

The Rock Cycle

5E Lesson

The 5E model is a scientifically proven method to improve student engagement and learning in your classroom

- ✓ Engagement
- ✓ Exploration
- ✓ Explanation
- ✓ Elaborate
- ✓ Evaluate



Complete Teacher Instructions

The Rock Cycle 5E Lesson

Grades 6-8	The Rock Cycle	Ongoing Lesson
Lesson Objective: Students will learn about: • Rocks and Minerals • Igneous Rocks • Sedimentary Rocks • Metamorphic Rocks • Rock Strata • The Rock Record • The Rock Cycle • Rock Formation • Rock Identification		
Possible Student Misconceptions: • All rocks are the same • A rock type can only turn into another rock type, not another of the same • A rock type can only turn into a specific other rock type • Only sedimentary rocks can be layered • Metamorphic rocks are a little melted • Any amount of heat and pressure will cause metamorphism • Rocks and minerals are the same thing • Rocks grow		
Materials: • 1 device (smartphone, Chromebook, laptop, tablet, or computer) per 3 students • A means of projecting a PowerPoint presentation • Internet access • General classroom objects		
Teacher Notes: ➢ All videos can be accessed directly from the PowerPoint. To retrieve them, click on the video icon while in slideshow mode and it will automatically open for you. If it does not, right-click on the image and click Edit Hyperlink or something similar. ➢ I've created a video walkthrough if needed. It can be accessed here - https://youtu.be/oCikIP9SaDQ ➢ I don't believe in long lessons. If you feel your students are losing their focus, stop the PowerPoint and give them a 5-minute break. If you'd like to show recommend my video collection here - http://www.teachwithferqy.com/sci/ are tons of brain-break videos to choose from all grouped by category.		

The Rock Cycle – 5E Lesson

Engagement Phase Your students will watch the video 'The 3 Types of Rocks' and complete the questions found in the file – Engagement – The 3 Types of Rocks Video . Teacher Notes: - The video is about three and a half minutes long - You may need to show the video more than once or pause when an answer is given to one of the questions.	Duration: 1 hour Teacher Role – Facilitate learning and keep students focused Goal ☐ Students use their newly obtained knowledge to propose solutions and extend their learning to new situations
Exploration Phase Exploration – Lab Station Activity • In groups of 2-3, have your students complete Exploration – Lab Station Activity. Once they're done, they will submit their passport to you. Teacher Notes: • The complete instructions for my Lab Station activity can be found in the START HERE – Instructions file.	Duration: 30 min Teacher Role – Distribute and collect evaluation Goal ☐ Students are given the opportunity to demonstrate their understanding and evaluate their own progress
Explanation Phase PowerPoint Lessons • The lesson is found in the folder – Explanation – The Rock Cycle Lesson • This lesson is designed to be completed over one day • There are multiple embedded videos and plenty of opportunity to engage, interact and check for your students' understanding throughout the lesson • The lesson covers the following topics: ➢ Rocks vs Minerals ➢ Three Types of Rock ➢ Earth's Layers ➢ Rock Formation ➢ The Rock Cycle ➢ Rock Identification Teacher Notes: • All videos can be accessed directly from the PowerPoint. To retrieve them, click on the video icon while in slideshow mode and it will automatically open for you. If they don't open, right-click the image and select Edit Hyperlink or something similar. • I've created a video walkthrough if needed. It can be accessed here - https://youtu.be/oCikIP9SaDQ • I have also enclosed a PDF version of both the teacher and student versions.	Duration: 1 hour Teacher Role – Facilitate learning and keep students focused Goal ☐ Students use their newly obtained knowledge to propose solutions and extend their learning to new situations

Elaborate Phase Elaborate – Scavenger Hunt Your students will complete – Elaborate – Scavenger Hunt . This activity will require your students to move beyond what was covered directly in the lesson and allow them to further develop their understanding. Teacher Notes: - Students will work individually or in small groups - Students will need one device per group	Duration: 1 hour Teacher Role – Facilitate learning and keep students focused Goal ☐ Students use their newly obtained knowledge to propose solutions and extend their learning to new situations
Evaluate Phase Quiz Have your students complete - Evaluate – The Rock Cycle Quiz Teacher Notes: ➢ It's sometimes best to have the students peer evaluate ➢ Placing students in small groups and having them exchange papers to mark will accomplish two things 1) Provide immediate feedback on the questions they just completed 2) Significantly reduce your marking time ➢ Peer evaluation is not needed, only suggested when appropriate	Duration: 30 min Teacher Role – Distribute and collect evaluation Goal ☐ Students are given the opportunity to demonstrate their understanding and evaluate their own progress

Each phase is clearly described

A Complete Lesson

Rocks vs. Minerals

- Minerals
 - Homogeneous
 - Naturally-occurring
 - Inorganic
 - Defined chemical composition
 - Crystalline structure
 - Single element or compound of elements
- Rocks
 - Composed of one or more minerals



Diamond, a mineral, embedded in a rock

← Make sure your students are on track

Student copies with blanks
Videos embedded right into
your slideshow

Rocks vs. Minerals

- Minerals
 - _____
 - Naturally-occurring
 - Inorganic
 - Defined chemical composition
 - _____
 - Single element or compound of elements
- Rocks
 - _____



Diamond, a mineral, embedded in a rock

Three Types of Rock



Interactive and Engaging Activities

Device-Based Scavenger Hunt The Rock Cycle



Includes

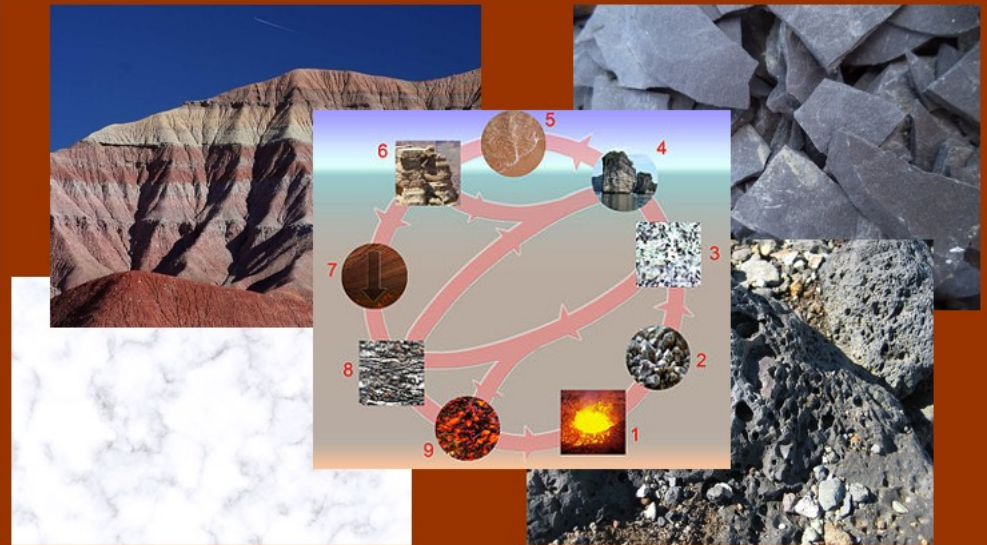
- 5 Unique Locations
- Online form submission
- Answer Key

Works on all smartphones, tablets, Chromebooks, and laptops

- **100% Digital**
- Simulations
- Quizzes
- Videos
- Games
- and more



The Rock Cycle Lab Station Activity



7 Lab Station Activities to get your kids out of their seats and engaged in their learning

Get away from tired practices and unengaged students



Provide a Scientifically-Proven means of instruction



Incorporate Technology and Increase Collaboration

