

INQUIRY ACTIVITY 7.1



Developing Science PCK

In this activity you will become familiar with examples of goals of science teaching and curricular materials to develop your understanding of one of the components of PCK that will help you create an instructional miniunit.

Materials

- Access to the Web
- Samples of science curriculum materials

Procedures

1. Using Table 7.2, visit the Web sites listed to identify and evaluate concepts and science teaching materials. Although only two sites are identified for each component, you should feel free to supplement your search and access printed materials as well.
2. The science content *Standards* and the *Benchmarks* outline what students should know in each domain of science at different grade level groupings (K–4, 5–8, and 9–12). Visit either the *Standards* or *Benchmarks* site and select a domain of science (e.g., biology or life science). Within the domain, select a content area and then identify three to five concepts (ideas, principles). As you do this, consider how you would go about teaching these ideas. Prepare a chart identifying the concepts and listing three or four suggestions about how you would help students understand these ideas.
3. The two sites to help you review curriculum are at the Educational Development Center (in Massachusetts) and the Eisenhower National Clearinghouse (at the Ohio State University). You will find links at these two sites to various curriculum materials. Locate curriculum materials that relate to the domain you selected in the previous exercise and identify activities and projects that others have developed to help students understand the concepts and ideas that you selected. On the same chart, describe your findings so that others may benefit from your research.
4. Present your finding to others in small groups or to the whole class.

Minds-On Strategies

1. What orientation toward science teaching was evident in the curriculum materials that you examined? Explain how learning was presented in the materials.
2. How was learning assessed in the curriculum materials that you studied?

Table 7.2 Science Concepts and Curriculum Materials

Components	Resources
Science Concepts and Goals	<i>National Science Education Standards</i> : http://www.nap.edu/readingroom/books/nses/ <i>Benchmarks for Scientific Literacy</i> : http://www.project2061.org/tools/benchol/bolframe.htm
Science Curriculum Materials	EDC K–12 Science Curriculum Dissemination Center: http://www2.edc.org/cse/work/k12dissem/materials.asp Eisenhower National Clearinghouse for Mathematics and Science Education: http://www.enc.org/