

Science Lab Supply List

Science 400

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| | | SCIENCE 400 (2010): UNIT 1 – PLANTS | |
|----------------------|--|--|------------|
| Assignment Number | Assignment Title | Project Summary and Supply List | Video Demo |
| 3 | Project: Things Made of Wood | Your goal for this assignment is to list objects made of wood. Supply List: N/A | □ Yes ⊠No |
| 4 | Report: Read and Write | Your goal for this assignment is to write about fruit grown in another country. Supply List: N/A | □ Yes ⊠No |
| 6 | Report: Flowers as State Symbols | Your goal for this assignment is to list state flowers. Supply List: N/A | ⊠ Yes |
| 7 | Report: Flower Paragraph | Your goal for this assignment is to write about a state flower. Supply List: N/A | □ Yes ⊠No |
| 11 | Experiment: Celery | Your goal for this assignment is to understand that tubes in plant stems carry water to the leaves. Supply List: • fresh celery stalk (stem) with leaves on top • a glass of water • (EL-SWITCH2 \$2.00) | ⊠ Yes □No |
| 15 | Special Project | Special Project assignments are used by teachers to create their own projects if needed. | □ Yes ⊠No |

* All items with a * can be ordered at the following website: www.hometrainingtools.com

| | | SCIENCE 400 (2010): UNIT 2 – ANIMALS | |
|----------------------|----------------------------------|--|------------|
| Assignment Number | Assignment Title | Project Summary | Video Demo |
| 3 | Report: Types of Whales | Your goal for this assignment is to compare three types of whales. Supply List: N/A | □ Yes ⊠No |
| 6 | Report: Writing about Fish | Your goal for this assignment is to write about fish. Supply List: N/A | □ Yes ⊠No |
| 7 | Project: Observing Fish | Your goal for this assignment is to observe the behavior of fish. Supply List: N/A | □ Yes ⊠No |
| 15 | Report: Honeybee Habits | Your goal for this assignment is to write about honeybees. Supply List: N/A | □ Yes ⊠No |
| 19 | Project: Animal Scrapbook | Your goal for this assignment is to organize animal pictures by special characteristics. Supply List: N/A | ☐ Yes ⊠No |
| 21 | Special Project | Special Project assignments are used by teachers to create their own projects if needed. | □ Yes ⊠No |

| | SCIENC | CE 400 (2010): UNIT 3 - MAN AND HIS ENVIRONMENT | |
|----------------------|-------------------------------------|--|------------|
| Assignment Number | Assignment Title | Project Summary | Video Demo |
| 2 | Project: Your Environment | Your goal for this assignment is to draw and describe your environment. Supply List: N/A | ☐ Yes ⊠No |
| 6 | Project: Populations | Your goal for this assignment is to list the plant and animal populations in your environment. Supply List: N/A | □ Yes ⊠No |
| 8 | Project: Make a Pyramid | Your goal for this assignment is to organize plants and animals in a population pyramid. Supply List: N/A | ☐ Yes ⊠No |
| 9 | Report: Rabbits in Australia | Your goal for this assignment is to explain how the balance of nature was upset for rabbits in Australia. Supply List: N/A | ☐ Yes ⊠No |
| 12 | Experiment: Still Water Life | Your goal for this assignment is to study plant and animal life in a still water community. Supply List: • one or more kitchen strainers (lengthen the handles by attaching them to longsticks or broom handles) • at least 5 wide-mouthed jars | ⊠ Yes □No |
| 14 | Project: Human Communities | Your goal for this assignment is to write about the needs and structure of your community. Supply List: N/A | □ Yes ⊠No |
| 15 | Report: Read and Write | Your goal for this assignment is to write a story about the life of a bee. Supply List: N/A | □ Yes ⊠No |
| 16 | Project: Terrarium or Diorama | Your goal for this assignment is to create and observe a desert terrarium. Supply List: a clean, empty two-liter plastic bottle (with the top cut off) one cup of gravel (tiny rocks) one-half cup of broken pieces charcoal | ☐ Yes ⊠No |
| 17 | Report: Forest Community | Your goal for this assignment is to write about plant and animal life in a forest community. Supply List: N/A | ☐ Yes ⊠No |
| 20 | Project: Ask an Expert | Your goals for this assignment are to interview an agricultural agent and to write what you learned about soil. Supply List: N/A | ☐ Yes ⊠No |
| 21 | Report: Endangered Species | Your goal for this assignment is to write about an endangered animal. Supply List: N/A | □ Yes ⊠No |

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| | SCIENCE | 400 (2010): UNIT 3 - MAN AND HIS ENVIRONMENT (CONT.) | |
|----------------------|------------------------|---|------------|
| Assignment Number | Assignment Title | Project Summary | Video Demo |
| 23 | Report: How to Save | Your goals for this assignment are to write about renewable energy and to list ways to save energy. | □ Yes ⊠No |
| | Energy | Supply List: N/A | |
| 25 | Report: | Your goal for this assignment is to write about a national park. | □ Yes ⊠No |
| | Special Treasures | Supply List: N/A | |
| 27 | Special Project | Special Project assignments are used by teachers to create their own projects if needed. | □ Yes ⊠No |

| Assignment | Assignment | Project | Video Demo |
|------------|-----------------------------------|---|------------|
| Number | Title | Summary | |
| 2 | Report: Galileo | Your goal for this assignment is to read and answer questions about Galileo Galilie. | □ Yes ⊠No |
| | | Supply List: N/A | |
| 3 | Experiment: Gravity | Your goal for this assignment is to examine how air friction affects gravity. Supply List: | □ Yes ⊠No |
| | | two or three pieces of newspaper a marble a partner a partner | |
| 7 | Experiment: Hammer and Nail | Your goal for this assignment is to compare work with and without use of a simple machine. | ⊠ Yes □No |
| | Indii | Supply List: | |
| | | a large nail* a short length of board or a large block of wood a hammer | |
| 8 | Experiment: Seesaw | Your goal for this assignment is to examine how fulcrum location affects amount of work needed for a lever. | □ Yes ⊠No |
| | | Supply List: | |
| | | a seesaw a friend who weighs about the same amount as you | |
| 10 | Experiment: Inclined Plane | Your goal for this assignment is to compare work with and without use of a simple machine. | ⊠ Yes □No |
| | | Supply List: | |
| | | four textbooks (each one should be at least 3 inches thick) a toy truck or car a board about 1 meter long (should be wider than the toy truck/car) a spring scale* | |
| | | (BS-SCALE1 \$3.95) | |
| 12 | Experiment: Screw and Nail | Your goal for this assignment is to compare the strength of a nail and a screw. | ⊠ Yes □No |
| | | Supply List: | |
| | | two thin pieces of wood (less than 1 cm thick) two thicker pieces of wood a hammer a screwdriver | |
| 15 | Experiment: Pulleys | Your goal for this assignment is to compare the mechanical advantage of two pulley types. | ⊠ Yes □No |
| | | Supply List: | |
| | | two pulleys*(2- MC- PULLY1 \$1.70 each) a light rope about two meters long a two-kilogram weight a broomstick | |
| 19 | Special Project | Special Project assignments are used by teachers to create their own projects if needed. | □ Yes ⊠No |

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| Assignment | Assignment | Project | Video Demo |
|------------|--------------------------------------|---|------------|
| Number | Title | Summary | video Demo |
| 2 | Report: Thomas Edison | Your goal for this assignment is to write about Thomas Edison. Supply List: N/A | ☐ Yes ⊠No |
| 3 | Experiment: Static Electricity | Your goal for this assignment is to examine the effects of static electricity. Supply List: string* (MC-STRING \$1.25) two balloons* (GS-BALLOON \$1.25) piece of woolen cloth * | ⊠ Yes □No |
| 5 | Project: Conductors | Your goal for this assignment is to classify items as conductors or nonconductors. Supply List: N/A | □ Yes ⊠No |
| 6 | Experiment: Wet Cell | Your goal for this assignment is to create a battery using wire and a lemon. Supply List: three strips each of copper and zinc (15 x 3 cm)* (3- EL-EECTCU \$1.40 each) (3- EL-EECTZN \$1.20 each) four lengths of covered copper wire, each about 50 cm long* (2- EL-WIRE241 \$5.50 each) Your goal for this assignment is to create a battery using wire and a lemon. a glass of vinegar a glass of vinegar a glavanometer* (EL-GALVAN1 \$10.95) a sharp knife | ⊠ Yes □No |
| 7 | Project: Electric Objects | Your goal for this assignment is to list household items that use electricity. Supply List: N/A | □ Yes ⊠No |
| 9 | Project: Fuses in Use | Your goal for this assignment is to study and write about car fuses. Supply List: N/A | □ Yes ⊠No |
| 12 | Experiment: Use a Magnet | Your goal for this assignment is to test the attraction between a magnet and various objects. Supply List: • one magnet* (<i>MG-BAR1C</i> \$.125) • one small piece of paper • two paper clips • one penny • two rubber bands • one nickel • one magnet* • five pins • one tin can • one small plastic cup* (<i>CE-BEAKCUP</i> \$0.70) • two sewing needles | ☐ Yes ⊠No |
| 13 | Experiment: Make a Magnet | Your goal for this assignment is to make a magnet from a nail. Supply List: • some iron filings* (CH-IRON \$2.25) • a large iron nail* (GS-NAILS \$1.00) | ⊠ Yes □No |

| Assignment Number | Assignment Title | Project Summary | Video Demo |
|----------------------|--|---|------------|
| 14 | Experiment: Magnet Poles | Your goals for this assignment are to identify the poles of a magnet. Supply List: • bar magnet* • one sheet of paper | ⊠ Yes □No |
| | | (MG-BAR1C \$.125) • iron filings* (CH-IRON \$2.25) | |
| 15 | Experiment: Testing a Magnet | Your goal for this assignment is to test the north pole of a magnet. Supply List: | ⊠ Yes ⊡No |
| | | a compass* (GS-COMPASS \$2.40) about 40 cm of heavy string* (MC-STRING \$1.25) a bar magnet* (MG-BAR1C \$.125) | |
| 16 | Experiment: Generate Electricity | Your goal for this assignment is to create an electrical current using a magnet. Supply List: | ⊠ Yes □No |
| | | a galvanometer* (<i>EL-GALVAN1</i> \$10.95) a mailing tube or the cardboard tube from a roll of paper towels a bar magnet* (<i>MG-BAR1C</i> \$.125) bell wire (a copper wire, usually solid rather than stranded, and soft-drawn rather than hard-drawn, used in low-current, low- voltage applications). May be found at hardware stores or online.* (<i>EL-WIRE24I</i> \$5.50) | |
| 17 | Experiment: Electromagne t | Your goal for this assignment is to create an electromagnet. Supply List: | ⊠ Yes □No |
| | | a large iron nail* (GS-NAILS \$1.00) a knife switch* (EL-SWITCH2 \$2.00) some bell wire* (EL-WIRE24I \$5.50) small metal objects a dry cell* a dry cell* (EL-BATT6 \$4.95) | |
| 18 | Report: Explorers | Your goal for this assignment is to write about the explorers who discovered the North and South poles. Supply List: N/A | □ Yes ⊠No |
| 20 | Special Project | Special Project assignments are used by teachers to create their own projects if needed. | ☐ Yes ⊠No |

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| ssignment Number | Assignment Title | Project Summary | Video Der |
|---------------------|----------------------------|---|-----------|
| | | | |
| 2 | Experiment: Ice | Your goal for this assignment is to examine the properties of ice. | ⊠ Yes □N |
| | | Supply List: | |
| | | a plastic bowl large enough to hold 3 or 4 cups of water 2 or 3 ice cubes (these must be cubes or chunks of ice for floating) | |
| 3 | Experiment: | Your goal for this assignment is to compare the volume of ice and water. | ⊠ Yes □N |
| | Ice Volume | Supply List: | |
| | | 1 small paper cup enough crushed ice to fill the cup | |
| 5 | Experiment: Potato | Your goal for this assignment is to determine the amount of water in a potato. | ⊠ Yes □N |
| | | Supply List: | |
| | | 1 raw potato 1 scale (to weigh ounces or grams)* (BS-SCALE1 \$3.95) 1 heavy-duty plastic knife a paper towel a paper towel | |
| 7 | Experiment: Forming Dew | Your goal for this assignment is to observe condensation. | 🛛 Yes 🔲 N |
| | | Supply List: | |
| | | 1 small tin can, fruit juice enough ice to fill the can type (be sure there are no sharp edges) | |
| 9 | Experiment: Solubility | Your goal for this assignment is to compare the solubility of different materials. | ⊠ Yes □N |
| | | Supply List: | |
| | | 4 plastic glasses (1 for each test material) (GS-CUPLID \$1.00) 1 teaspoon of salt 1 teaspoon of salt a plastic spoon or wooden stick for stirring 1 teaspoon of sand | |
| 13 | Experiment: Molecules | Your goal for this assignment is to compare the strength of smell of perfume and amonia. | 🗌 Yes 🖾 N |
| | | Supply List: | |
| | | 1 bottle of strong-smelling perfume 1 bottle of household ammonia (only a small amount is needed) | |
| 16 | Special Project | Special Project assignments are used by teachers to create their own projects if needed. | □ Yes ⊠N |

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| | | SCIENCE 400 (2010): UNIT 7 – WEATHER | |
|----------------------|------------------------------|--|------------|
| Assignment Number | Assignment Title | Project Summary | Video Demo |
| 2 | Experiment: Air and Space | Your goal for this assignment is to determine if air has volume. Supply List • a water glass • a pan full of water | ⊠ Yes □No |
| 4 | Experiment: Temperature | Your goal for this assignment is to compare the effect of heat on different materials. | ⊠ Yes □No |
| | | sheet of black paper window sunlight shining through the window | |
| 6 | Experiment: Pressure | Your goal for this assignment is to observe the effect of pressure. Supply List drinking glass full of water piece of cardboard large enough to cover the glass | ⊠ Yes ⊡No |
| 10 | Report: Hurricanes | Your goal for this assignment is to write about hurricanes. Supply List: N/A | □ Yes ⊠No |
| 13 | Project: Thermometers | Your goal for this assignment is to compare Fahrenheit and Celsius thermometers. Supply List: N/A | □ Yes ⊠No |
| 15 | Special Project | Special Project assignments are used by teachers to create their own projects if needed. | □ Yes ⊠No |

| | SCIENCE 40 | 0 (2010): UNIT 8 - OUR SOLAR SYSTEM AND THE UNIVERSE | |
|--------------------------|-------------------------------------|---|------------|
| Assignmen t Number | Assignmen t Title | Project Summary | Video Demo |
| 3 | Report: Astronomy Instruments | Your goal for this assignment is to write about one of the following: the telescope, spectroscope, or radio telescope. Supply List: N/A | □ Yes ⊠No |
| 4 | Essay: Astronomy | Your goal for this assignment is to write about the importance of the mind in astronomy. Supply List: N/A | □ Yes ⊠No |
| 7 | Essay: Ancient People | Your goal for this assignment is to explain the reason behind ancient beliefs about the sun. Supply List: N/A | ☐ Yes ⊠No |
| 9 | Report: Isaac Newton | Your goal for this assignment is to write about Isaac Newton. Supply List: N/A | □ Yes ⊠No |
| 12 | Experiment: Moon Phases | Your goal for this assignment is to use a model to create phases of the moon. Supply List flashlight large white sheet of paper rubber ball (about 6 inches in diameter) | ☐ Yes ⊠No |
| 15 | Essay: Astrology | Your goal for this assignment is to explain why astrology is a false science. Supply List: N/A | □ Yes ⊠No |
| 18 | Special Project | Special Project assignments are used by teachers to create their own projects if needed. | □ Yes ⊠No |

| | SC | IENCE 400 (2010): UNIT 9 - THE PLANET EARTH | |
|----------------------|-----------------------------|--|------------|
| Assignment Number | Assignment Title | Project Summary | Video Demo |
| 2 | Experiment: Condensation | Your goal for this assignment is to condense water on a glass. Supply List: | ⊠ Yes □No |
| | | a drinking glass some ice cubes | |
| 6 | Essay: Psalm 147 | Your goal for this assignment is to interpret the meaning of Psalm 147. Supply List: N/A | ☐ Yes ⊠No |
| 8 | Experiment: Currents | Your goal for this assignment is to create a convection current in water. Supply List: | ⊠ Yes □No |
| | | a glass 2 ice cubes some hot water a paper towel | |
| 11 | Experiment: Shadows | Your goal for this assignment is to compare the shadows made by a disk and a sphere. | ⊠ Yes □No |
| | | Supply List: | |
| 15 | Special Project | Special Project assignments are used by teachers to create their own projects if needed. | □ Yes ⊠No |

| SCIENCE 400 (2010): UNIT 10 - UNDERSTANDING GOD'S WONDERFUL CREATION | | | |
|--|-----------------------------------|---|------------|
| Assignment Number | Assignment Title | Project Summary | Video Demo |
| 7 | Project: Weather Scrapbook | Your goal for this assignment is to create a scrapbook on different types of weather. Supply List: N/A | □ Yes ⊠No |
| 10 | Project: Thomas Alva Edison | Your goal for this assignment is list five facts about Thomas Edison. Supply List: N/A | □ Yes ⊠No |
| 15 | Report: Passenger Pigeon | Your goal for this assignment is to write about passenger pigeons. Supply List: N/A | □ Yes ⊠No |
| 17 | Special Project | Special Project assignments are used by teachers to create their own projects if needed. | □ Yes ⊠No |