Introduction

Lab Options

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

- Dry labs have no required materials.
- Hands-on labs require the materials listed below.

Lab Manual

- Each lab contains complete instructions – there is no lab manual for this course. It is strongly recommended that students keep a detailed notebook of their work.

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

Wet Pennies

Semester 1: 1.2.3

- 3 pennies
- Medicine dropper or pipette
- Liquid dish soap
- Food coloring
- 3 small glasses of water

Falling Bodies

Semester 1: 2.2.2

- 2 sheets of notebook paper
- 2 Ziploc sandwich bags
- Feather
- Book approximately the size of the flat sheet of paper
- Leaf from a tree or bush
- Plastic drinking cup with small holes in the bottom that are large enough for water to drip through

Newton's Laws

Semester 1: 3.1.2

- "Newton's Cradle" device with a row of balls suspended with string
- Tray of sand or dirt, at least 2 inches deep
- Hard-boiled egg
- Raw egg

That Rubs Me the Wrong Way

Semester 1: 3.2.2

- Ruler, meter stick, or measuring tape
- Paperback book
- Flat eraser
- Key
- Notebook

Losing My Marbles

Semester 1: 4.1.2

- No materials needed

Smile and Wave

Semester 1: 5.1.2

- Coiled spring (e.g. Slinky brand)
- Stopwatch
- Meter stick or ruler
- Partner

Bend It Like Beckham

Semester 1: 5.4.2

- Small drinking glass that fits inside the larger glass
- Large, clear drinking glass
- Water
- Cooking oil
- Wood pencil

A Shocking Tale

Semester 1: 6.1.2

- Small pieces of tissue paper
- Salt and pepper
- Balloon
- Plastic comb
- Empty soda can
- Paper plate

A Series of Enlightening Events

Semester 1: 6.2.2

- (8) 10 cm-long pieces of insulated wire
- (4) 1.5-V light bulbs
- (2) 1.5-V batteries
- Battery holders
- Mini bulb sockets

Braving the Elements

(Semester 2: 1.1.4)

- Periodic table of elements
- Graph paper
- Ruler
- Pencil

Elements from Outer Space

(Semester 2: 1.3.2)

- Periodic table of elements
- The set of clues provided in the lab report
- A keen sense of reasoning

Edible Molecules

(Semester 1: 2.2.3)

- Small box of dots or other small, round candy that a toothpick can pierce
- Package of large white marshmallows
- Package of small white marshmallows
- Package of mixed-color small marshmallows
- Toothpicks

How Do You Color Your Eggs?

(Semester 2: 2.3.3)

- 4 small bowls or cups (each big enough for an egg)
- Small tub of water (for rinsing eggs)
- 2 teaspoons of food coloring
- 2 cups of water
- Vinegar
- 1 tablespoon salt
- 1 tablespoon sugar
- Pencil
- Masking tape
- 4 spoons
- 4 eggs

I’m Having a Reaction

(Semester 2: 3.1.3)

- Laboratory balance or equivalent scale
- Calcium chloride
- Baking soda
- Teaspoon
- Small capped vial with phenol red
- Small plastic sandwich bag that can be sealed

Can You Feel the Heat?

(Semester 2: 4.1.2)

- Stopwatch or timer
- Thermometer
- 4 Styrofoam drinking cups
- Ice cubes, preferably of similar shape and size
- Hot, but not boiling, water
- Room-temperature water
- 3 stirring rods, made of wood or plastic
- Cold water, from the refrigerator

Homemade Ice Cream

(Semester 2: 4.3.3)

- Large baby-food jar or sandwich- sized sealable plastic bag
- Large coffee can with lid or similar container
- 1 cup half-and-half
- 1 cup whole milk
- ¼ cup sugar
- 3 tablespoons vanilla pudding mix
- ¼ teaspoon vanilla
- 2 kg crushed ice
- Apron
- 300 g rock salt
- Thermometer
- Towel
- Spoons

Nuclear Decay Chain

(Semester 2: 5.1.4)

- Periodic table of elements