



Switched-On
SCHOOLHOUSE

2015 Science Supply List

Science 400

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UNIT 1: PLANTS

Assignment Title	Project Summary	Video Demo	Materials Needed
*Project: Things Made of Wood	In this project, you will think about other objects that are made of wood.	No	<ul style="list-style-type: none"> things made of wood
*Report: Read and Write	In this report, you will learn about a fruit from another country.	No	<ul style="list-style-type: none"> research resources
Report: Flowers as State Symbols	In this report, you will learn about state flowers.	No	<ul style="list-style-type: none"> research resources
*Report: Flower Paragraph	In this report, you will learn more about state flowers.	No	<ul style="list-style-type: none"> research resources
Experiment: Celery	In this experiment, you will learn why these strings are important.	Yes	<ul style="list-style-type: none"> fresh celery stalk (stem) with leaves on top a glass of water red food coloring a knife
*Special Project	Special Project assignments are used by teachers to create their own projects if needed.	No	N/A

*indicates alternate project/experiments

UNIT 2: ANIMALS

Assignment Title	Project Summary	Video Demo	Materials Needed
Report: Types of Whales	In this report, you will learn more about three types of whales.	No	<ul style="list-style-type: none"> research resources
*Report: Writing about Fish	In this report, you will learn more about fish characteristics and behavior.	No	<ul style="list-style-type: none"> research resources
*Project: Observing Fish	In this project, you will learn more about how fish swim.	No	<ul style="list-style-type: none"> fish in an aquarium
Report: Honeybee Habits	In this report, you will learn more about the work and behavior of bees.	No	<ul style="list-style-type: none"> research resources
*Project: Animal Scrapbook	In this project, you will practice sorting animals into different groups.	No	<ul style="list-style-type: none"> pictures of animals construction paper glue scissors notebook or folder
*Special Project	Special Project assignments are used by teachers to create their own projects if needed.	No	N/A

*indicates alternate project/experiments

UNIT 3: MAN AND HIS ENVIRONMENT

Assignment Title	Project Summary	Video Demo	Materials Needed
*Project: Your Environment	In this project, you will take a closer look at your environment.	No	<ul style="list-style-type: none"> drawing paper pencil
*Project: Populations	In this project, you will take a closer look at the populations in your environment.	No	<ul style="list-style-type: none"> paper pencil
*Project: Make a Pyramid	In this project, you will create a population pyramid.	No	<ul style="list-style-type: none"> access to a printer paper pencil
*Report: Rabbits in Australia	In this report, you will create a population pyramid.	No	<ul style="list-style-type: none"> research resources
*Experiment: Still Water Life	In this experiment, you will create a population pyramid.	Yes	<ul style="list-style-type: none"> one or more kitchen strainers at least 5 wide-mouthed jars hand magnifying glass cloth or netting string microscope
Project: Human Communities	Write about the needs and structure of your community	No	N/A
*Report: Read and Write	In this report you will learn about the role of a honeybee in a community.	No	<ul style="list-style-type: none"> research resources
*Project: Terrarium or Diorama	In this project, you will make your own desert community.	No	<ul style="list-style-type: none"> a clean, empty two-liter plastic bottle (with the top cut off) one cup of gravel one-half cup of broken pieces charcoal two cups of sand a handful of spanish moss or sphagnum one or two cups of potting soil desert plants, like cactus water
*Report: Forest Community	In this report, you will learn more about forest communities around the world.	No	<ul style="list-style-type: none"> research resources
*Project: Ask an Expert	In this project, you will learn more about forest communities around the world.	No	<ul style="list-style-type: none"> contact with the agricultural agent in your county
*Report: Endangered Species	In this report, you will learn about one endangered animal.	No	<ul style="list-style-type: none"> research resources
*Report: How To Save Energy	In this report, you will learn more about renewable energy and ways to conserve it.	No	<ul style="list-style-type: none"> research resources
*Report: Special Treasures	In this report, you will learn more about a United States National park.	No	<ul style="list-style-type: none"> research resources
*Special Project	Special Project assignments are used by teachers to create their own projects if needed.	No	N/A

*indicates alternate project/experiments

UNIT 4: MACHINES

Assignment Title	Project Summary	Video Demo	Materials Needed
*Report: Galileo	In this report, you will learn more about this important man.	No	<ul style="list-style-type: none"> research resources
*Experiment: Gravity	In this experiment, you are going to examine how air friction affects gravity	No	<ul style="list-style-type: none"> two or three pieces of newspaper a piece of paper a chair a marble a partner
Experiment: Hammer and Nail	In this experiment, you are going to compare work with and without use of a simple machine	Yes	<ul style="list-style-type: none"> a large nail a hammer a short length of board or a large block of wood
*Experiment: Seesaw	In this experiment, you are going to examine how fulcrum location affects amount of work needed for a lever	No	<ul style="list-style-type: none"> a seesaw a friend who weighs about the same as you
*Experiment: Inclined Plane	In this experiment, you are going to compare work with and without use of a simple machine	Yes	<ul style="list-style-type: none"> four textbooks (3 inches thick) a board about 1 meter long (should be wider than the toy truck/car) a toy truck or car a spring scale
*Experiment: Screw and Nail	In this experiment, you are going to compare the strength of a nail and a screw	Yes	<ul style="list-style-type: none"> two thin pieces of wood (less than 1 cm thick) two thicker pieces of wood a hammer a screwdriver
*Experiment: Pulleys	In this experiment, you are going to compare the mechanical advantage of two pulley types	Yes	<ul style="list-style-type: none"> two pulleys a two-kilogram weight a light rope about two meters long a broomstick
*Special Project	Special Project assignments are used by teachers to create their own projects if needed.	No	N/A

*indicates alternate project/experiments

UNIT 5: ELECTRICITY AND MAGNETISM

Assignment Title	Project Summary	Video Demo	Materials Needed
Report: Thomas Edison	In this report, you will learn more about Thomas Edison.	No	<ul style="list-style-type: none"> research resources
Experiment: Static Electricity	In this experiment, you will "charge" objects and create static electricity.	No	<ul style="list-style-type: none"> string two balloons piece of woolen cloth rubber comb or hard rubber rod
Project: Conductors	In this project, you will classify items as conductors or nonconductors	No	<ul style="list-style-type: none"> metal spoon screwdriver handle screwdriver blade chalkboard eraser glass dish tin can rubber ball paper paper clip wood silk wool chalk lemon juice vinegar pencil lead distilled water salt water
*Experiment: Wet Cell	In this experiment, you will make your own electric cell.	Yes	<ul style="list-style-type: none"> three strips each of copper and zinc (15 x 3 cm) four lengths of covered copper wire, each about 50 cm long. a glass of vinegar a juicy lemon a galvanometer a sharp knife
*Project: Electric Objects	In this project you will take a closer look at the electrical objects in your home.	No	<ul style="list-style-type: none"> various object around your house
Project: Fuses In Use	In this project, you will study and write about car fuses.	No	<ul style="list-style-type: none"> access to a car flashlight
Experiment: Use a Magnet	In this experiment you will test different objects to see which ones are attracted to a magnet and which ones are not.	No	<ul style="list-style-type: none"> one magnet one small piece of paper two paper clips one penny two rubber bands one nickel five pins one tin can one piece of chalk one small plastic cup two bits of wood two sewing needles
Experiment: Make A Magnet	In this experiment you will turn a nail into a magnet.	Yes	<ul style="list-style-type: none"> some iron filings a large iron nail a bar magnet
*Experiment: Magnet Poles	In this experiment you will use iron fillings to "see" the magnetic field around the poles.	Yes	<ul style="list-style-type: none"> bar magnet iron filings one sheet of paper

UNIT 5: ELECTRICITY AND MAGNETISM (CONTINUED)

Assignment Title	Project Summary	Video Demo	Materials Needed
*Experiment: Testing A Magnet	In this experiment you will use a compass to find the north pole of a magnet.	Yes	<ul style="list-style-type: none"> a compass about 40 cm of heavy string a bar magnet a stack of books meter stick
*Experiment: Generate Electricity	In this experiment you will use a magnet to make an electrical current.	Yes	<ul style="list-style-type: none"> a galvanometer a mailing tube or the cardboard tube from a roll of paper towels a bar magnet 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.
*Experiment: Electromagnet	In this experiment you will use electricity to turn a nail into an electromagnet.	Yes	<ul style="list-style-type: none"> a large iron nail a knife switch some bell wire small metal objects a dry cell
*Report: Explorers	In this report you will learn about the people who discovered these areas.	No	<ul style="list-style-type: none"> research resources
*Special Project	Special Project assignments are used by teachers to create their own projects if needed.	No	N/A

*indicates alternate project/experiments

UNIT 6: WATER AND MATTER

Assignment Title	Project Summary	Video Demo	Materials Needed
Experiment: Ice	In this experiment you will test what you know about this property of ice.	Yes	<ul style="list-style-type: none"> 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)
*Experiment: Ice Volume	In this experiment you will test what you know about the volume of ice.	Yes	<ul style="list-style-type: none"> 1 small paper cup enough crushed ice to fill the cup
*Experiment: Potato	In this experiment you will measure the water in a potato.	Yes	<ul style="list-style-type: none"> 1 raw potato 1 scale (to weigh ounces or grams) 1 heavy-duty plastic knife a paper towel
*Experiment: Forming Dew	In this experiment you will see water change state.	Yes	<ul style="list-style-type: none"> 1 small tin can, fruit juice type (be sure there are no sharp edges) enough ice to fill the can
Experiment: Solubility	In this experiment you will test the solubility of salt, sugar, sand, and oil.	Yes	<ul style="list-style-type: none"> 4 plastic glasses (1 for each test material) 1 teaspoon of salt 1 teaspoon of sugar 1 teaspoon of sand 1 teaspoon of salad or cooking oil a plastic spoon or wooden stick for stirring
*Experiment: Molecules	In this experiment you will smell different odors.	No	<ul style="list-style-type: none"> 1 bottle of strong-smelling perfume 1 bottle of household ammonia (only a small amount is needed) A room about 12 x 12 in dimensions. An adult to help perform experiment. A clock with a second hand. A couple of sheets of paper.
*Special Project	Special Project assignments are used by teachers to create their own projects if needed.	No	N/A

*indicates alternate project/experiments

UNIT 7: WEATHER

Assignment Title	Project Summary	Video Demo	Materials Needed
*Experiment: Air and Space	In this experiment you will answer this question.	Yes	<ul style="list-style-type: none"> a water glass a pan full of water
Experiment: Temperature	In this experiment you will test the heat absorption of different materials.	No	<ul style="list-style-type: none"> sheet of black paper window sunlight shining through the window
Experiment: Pressure	In this experiment you will see the strength of air pressure.	Yes	<ul style="list-style-type: none"> drinking glass full of water piece of cardboard large enough to cover the glass sink or large basin to catch the water after the experiment
*Report: Hurricanes	In this report you will learn more about these dangerous storms.	No	<ul style="list-style-type: none"> research resources
*Project: Thermometers	In this project you will learn more about the two most common thermometers.	No	<ul style="list-style-type: none"> research resources
*Special Project	Special Project assignments are used by teachers to create their own projects if needed.	No	N/A

*indicates alternate project/experiments

UNIT 8: OUR SOLAR SYSTEM AND THE UNIVERSE

Assignment Title	Project Summary	Video Demo	Materials Needed
Report: Astronomy Instruments	In this report you will learn more about one type of instrument.	No	<ul style="list-style-type: none"> research resources
*Essay: Astronomy	In this report you will think about an astronomer's most important instrument... their mind.	No	N/A
*Essay: Ancient People	You have learned that ancient people believed in myths and stories about the sun. We know now that these stories are not true. In this essay you will write about these ancient beliefs.	No	N/A
*Report: Isaac Newton	In this report you will learn more about this famous English scientist.	No	<ul style="list-style-type: none"> research resources
Experiment: Moon Phases	In this experiment you will use a model to show the moon's phase changes.	No	<ul style="list-style-type: none"> 8 Oreo cookies paper plate plastic butter knife
*Essay: Astrology	In this essay you will explain why astrology should not be studied.	No	N/A
*Special Project	Special Project assignments are used by teachers to create their own projects if needed	No	N/A

*indicates alternate project/experiments

UNIT 9: THE PLANET EARTH

Assignment Title	Project Summary	Video Demo	Materials Needed
Experiment: Condensation	In this experiment you will watch water vapor change state.	Yes	<ul style="list-style-type: none"> • a drinking glass • some ice cubes <ul style="list-style-type: none"> • some flavored beverage • a clean cloth or tissue
*Essay: Psalm 147	In this essay you will read a Psalm and discuss its meaning.	No	N/A
*Experiment: Currents	In this experiment you will use differences in water temperature to create a current.	Yes	<ul style="list-style-type: none"> • a glass • 2 ice cubes <ul style="list-style-type: none"> • some hot water • a paper towel
Experiment: Shadows	In this experiment you will see how shadows helped scientists and explorers discover that the earth was not flat.	Yes	<ul style="list-style-type: none"> • a ball (3 to 5 inches) • a light source <ul style="list-style-type: none"> • a disk (3 to 5 inches)
*Special Project	Special Project assignments are used by teachers to create their own projects if needed.	No	N/A

*indicates alternate project/experiments

UNIT 10: UNDERSTANDING GOD'S WONDERFUL CREATION

Assignment Title	Project Summary	Video Demo	Materials Needed
Project: Weather Scrapbook	In this project you will review what you know about the forces of weather.	No	<ul style="list-style-type: none"> • magazines • newspaper <ul style="list-style-type: none"> • scrapbook
*Project: Thomas Alva Edison	In this project you will review important facts about Edison.	No	<ul style="list-style-type: none"> • the news story you wrote in unit 5
*Report: Passenger Pigeon	In this report you will learn about an extinct animal called the Passenger Pigeon.	No	<ul style="list-style-type: none"> • research resources
*Special Project	Special Project assignments are used by teachers to create their own projects if needed.	No	N/A

*indicates alternate project/experiments