Introduction

Lab Options

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

- Dry labs require the lab manual – no additional materials are required.
- Hands-on labs require the lab manual and the materials listed below.

Lab Manual


- See the [Course Materials List](#) for how to acquire this manual.
- Note: The "DataBank" is a set of colored images (maps, charts, etc.) in the back of the manual.

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 Apex Learning Support by phone at 1-800-453-1454 or by email at support@apexlearning.com.

Hands-On Lab Materials

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

- Enlarged photocopy of part of a topographic map (alternate printable provided)
- Modeling clay (alternate material: playdough recipe)
- Transparent shoebox with lid
- Nonpermanent, fine-lined marking pen
- Cellophane or masking tape
- Metric ruler
Exploring Orbits
Semester 1: 2.2.5 / 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

- Resources 14+15 in the DataBank
- Ruler or straight edge
- Graph paper
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
- Mineral samples
- Hand lens
- Streak plate
- Copper penny
- Steel knife blade
- Glass plate
- Piece of quartz
- Magnet
- Hammer
- 50-mL graduated cylinder
- Tap water
- Balance
- Thin thread
• Scissors
• Paper or cloth towels
• Dilute hydrochloric acid

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