing/explaining your journey through the rock cycle to become the type of rock you are today. It must include:

- At least 6 pages as well as the cover and back.
- Description of your rock.
- Storyline from the rocks point of view.
- Pictures of your rock and color.
- Neatly hand written or computer generated at home.
- Can be humorous, informative, or action packed.

**Schedule:**

Day 1 Today:

Rock Type Determination

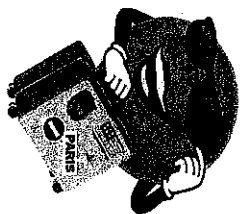
Brainstorming

IN CLASS

PROJECT WORK DAY

Day 2:

Day 3: Presentation



### Rock Journey Project Rubric

CATEGORY	20	15	10	5	0
<b>Assignment Length</b>	The project meets all length requirements	The project meets most of the length requirements.	Some of the length requirements.	The project is barely completed.	The project is not completed.
<b>Story Line</b>	The project if from the rocks point of view and tells the whole journey.	This project is from the rocks point of view but is missing parts of the journey.	The project is not from the rocks point of view and is missing parts of the journey.	The project is not on topic and has a different story line.	The project has no storyline.
<b>Neatness</b>	The final copy of the project is neatly written or typed and done with care.	The final draft of the project is neatly written or typed and done with some care.	The final draft of the project is sloppy and not done with care.	The final draft of the project is sloppy and looks like it was rushed through to get done.	The project was not completed.
<b>Color and Pictures</b>	The project has a lot of color and detailed pictures.	The project has some color and some pictures.	The project has very little color and few pictures.	The project has no color, barely any pictures.	The project has no color and no pictures at all.
<b>Accuracy of Rock Cycle Facts</b>	All facts presented in the project are accurate to the rock cycle.	Almost all facts presented in the project are accurate to the rock cycle.	Some facts presented in the project are accurate to the rock cycle.	There are several factual errors in the project.	Has nothing to do with the rock cycle.
<b>Presentation</b>	Makes eye contact, speaks loud and is an excellent audience member.	Makes some eye contact, speaks loud and is a good audience member.	Makes little eye contact, speaks low, is a good audience member.	Does not make eye contact, speaks low, is a bad audience member.	Chooses not to present or did not have project on due date.