

# The 5 E's: A Model for Designing Lessons for Inquiry Planner<sup>1</sup>

## Logistics Information:

- a. Environmental Education Learning Cycle Example
- b. A synthesis of *Project WILD*
- c. Iowa Core Essential Concepts  
Earth and Space: Understand and apply knowledge of the structure and processes of the earth system and the processes that change the earth and its surface.
- d. Developed April 16, 2010

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

## Materials Required:

Writing Materials

## Time Period:

One or two 20 minute writing sessions.

**Name of the Unit:** *Aqua Words (Project WILD Aquatic, p. 29)*

- I. Plan of the Unit
  - a. Goal of the unit: Students will describe a variety of ways and reasons that water is important to people and wildlife.
  - b. How this unit related to the curriculum:

Previous Grade/Course	Current Grade/Course	Next Grade/Course
3 <sup>rd</sup> Grade (Life Science)/Buoyancy	4 <sup>th</sup> Grade (Life Science)/Water Quality	5 <sup>th</sup> Grade (Life Science)/Environments, Water Planet

- 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

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

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><b>ENGAGE:</b> Students brainstorm a list of “water words” and share these with the class.</p> <p><b>EXPLORE:</b> Students will copy words onto index cards and sort according to category. Group will come up with a specific category.</p> <p><b>EXPLAIN:</b> Using proper water related vocabulary, students will explain how the words in their category relate to one another.</p>	<p>Students will come up with a list of words that have to do with common uses of water, i.e. swimming, weather, doing dishes, drinking, etc.</p> <p>Students will come up with single category.</p> <p>Students are able to explain how their water words are related.</p> <p>Students may have difficulty relating words due to lack of vocabulary/prior knowledge.</p>	<p>Teacher encourages students to expand list into other categories, i.e. properties of water such as temperature.</p> <p>Teacher will encourage students to generate multiple categories.</p> <p>Teacher will challenge students to explain why certain words would or would not fit into this category. For example: why would drinking NOT fit in with weather related words?</p> <p>Teacher should be ready to assist with certain connections.</p>	<p>Students make a water list of important words for display.</p> <p>Students generate a minimum of 3-5 categories.</p> <p>Teacher can listen for correct use of water related vocabulary and that water vocabulary connections make sense.</p>

<b>Phases of the lesson: learning activities and key questions (and time allocation)</b>	<b>Student activities/ anticipated student reactions or responses</b>	<b>Teacher's response to student reactions/ Things to remember</b>	<b>Evidence of Student Understanding</b>
<p><b>ELABORATE:</b> Students will create a more complicated water web based upon their initial connections.</p> <p>Students will share their findings with the class.</p> <p><b>EVALUATE:</b> Write (and possibly illustrate) a short story about water, and the connections that a drop of water has with many different parts of life, i.e. animal and plant life, the planet, etc.</p>	<p>Students may have difficulty relating words due to lack of vocabulary/prior knowledge.</p> <p>Some students may have difficulty coming up with ideas that need to be written.</p>	<p>Teacher should be ready to assist with certain connections.</p> <p>Teacher may need to pair up students accordingly.</p>	<p>Students generate a more complicated web using interrelated ideas.</p>

### **EXTENSIONS**

The class creates a master web using all vocabulary words generated. These words will become the word wall for this unit.

Teacher can add words to the word wall as they arise.

The stories can be put together and published into a class book to use as enjoyment and review of key concepts. This could also be checked out and taken home to share with parents.

Read *A Drop of Water* by Walter Wick.

### **ADDITIONAL ACTIVITIES:**

*I'm Thirsty* (Project WILD, p. 134)

*Water Wonders* (Project Learning Tree, p. 188)