

Biology
Pacing Guide
1st Nine Weeks Fall Semester

I. Science Process Skills, Laboratory Safety, and Research (10 days)

Resources: Merrill Biology, 1995, Chapter 1; Science Graduation Test Practice Book, 1997, Chapters 1 and 4; Holt Biology, 1993, Chapters 1 and 2

Activities:

1. Exit Exam Vocabulary – 10 words, “Who Uses Biology” discussion, Fields of Science worksheet, and discussion, begin Chapter 1 vocabulary crossword puzzle.
2. Introduction to graphing from the Red Exit Exam Book, pages 20, 40-41, Graphing exercises, Introduction to lab safety, lab equipment, “Laws of the Law” worksheet, “Observation” group activity.
3. Microscope lab – introduction to microscope, wet mount and prepared slides. Adapted from the textbook, page 9.
4. Exit Exam Vocabulary Test, Introduction into Scientific Method. Discuss ways students go about solving their problems, then discuss the steps of the scientific method – do a concept map here.
5. Group activity – students will be given a research problem and will follow the steps of the scientific method to solve the problem. Reminder to also discuss the independent and dependent variables.
6. Scientific Method: Experimental Design Practice Worksheets done in groups of two then we will go over each one as a class. Begin “Activity: Interpreting An Experiment.” Covers independent variables, dependent variables, experimental and control groups, and controlled variables.
7. Characteristics of Life worksheet, and Metrics –notes and worksheet.
8. Hands on lab using science equipment and units-balances, beakers, graduated cylinders, encyclopedias, Microsoft Encarta, thermometers, graphing, stereoscope, and microscope.
9. Complete Lab, Video: “The Scientific Method” (about 25 minutes). Review for test.
10. Test on the past two weeks information – includes Chapter 1 EVET will be included on this test.

Evaluation:

1. Vocabulary test
2. Quizzes
3. Lab evaluation
4. Test on chapter 1: Science Process Skills, Laboratory Safety and Research

QCC Objectives: 1 Topic: Science Process Skills, and Laboratory Safety
2 Topic: Research
3 Topic: Nature of Biology