

Ken Bingman Lesson Plan

Objective

The objectives of this lesson are to identify evolution topics, identify students' preconceptions and misunderstandings about evolution, to create a classroom climate that encourages risk-taking, and to develop students' research and presentation skills.

Time

This lesson was based on four 90-minute blocks: two for research, one to prepare presentations, and one to present.

Materials

- Scientific journals, books, and computers with Internet access
- A list of evolution research topics
- Materials for presentations, i.e., poster board, video, or Power Point

Procedure

1. Identify the essential topics for student presentations, leaving one topic to be determined by the students.
2. Write research topics on the board and brainstorm for additional topic ideas. Mr. Topics included: descent with modification, natural selection, and evidences for evolution from 1) the fossil record, 2) molecular genetics, 3) the human genome project, and 4) anatomy and physiology. The topic of human origins was added by the students.
3. Divide the class into groups, each group selecting a presentation topic.
4. Outline work expectations and identify the logical sequence for presentations.
5. Discuss these (and other) questions to evaluate the research credibility of Web sites:
 - What does the domain name tell you about the authority of the site?
 - What do the links within a site and the presentation of data tell you about the objectivity and professionalism of the site?
 - What are some ways to verify the information using other Web sites?More questions and criteria for evaluating web information are available at <http://www.lib.vt.edu/research/lbinst/idle/evaluating.html>
6. As student groups research topics and prepare presentations, check in with each group, asking students questions that challenge the accuracy of the information being gathered and the quality of the presentations.

evolution

7. Prepare the class to be active and respectful listeners. Students should be asked to take notes, think critically, and ask questions of their peers after each presentation.
8. During the presentations, make a list common misconceptions and develop questions to help students confront their own thinking.
9. As a class, discuss these questions to begin to address misconceptions about evolution.