

INSPIRE GK12 Lesson Plan



Lesson Title	Geology: A Peek Into the Past
Length of Lesson	Three Class Periods – 50 minutes each
Created By	Deb Pounders
Subject	General Science
Grade Level	7 th grade
State Standards	7 th 1 b h 4 a b c d
DOK Level	DOK 3
DOK Application	Draw Conclusions, Develop Logical Argument, Compare, Investigate, Differentiate
National Standards	5-8: A (Inquiry); D (Earth/Space)
Graduate Research Element	Not applicable

Student Learning Goal:

MS 7th Grade:

(Inquiry) 1. Design and conduct a scientific investigation utilizing appropriate process skills and technology. b. Discriminate among observations, inferences, and predictions. h. Make relationships between evidence and explanations. (Earth Science) 4. Describe the properties and structure of the sun and the moon with respect to the Earth. a. Justify the importance of Earth materials (e.g., rocks, minerals, atmospheric gases, water) to humans. b. Explain the causes and effects of historical processes shaping the planet Earth c. Describe the causes and effects of heat transfer as it relates to the circulation of ocean currents, atmospheric movement, and global wind patterns d. Conclude why factors, such as lack of resources and climate, can limit the growth of populations in specific niches in the ecosystem.

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; Recognize and analyze alternative explanations and predictions; (Earth/Space – D) Structure of the earth system; Earth’s history; Earth in the solar system.

Day One – Introduction (Half a class period)

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

Power Point with Photos (INSPIRE_05_08_11_PP); Copies of photos – 1 per group; Computer and Projector; Pens/Pencils and Notebook Paper



Lesson Performance Task/Assessment:

Students will form groups of 3-4. Power Point and copies will provide visual reference for geologic site. Each group is assigned one photo/site and every member of the group is responsible for writing 5 different descriptive phrases about the assigned photo. As homework, each member is to develop a main idea/story line about people or animals living at the site some time in Earth's past. The ideas will be presented to the group the next class period.

Lesson Relevance to Performance Task and Students:

This lesson will be the students' introduction to geology and earth's history.

Anticipatory Set/Capture Interest:

Before Power Point or photos are presented, the instructor will ask students two questions:

- Has the earth always been like it is now?
- How do we know if the earth has changed or stayed the same?

Guided Practice:

The instructor will display the geologic sites/photos using Power Point and allow groups to choose a site. The instructor will distribute photos to the groups and give instructions for descriptive phrases and homework.

Independent Practice:

Students will work in groups for 5-10 minutes to complete the list of 5 descriptive phrases and then develop the main idea/story line for homework.

Remediation and/or Enrichment:

Remediation- Individual IEP; Resource teacher will guide group selection for inclusion classes.

Enrichment – Students with artistic abilities may also include character drawings with the main idea or story line.

Check(s) for Understanding:

The instructor will observe group work and check for completion of descriptive phrases.

Closure:

The instructor will explain to students that the remainder of the assignment will be completed in class the next day with the small groups they have formed. Students will have an opportunity to ask questions about the homework assignment before leaving class.



Day 2 – Writing the Story

Materials Needed:

Copies of photos from previous day; Pens/Pencils and Paper; List of Geology Terms (INSPIRE_Pounders_05_08_11_GT)

Lesson Performance Task/Assessment:

Students will reform groups from the previous day. The instructor will provide each group with a list of geology terms and a copy of the geologic site/photo. Each student in the group will present the main idea or story line they completed for homework. The group will choose one of those ideas to write a descriptive narrative about during the remainder of the class period

Lesson Relevance to Performance Task and Students:

This lesson will introduce students to basic geology concepts, as well as give them practice with team work and creative writing skills.

Anticipatory Set/Capture Interest:

Students will be informed the stories they create in small groups today will be presented to the entire class tomorrow. They should develop interesting characters in an exciting story. Props/costumes may be used if appropriate and available from home.

Guided Practice:

The instructor will provide instructions for the small group work:

- Reform groups
- Choose one idea from the homework
- Complete a written descriptive narrative of the geologic site that includes people and/or animals as characters living there in the past
- Story must include a minimum of 10 geology terms from the list provided
- Choose each group member's role for the presentation in the next class period

Independent Practice:

The students will have the remainder of the class period to complete the story with their groups according to the instructions provided during guided practice.

Remediation and/or Enrichment:

Remediation – Individual IEP; Resource teacher will be available to assist inclusion groups.

Enrichment – Props and costumes may be brought from home, but are not required.

Check for Understanding:

The instructor will circulate among the groups to answer questions or address concerns. A grade may be taken for the written work and/or participation within the group.



Closure:

The instructor will answer any student/group questions regarding presentations for the next day.

Day 3 – The Presentations

Materials Needed:

Final copies of student stories; props and costumes (if provided by students from home)

Lesson Performance Task/Assessment:

Students will be given 5-10 minutes in their small groups at the beginning of the period to make final preparation for their presentation. Each group will then have approximately 5 minutes to present their story to the class.

Lesson Relevance to Performance Task and Students:

Students will demonstrate knowledge of geology terms as well as practice communication skills.

Anticipatory Set/Capture Interest:

Every student will be involved throughout the class period as a member of the audience or a performer in the group presentation.

Guided Practice:

None

Independent Practice:

Group presentations

Remediation and/or Enrichment:

Remediation – Individual IEP; Resource teacher may coach inclusion students as needed

Check for Understanding:

The instructor will observe and critique student presentations. The presentation may also be graded.

Closure:

After each presentation, the groups in the “audience” will provide positive feedback – what they learned, their favorite characters, etc. The instructor will identify and review geology terms that were used correctly during presentations.



Possible Alternate Subject Integrations:

8th Grade General or Integrated Science

Earth Science

Social Studies

English/Composition

Teacher Notes:

The lesson can be completed without a computer and projector using just the photos as hand-outs. Teachers are welcome to copy and reuse all photos from the power point or choose their own.

This lesson can be used prior to a unit on geology as an assessment for any previous knowledge students may have. It may also be used during or after a unit on geology to assess student understanding of geologic processes and terminology.

Groups may all be required to choose different photos or they can choose the same photos and observe the variations in the stories that are written about the same location.