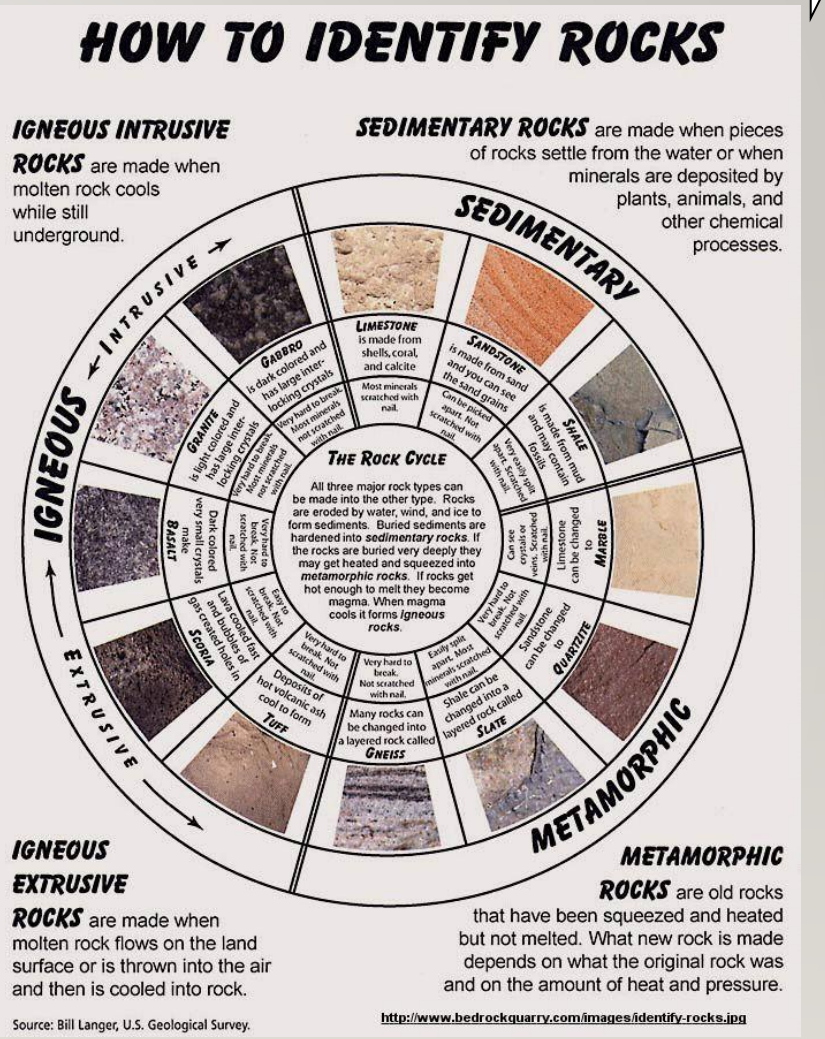
I. QUESTION & RESEARCH TASK

Rocks are constantly undergoing changes; some rapid and others are gradual. There are three rock types which are based upon how they are formed: **igneous, metamorphic** and **sedimentary.** Rocks within each rock type are differentiated by their *size*, *shape* and *texture*.

The **Rock Cycle** describes how the three rock types are related and can change from one type to another.

In this Slam Dunk, you will conduct brief, focused research to respond to the inquiry question:

How can the processes that change one form of rock into another be described?



2. INFORMATION SOURCES

Use the resources found on the following site to increase your knowledge about the processes that cause rocks to change over time.

Rock Cycle Interactive

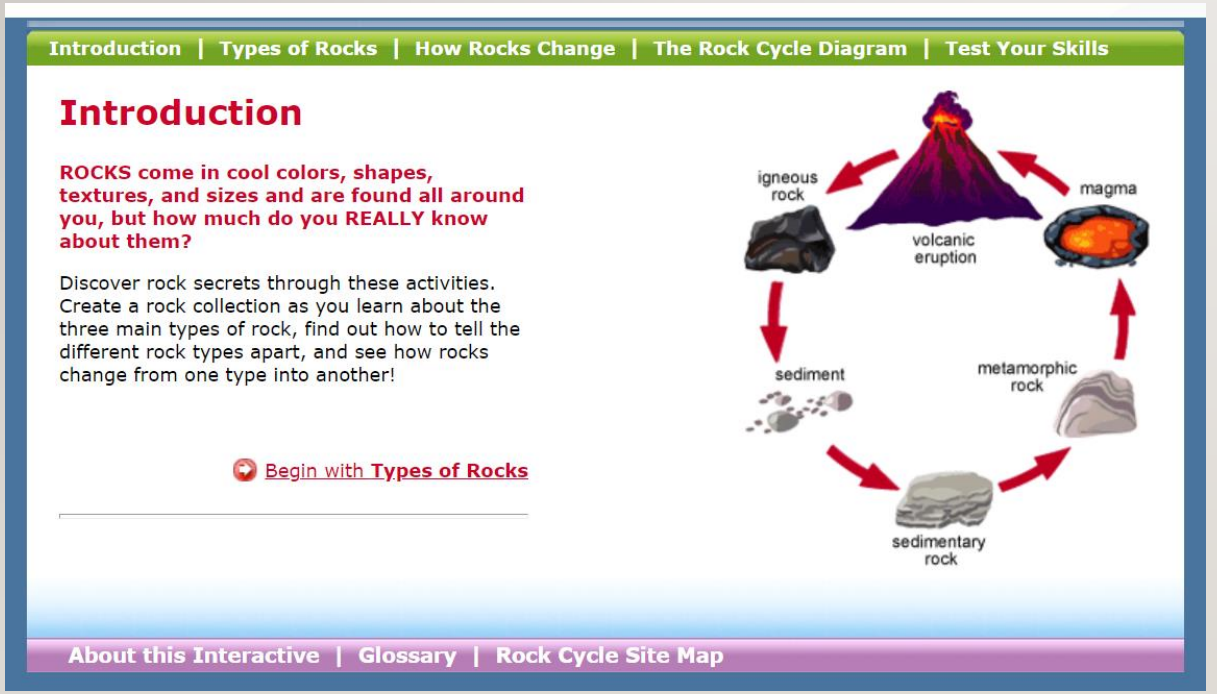


Image Source:Annenburg Learner

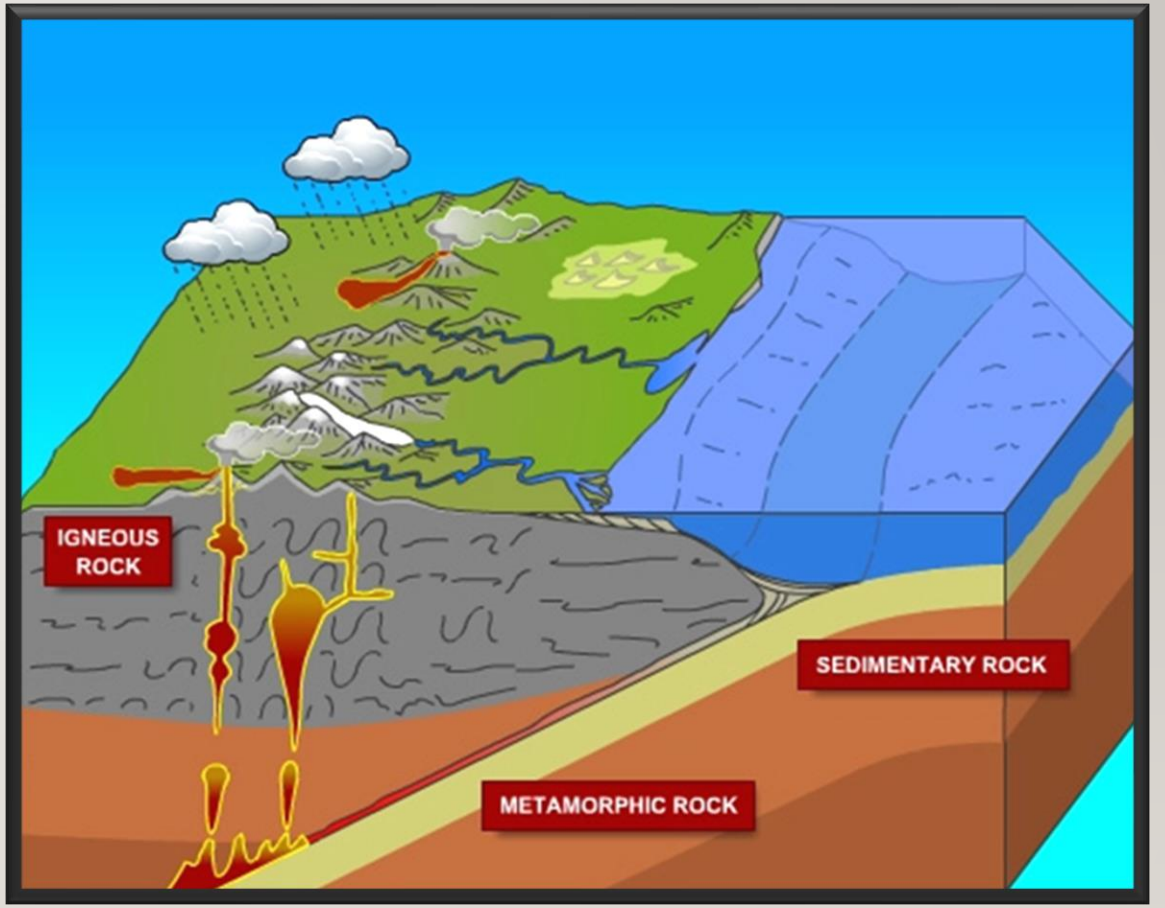


Image Source: National Science Foundation

3. STUDENT ACTIVITY

Begin your investigation about the *Rock Cycle*…

Start here: **Rock Cycle Interactive**

a. **Read** the **Introduction** tab.
b. **Read** the **Types of Rocks** tab.
c. **Read** and click on animations In the **How Rock Change** tab.
d. **Explore** the **Rock Cycle Diagram** tab.

First, complete **Activity A** (assigned by your teacher in Schoology) to label parts of the Rock Cycle.

Then, complete **Activity B** (assigned by your teacher in Schoology) to identify Rock Transformations.

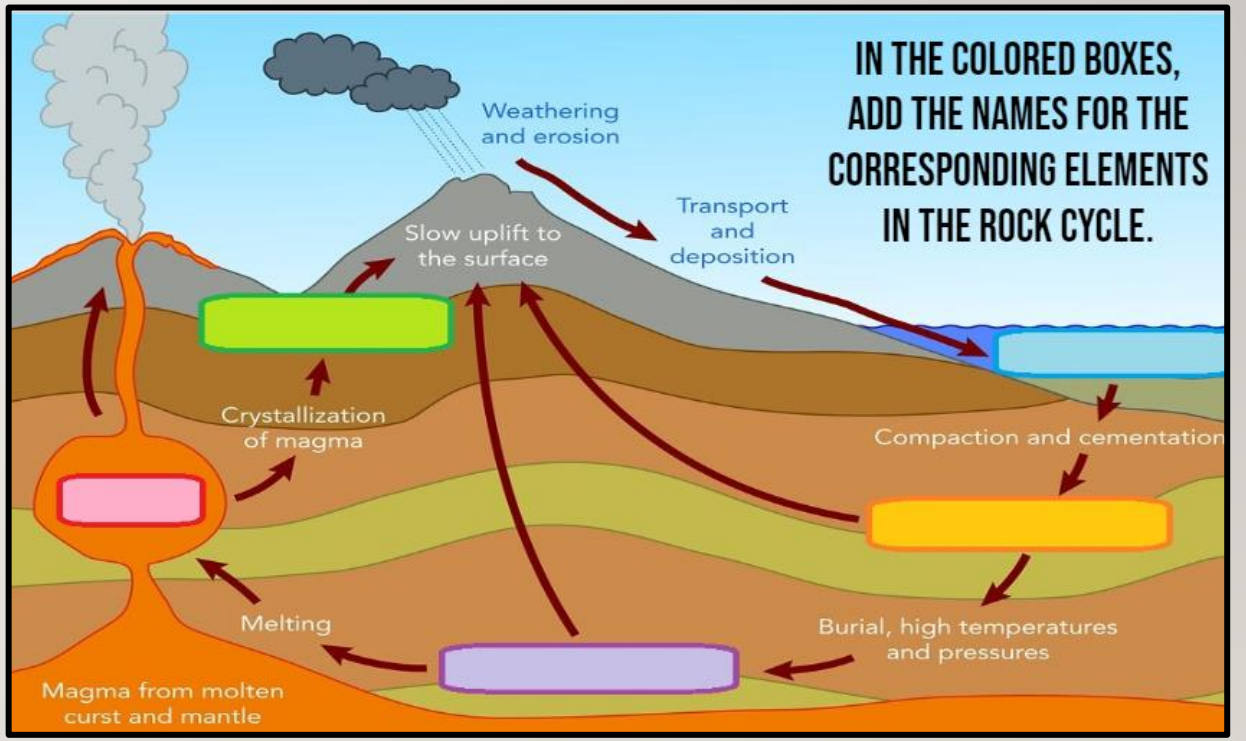


Image from Activity A

4. ASSESSMENT ACTIVITY

How can the processes that change one form of rock into another be described?

Complete the **Assessment Activities** assigned by your teacher through Schoology

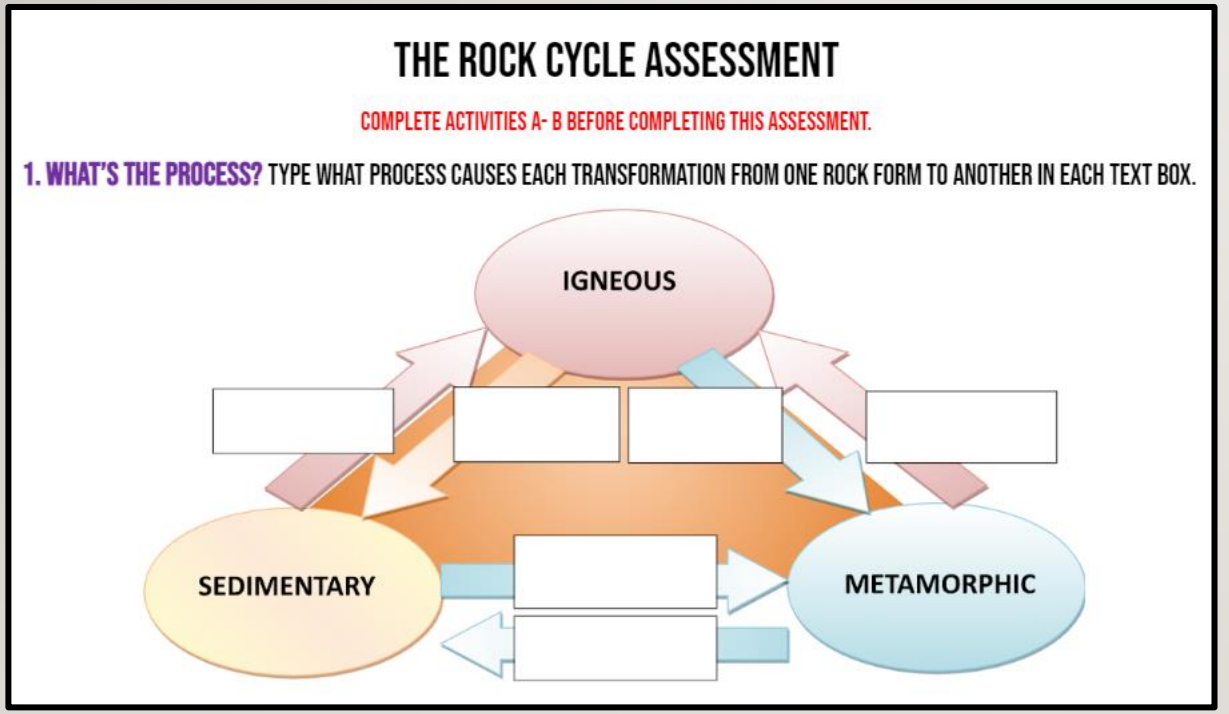


Photo from James St. John from Flickr

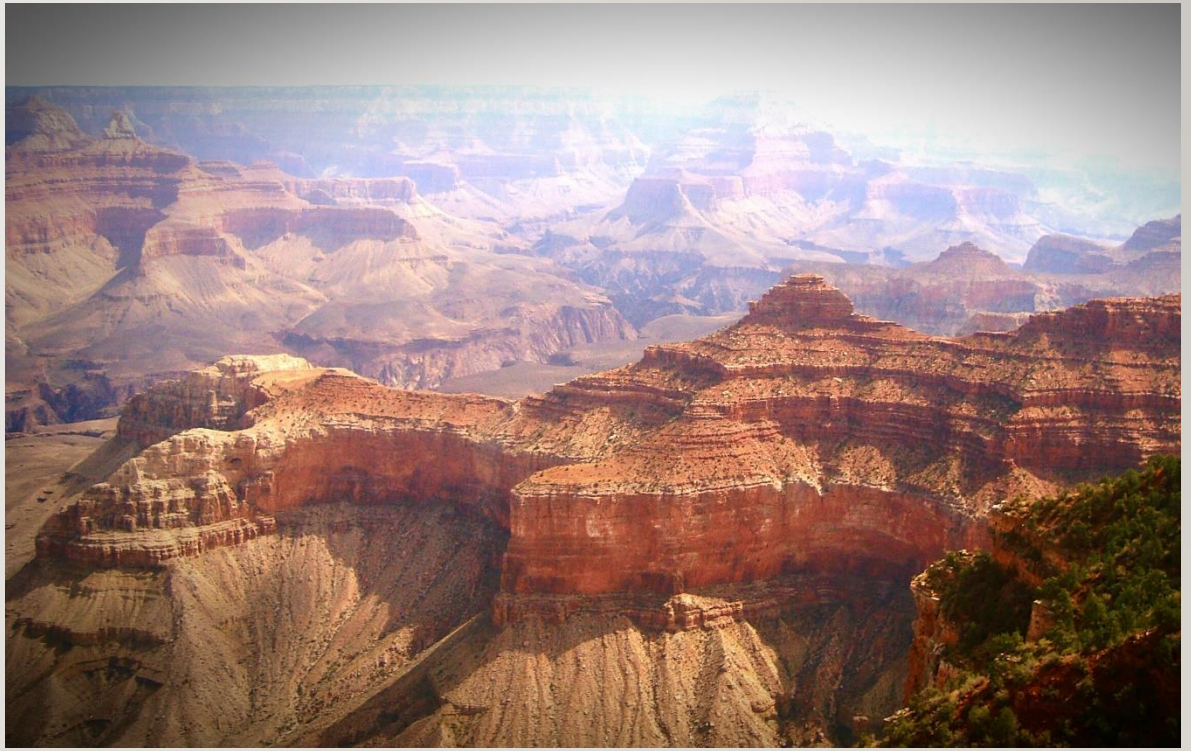
5. ENRICHMENT ACTIVITIES

Below are some additional sites to further develop your understanding of the Rock Cycle:

- BrainPOP
- Rock Cycle Animation

Real World Applications: The Rock Cycle

- How Tunnels Work
- Digging for Tunnels
- How the Grand Canyon was Formed Over Time



The Grand Canyon. Image Source: Discovery Education

6. TEACHER RESOURCES

SLIDE NAVIGATION

1	2	3	4	5	6

Learning Standards Alignment

Content Learning Standards

MS-ESS2-1. Develop a model to describe the cycling of Earth's materials and the flow of energy that drives this process.

Common Core State Standards for English Language Arts & Literacy

Reading: 1. Read closely to determine what the text says explicitly and to make logical inferences from it; cite specific textual evidence when writing or speaking to support conclusions drawn from the text.

Writing: 7. Conduct short as well as more sustained research projects based on focused questions, demonstrating understanding of the subject under investigation.

AASL Standards Framework for Learners Inquire: Build new knowledge by inquiring, thinking critically, identifying problems, and developing strategies for solving problems.

Think: Learners display curiosity and initiative by:

I.A.2 Recalling prior and background knowledge as context for new meaning.

Create: Learners engage with new knowledge by following a process that includes:

I.B.1 Using evidence to investigate questions. I.B.3 Generating products that illustrate learning.

Share: Learners adapt, communicate, and exchange learning products with others in a cycle that includes:

I.C.1 Interacting with content presented by others.

Grow: Learners participate in an ongoing inquiry-based process by:

I.D.2 Engaging in sustained inquiry.

P21 Framework: 21st Century Student Outcomes

3. Information, Media & Technology Skills: Information Literacy: Access information efficiently and effectively; Use information accurately and creatively for the issue or problem at hand.
ICT Literacy: Use technology as a tool to research, organize, evaluate and communicate information.

Grade 7 Science:

Objective: Students will be conduct brief, focused research in order to describe the processes that change one form of rock into another.

Time Frame: approximately three hours.

Differentiation strategies for this lesson:

- Have students use learning supports provided in BCPS Digital Content found in the Apps Portal. Refer to Digital Content Snapshot/Support pages as needed.

Notes to the teacher:

- Collaborate with your school library media specialist to plan and implement this lesson.
- **The Student Activity A and Activity B on Slide 3 AND the Assessment Activity on Slide 4 are Google Drive activities that can be assigned to students as a OneDrive Assignment using the Schoology Assignment App**
- Provide students with login information as needed to authenticate BCPS Digital Content. Login information is available on the **BCPS Digital Content** page found via the Apps Portal