

INSPIRE GK12 Lesson Plan



Lesson Title	Introduction to Ecology
Length of Lesson	One (50 minute) class period
Created By	Rob Thornton, Will McBryde
Subject	General Science
Grade Level	8 th grade
State Standards	8 th : 1b, d (Inquiry); 3a, e (Life Science)
DOK Level	DOK 3
DOK Application	Identify, Name, Participate, Investigate
National Standards	5-8: A (Inquiry); C (Life Science)
Graduate Research Element	Weather and climate are important to the environments in which plants and animals live.

Student Learning Goal:

MS 8th Grade:

1(b) Distinguish between qualitative and quantitative observations make inferences based on observations. (d) Analyze evidence that is used to form explanations and draw conclusions. 3(a) Analyze how adaptations to a particular environment can increase an organism's survival and reproduction and relate organisms and their ecological niches to evolutionary change and extinction. (e) Explain energy flow in a specified ecosystem.

National Science Education Standards of Content 5-8:

A: Inquiry: Abilities necessary to do scientific inquiry, Understandings about scientific inquiry.

C: Life Science: Structure in Functions in Living Systems.

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

PowerPoint file INSPIRE_Thornton_03.01.11_PP, Note taking sheet (see INSPIRE_Thornton_03.01.11_Ecology_Notes, laptop, projector, Smartboard/chalk board/dry erase board and internet access.

Lesson Performance Task/Assessment:

The PowerPoint will cover introductory material on the topic of ecology. The instructor can assess students' knowledge by questioning them during the lecture. There is also a note taking sheet to help guide the students through the lecture. In addition, there is an "ecosystem exercise" in the lecture (see Teacher Notes). In this exercise, the instructor will give the students an ecosystem such as the ocean and they will be asked to list the living and non-living parts of it. Example: Ocean: Living- fish, whales, sharks, kelp, etc. Non-Living- sand, rocks, water, etc.

Lesson Relevance to Performance Task and Students:

The material covered in the lesson will expose students to basic concepts in ecology and help them understand more about the "outside" world around them. The lesson will



expose the students to concepts they have likely never experienced before. It will also get them to think about the outside world more than they may have.

Anticipatory Set/Capture Interest:

The PowerPoint lesson serves as an anticipatory set. The BrainPOP video and quiz (see Teacher Notes) could be used as an anticipatory set.

Guided Practice:

The instructor will lead the class through a lecture and along the way will ask questions of them. The students will also be instructed to fill-in their note taking sheets. The students will also be asked to provide examples of living and non-living things in the ocean.

Independent Practice:

Students will answer questions asked by the instructor throughout the lecture. They will also be taking notes by using the note taking sheet (see INSPIRE_Thornton_03.01.11_Ecology_Notes). In addition, students will be called on to provide examples of living and non-living things in the ocean.

Remediation and/or Enrichment:

Remediation- Individual IEP; Make PowerPoint available to resource teacher
Enrichment – Have students do research on ecosystems in their home state or area where they live.

Check(s) for Understanding:

Observe students during lecture. Ask students questions regarding the lecture. Review students' note taking sheets.

Closure:

Question 1: What is an ecosystem?

Question 2: Are we as humans, producers or consumers?

Possible Alternate Subject Integrations:

Biology

Teacher Notes:

One of the slides in the PowerPoint file is titled “Review on Smartboard.” At this point of the lecture, the instructor can switch to the Smartboard and do an “ecosystem exercise” with the class.

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At the end of the lecture is a link for BrainPOP. www.brainpop.com
If time permits, the instructor can show the video on “Food Chains.” The videos are found under the Science category on the BrainPOP website.
BrainPOP is a resource that provides concise videos and quizzes on a variety of science topics. The quizzes can be taken as a group.

An ecology website for reference:

<http://kids.nceas.ucsb.edu/>