

INSPIRE GK12 Lesson Plan



Lesson Title	Who Wants to be a Geologist?
Length of Lesson	50 minute class period
Created By	Bo Cherry
Subject	General Science
Grade Level	8 th grade
State Standards	8 th : 1 e (Inquiry); 4 a,b (Earth and Space Science)
DOK Level	DOK 2
DOK Application	Develop Logical Argument, Compare
National Standards	5-8: A (Inquiry); D (Earth and Space Science)
Graduate Research Element	This lesson includes several topics that are relevant to hydrogeology.

Student Learning Goal:

MS 8th Grade:

(Inquiry) 1 (e) Develop a logical argument defending conclusions of an experimental method; (Earth and Space Science) 4 (a) Compare and contrast the lithosphere and the asthenosphere. (b) Describe the cause and effect relationship between the composition of and movement within the Earth's lithosphere.

National Science Education Standards of Content 5-8:

(Inquiry - A) Think critically and logically to make the relationships between evidence and explanations; Develop descriptions, explanations, predictions, and models using evidence; Communicate scientific procedures and explanations; (Earth and Space Science – D) Structure of the Earth Systems; Earth's history.

Materials Needed (supplies, hand-outs, resources):

Computer; Projector; Powerpoint Presentation (INSPIRE_Cherry_04.30.11_PP), ten small dry erase boards, ten dry erase markers, paper towels

Lesson Performance Task/Assessment:

This lesson gives students an opportunity to review the key topics in geology. This lesson can be used in a variety of situations. For instance, this can be a review for a test on geology. For this lesson, students are grouped in teams of 3-4. Each team is given a small dry erase board (~8in. x 10in.), a dry erase marker, and a paper towel to be used as an eraser. After each question is read, the teams are given 20-30 seconds to answer. When time is out, each team must show their board. The teams with the correct answers are awarded the amount of money for each question. At the end of the game, all of the money earned is totaled in order to get a winner. The winning team is given an award, which is to be determined by the instructor (i.e. homework pass, bonus points, etc.).



Lesson Relevance to Performance Task and Students:

This lesson allows students to reflect on the rock cycle and plate tectonics. There is a lot of room for discussion after each question, which will allow this lesson to take up a 50 minute period. This discussion should incorporate how geology is a part of our everyday lives. Also, relating some questions to current research is recommended.

Anticipatory Set/Capture Interest:

As an introduction to the lesson, students will watch a short video on volcanoes, and be expected to answer questions on the video.

Guided Practice:

This powerpoint presentation is guided by the instructor.

Independent Practice:

Each team of students must work to come up with the correct answer. Several questions require drawings and/or explanations, which they will do independently.

Remediation and/or Enrichment:

Remediation – Individual IEP; the PowerPoint will be made available to resource teacher;
Enrichment – Have students select a topic in geology (i.e. hydrogeology, petroleum geology, paleontology, etc) and explain to the class what each topic means, what a geologist in these fields does, and how much they make on average.

Check(s) for Understanding:

There is much room for discussion in the lesson, which will provide formative feedback for the instructor.

Closure:

- 1) Ask students to explain how the Himalayan Mountains are forming.
- 2) Ask students to draw and explain the rock cycle.

Possible Alternate Subject Integrations:

Earth Science

Teacher Notes:

None