Overview

This course includes the option of either hands-on or dry lab activities.

- In order to conduct the hands-on laboratory activities in this course, you will need to obtain the materials and lab manual listed in this document.
- Dry labs require only the lab manual; there are no additional lab materials needed for these activities.

Lab Manual


Note: The "DataBank" is a set of colored images (maps, charts, etc.) in the back of the manual.

For information on acquiring the lab manual for this course, refer to the Course Materials List at [http://support.apexlearning.com](http://support.apexlearning.com). In the upper-right corner, under Quick Links, select Course Materials.

Disclaimer

Apex Learning® has no liability whatsoever regarding any hands-on laboratory activities. The personnel at the school at which the student conducts the hands-on lab activities, or the student's parent or guardian if the lab activities are completed at home, are responsible for all such hands-on lab activities, including ensuring that qualified personnel are available to supervise the activities.

Questions?

Contact the Apex Learning support team by phone at 1-800-453-1454 or by email at support@apexlearning.com.
Hands-On Lab Materials by Experiment

(In parentheses: Semester, Unit, Lesson, and Activity number in Apex Learning course; Prentice Hall lab number)

Determining Latitude and Longitude
(Semester 1: 1.2.2; PH: Exploration 1)
- Globe (optional)
- Protractor
- Ruler
- World map

Using a Topographic Map to Create a Landform
(Semester 1: 1.2.5; PH: Investigation 1B)
- Transparent shoebox with lid
- Nonpermanent, fine-lined marking pen
- Enlarged photocopy of part of a topographic map (alternate printable provided)
- Cellophane or masking tape
- Modeling clay (alternate material: playdough recipe)
- Metric ruler

Exploring Orbits
(Semester 1: 2.2.3; PH: Investigation 23)
- 3 sheets of paper
- Heavy corrugated cardboard
- 2 pushpins
- Metric ruler
- String, 30 cm long
- 5 colored pencils
- Cellophane tape
- Calculator

How Does Temperature Affect Water Density?
(Semester 1: 3.3.2; PH: Exploration 15)
(Alternate dry lab available.)
- (2) 100-ml graduated cylinders
- 2 test tubes
- 2 beakers
- Stirrer
- Food coloring or dye
- Ice
- Tap water
- Graph paper
- Colored pencils

Determining How Temperature Changes with Altitude
(Semester 1: 4.1.5; PH: Investigation 17A)
- Ruler or straight edge
- Colored pencils
- Tracing paper
- Resource 12 in the DataBank
Investigating Factors that Control Temperature
(Semester 1: 4.2.3; PH: Investigation 17B)
- Ruler or straight edge
- Graph paper
- Resources 14+15 in the DataBank

Analyzing Severe Weather
(Semester 1: 5.1.4; PH: Investigation 20A)
- 3 colored pencils

Measuring Humidity
(Semester 1: 5.2.2; PH: Exploration 18)
(Alternate dry lab available.)
- Psychrometer (alternative materials for psychrometer: 2 thermometers, cotton gauze, paper fan, string)
- Water at room temperature
- Calculator

Modeling a Plate Boundary
(Semester 2: 2.1.4; PH: Investigation 9)
- Resource 3 in the DataBank
- Ruler
- Protractor

Continental Glaciers Change Earth’s Topography
(Semester 2: 2.3.4; PH: Investigation 7)
- Resources 1+9 in the DataBank
- Metric ruler
- Calculator (optional)

Mineral Identification
(Semester 2: 3.1.3; PH: Exploration 2)
(Alternate dry lab available.)
- Resource 16 in the DataBank
- Hand lens
- Streak plate
- Copper penny
- Steel knife blade
- Glass plate
- Piece of quartz
- Magnet
- Dilute hydrochloric acid
- Hammer
- 50-mL graduated cylinder
- Tap water
- Balance
- Thin thread
- Scissors
- Paper or cloth towels
- Mineral samples
Classifying Rocks Using a Key
(Semester 2: 3.5.4; PH: Investigation 3)
(Alternate dry lab available.)
- Bottle of dilute (iM) hydrochloric acid (HCl) with dropper
- Igneous rocks
- Sedimentary rocks
- Metamorphic rocks
- Hand lens
- Paper towels
- Red pen or pencil

Determining Geologic Ages
(Semester 2: 4.1.3; PH: Investigation 13)
- Resources 10+11 in the DataBank
- Geologic block diagram (figure 1 provided)
- Logarithmic scale showing decay of U-235 (provided)

Human Impact on Climate and Weather
(Semester 2: 5.3.1; PH: Exploration 21)
- Paper
- Pen or pencil