WebQuest & the Fear Theme in Biology

Link:

<http://www.station05.qc.ca/css/ecoles/stmarg/als/memphrequest/index.htm>

This WebQuest fits into our unit theme because it focuses on the mythology of lake monsters. It integrates ELA, technology and biology. This WebQuest also includes major themes in biology such as evolution and ecology. Although it is designed for grades 2-5, I would modify this to challenge 8th graders by giving more details associated with the ecology of the lake and what other animal(s) the “monster” could be misidentified as. In addition, groups would be assigned and they would focus on one of the three lake monsters. If I had access to laptops or a library with computers, I would use one double-period session and another period for them to complete this WebQuest. The students would ultimately relate their findings to why it is important to be aware of possible new species and how they affect and are affected by the surrounding environment. By researching the ecological traits of the lake, the students connect animal to environment and how an animal’s relationship with the environment affects humans.

Questions that would be added to the "Process”:

* + *Has this “monster” affected fisherman? How? Give detailed examples.*
  + *What other animals does your lake monster resemble?* 
    - *Could the “monster” be mistaken for another animal? If so, name the possibilities.*
  + *Say your “lake monster” is really a rare animal that has not yet been recorded. Say that it is a member of an entirely different new species. Based on your knowledge of evolution, how would you classify this animal?*
    - *What role would this new organism play in that ecosystem?*
      * *Example: Is it a predator to other animals?*
    - *Give details on body structure, behavior, and any other trait that would help identify the animal.*
      * *Example: Does it seem to have a backbone? If so, it would be in the phylum Chordata.*
      * *Example: If it lives in the lake, is it a fish? A reptile? A mammal? How would we assess this?*
  + *Note the ecological traits of the lake:*
    - *Is it a man-made lake?*
    - *What kinds of animals live here?*
    - *Has the lake suffered from high levels of pollution? If so, what kind of pollution? Which organisms are most affected?*
      * *Can this organism or “monster” be an effect of pollution?*
        + *Example: effect of nuclear waste and radiation*
  + *Give a background history on the myth.* 
    - *Identify the culture that this tale is associated with, if any.*
    - *Has the story of this lake monster changed in recent years?*
      * *How? Why?*

Content Standards:

**Standard 4:** Students will understand and apply scientific concepts, principles, and theories pertaining to the physical setting and living environment and recognize the historical development in ideas in science.

Literacy Standards (Grade Level 6-8):

**R2.** Determine the central ideas or conclusions of a text; provide an accurate summary of the text distinct from prior knowledge or opinions.

**R4.** Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to *grades 6– 8 texts and topics*.

**R9.** Compare and contrast the information gained from experiments, simulations, video, or multimedia sources with that gained from reading a text on the same topic.

**W4.** Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.

**W7.** Conduct short research projects to answer a question (including a self-generated question), drawing on several sources and generating additional related, focused questions that allow for multiple avenues of exploration.

**W8.** Gather relevant information from multiple print and digital sources, using search terms effectively; assess the credibility and accuracy of each source; and quote or paraphrase the data and conclusions of others while avoiding plagiarism and following a standard format for citation.

**W9.** Draw evidence from informational texts to support analysis, reflection, and research.

**This Lesson’s Connection with *Some* of the 21st Century Skills Middle Schoolers are Learning:**

* *Collaborate with others; use teamwork* 🡪 students would work in assigned groups.
* *Be technology – literate* 🡪 Students must know and will learn more about research, credible sources, and how to relate their evidence to their purpose.
* *Think critically* 🡪 Students would be using prior knowledge of taxonomy to classify these animals and compare them to already known species.
* *Ask questions (be inquisitive) 🡪* Consistently throughout class.
* *Become aware and informed of current events* 🡪 Students would become aware in any ecological issues (i.e. pollution) that affect the mythical lake monsters they are researching as well as cultural background on their lake monster.
* *Collect research and information from credible sources to use in expository writing🡪* Students would be writing their findings to a specific audience.