Title: Virtual Fetal Pig Dissection

Grade Ranges:
___K-4
___5-8
_X_9-12

Subject Tag:
Science: Biology

Synopsis:
Students will utilize a Web site for introduction or reinforcement of the anatomy of a fetal pig. Students will need Internet access in order to work their way through the Web site's study guides on a pig's anatomy.

Keywords:
dissection, fetal pig, anatomy, virtual dissection, technology, dissection guide

Body:
This lesson requires Internet access for each student or at least for every pair of students. Students will log on to the Internet and go to the virtual pig dissection online at http://www.whitman.edu/offices_departments/biology/vpd/main.html.
This site eliminates the need of buying a written guide if you have students use it to make their own anatomy guides and physiology (function) guides. This is an excellent way to insure students prepare themselves before dissecting a system and should increase their understanding when they do the dissection. Depending on which systems you choose to dissect, you can have students prepare for dissection with any or all of the site's eight study guides: *anatomical references, sexing your pig*, *digestive system, excretory system, circulatory system, reproductive system, respiratory system*, and *nervous system*. For example, before dissecting the digestive system, the following assignment could be issued to students:

1. Log on to the Virtual Pig Dissection web site.
2. Chose the Digestive System study guide.
3. As you work your way through the study guide, make a list of all structures in this system and include a definition for each part (its function or what it does).
4. Go through the same module a second time, this time drawing your own map of the system within an outline of the pig and labeling it.

As students finish each study guide assignment, they can try the quiz for that topic, or the quizzes could be utilized just prior to a test on the fetal pig dissection. If you have the equipment to project the Internet onto a screen, the study guides are also excellent ways to introduce major structures before the day's dissection without students crowding over a teacher's shoulders in the lab.

Related Links:

Virtual Pig Dissection
http://www.whitman.edu/offices_departments/biology/vpd/main.html
Excellent Web site; utilizes the Shockwave plug-in to help students learn the locations of major anatomical systems of the fetal pig. This site includes interactive study guides and quizzes. It is part of the biology department's site at Whitman College in Washington.

Features:
__Contains special education tips
___Quick Activity (less than 30 minutes; story starter)
_X_Requires Internet access for students to complete

Objectives:
1. Students will utilize interactive study guides for introduction or review of the anatomy of a fetal pig.
2. Students will produce vocabulary lists and anatomy maps of selected systems.
3. Students will utilize interactive quizzes for self-assessment of knowledge of fetal pig anatomy.

Standards:
NY: The Living Environment 1: Living things are both similar to and different from each other and from nonliving things.

NYC: Scientific Connections and Applications: S4a. The student produces evidence that demonstrates understanding of: Big ideas and unifying concepts, such as order and organization; models, form and function; change and constancy; and cause and effect. **Scientific Tools and Technologies: S6a.** The student demonstrates competence with the tools and technologies of science by using them to collect data, make observations, analyze results, and accomplish tasks effectively. **A3a**. Gather information to assist in completing project work. **A3b**. Use information technology to assist in gathering, organizing, and presenting information. **A4a.** Learn from models.

CT: 5: Relationships Of Structure And Function: Students will understand the classification and physiology of the great diversity of organisms and identify relationships of structure and function.

NJ: Science 5.6: All Students Will Gain An Understanding Of The Structure, Characteristics, And Basic Needs Of Organism. **Cross-Content Workplace Readiness 2:** All students will use technology, information and other tools.

Time Required:
Each study guide or quiz takes approximately five to 10 minutes to complete (and there are eight study guides and eight corresponding quizzes). It will take most students 30-45 minutes to work through a study guide, make a vocabulary list, and labeled drawing.

Assessment Criteria:

1. Are students successful in the Web site's quiz(zes)?
2. Did student complete a vocabulary list and labeled drawing for the system?

Recommended Lesson Plan Review Date:
6 months

Review Comments:
Because a web site is listed as a main resource, the link should be checked every six months.