

The 5 E's: A Model for Designing Lessons for Inquiry Planner¹

Logistics Information:

- a. Environmental Education Learning Cycle Example
- b. A synthesis of *Project WILD*, *Project Learning Tree*
- c. Iowa Core Essential Concepts
Life Science: Understand and apply knowledge of organisms and their environments including structures, characteristics, and adaptations of organisms that allow them to function and survive within their habitats.
- d. Developed April 16, 2010

Background Information (What do observers need to know about our learners, classroom and school?): Schools will vary

Materials Required:

Graph Paper and writing materials
Large outdoor area
Chart paper

Time Period:

30-45 minutes

Name of the Unit: *Oh Deer!* (*Project WILD*, p. 36)

- I. Plan of the Unit
 - a. Goal of the unit: Students will identify and describe food, water, and shelter as three essential components of habitat; Students will describe the importance of good habitat for animals; Students will recognize that some changes in wildlife populations are natural as ecological systems change.
 - b. How this unit related to the curriculum:

Previous Grade/Course	Current Grade/Course	Next Grade/Course
3 rd Grade (Life Science)/ Fast Plants	4 th Grade (Life Science)/ Human Body	5 th Grade (Life Science)/Environments, Habitats

- c. Lesson Plan: Phases in a 5E Learning Cycle (in no particular order) are Engage, Explore, Explain, Elaborate, and Evaluate. There may be multiple experiences in each phase.

Phases of the lesson: learning activities and key questions (and time	Student activities/ anticipated student reactions or responses	Teacher's response to student reactions/ Things to remember	Evidence of Student Understanding

¹ Adapted from *Teacher to Teacher: Reshaping Instruction Through Lesson Study* (NCREL, 2002)

allocation)			
<p>ENGAGE: What do you need if you are stranded on a desert island?</p> <p>EXPLORE: Introduce the game <i>Oh Deer!</i> (<i>Project WILD</i>, p. 36)</p> <p>Play the game in a large outdoor space.</p>	<p>Students will come up with a list of essentials and non essentials.</p> <p>Students need to stay focused on the requirements of the game, and to follow the rules.</p>	<p>Teacher needs to make sure students can understand concept of items needed for survival versus non essential items. Make sure students understand the essentials come from the land itself.</p> <p>Teacher should monitor and stop occasionally to check for understanding. After about 3 rounds of the game, stop and ask:</p> <ul style="list-style-type: none"> • What do you notice about the population of deer and the amount of food/water/shelter? • What do you think will happen in the next round? <p>Run a few more rounds. By this time, you should see an unequal ration of deer to needs, resulting in lots of dead deer. This is a good point to discuss, so be sure to record on the data chart.</p> <p>Run as many more rounds as needed, and change the game by adding the roles of a predator (wolf or hunter), or variables such as wildfire or city developments.</p>	<p>Students generate a list of items needed to survive which needs to include food, shelter, and water.</p> <p>Students will play the game fairly, and this is evident by the ratio of deer to habitat needs.</p>

Phases of the lesson: learning activities and key questions (and time allocation)	Student activities/ anticipated student reactions or responses	Teacher's response to student reactions/ Things to remember	Evidence of Student Understanding
<p>EXPLAIN: Students defend their roles (written or presenting) as important to the environment.</p> <p>ELABORATE: Students can design an appropriate habitat for an animal.</p> <p>EVALUATE: Students create drawing or diorama of their habitat to create a class zoo.</p>	<p>Students will present a defense of themselves as water, food, shelter, predator, or urban sprawl. What is important about this role, what are drawbacks, etc.</p> <p>Students must incorporate food, water, shelter, and space into their designs.</p>	<p>Teacher needs to point out the interdependence of each role, i.e. that water, shelter, and food are all needed by living creatures</p> <p>Teacher will monitor progress and bring back terms of habitat (food, water, shelter), and keep the designs realistic and focused on necessities.</p>	

EXTENSIONS

Students create an energy flowchart showing interdependence of species and their environment.
 Do a nature hike looking for tracks of animals and discussing local evidence of habitat needs.
 Generate a list of predator and prey.
 Set up a debate defending the needs of animal species versus human needs (wolves and ranchers, etc.).
 Research deer populations.
 Play *Habitat Rummy* (*Project WILD*, p. 14)

ADDITIONAL ACTIVITIES

Changing Attitude (*Project WILD*, p. 254)
Habittracks (*Project WILD*, p. 53)
Shrinking Habitat (*Project WILD*, p. 310)
What's That Habitat (*Project WILD*, p. 56)

ADDITIONAL RESOURCES

Hoot by Carl Haissen
A Kettle of Hawks by Jim Arnofsky