



Switched-On
SCHOOLHOUSE

2015 Science Supply List

Science 500

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UNIT 1: CELLS

Assignment Title	Project Summary	Video Demo	Materials Needed
Experiment: Skin Cells	In this experiment you will use a microscope to examine examples of different types of cells.	Yes	<ul style="list-style-type: none"> • microscope • slide • small eye dropper or toothpick
Experiment: Onion Cells	In this experiment you will examine the structure of onion cells using a microscope	Yes	<ul style="list-style-type: none"> • onion bulb with leaves and roots • knife • tweezers • slide cover
Experiment: Pond Water Examination	In this experiment you will observe pond water organisms using a microscope	Yes	<ul style="list-style-type: none"> • microscope • slide • slide cover
Experiment: Cheek Cells	In this experiment you will examine cheek cells using a microscope and compare cheek and skin cells	Yes	<ul style="list-style-type: none"> • microscope • slide • iodine stain
Experiment: Blood Cells	In this experiment you will use a microscope to take a closer look at the cells in your blood.	Yes	<ul style="list-style-type: none"> • microscope • two slides • rubbing alcohol • cotton ball
*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: PLANTS: LIFE CYCLES

Assignment Title	Project Summary	Video Demo	Materials Needed
Experiment: Flower Dissection	In this activity, you will look at the structure of two different types of flowers.	Yes	<ul style="list-style-type: none"> • 2 flowers • microscope • 2 microscope slides • 2 slide covers • magnifying glass <ul style="list-style-type: none"> • straight pins • paper • dropper • sharp knife
Experiment: Seed Dissection	In this experiment, you will identify the main reproductive parts of seed-bearing and spore-bearing organism.	Yes	<ul style="list-style-type: none"> • lima bean seed • knife • corn seed <ul style="list-style-type: none"> • baby food jar half full of water • tweezers
Project: Examining Cones	In this experiment, you will identify the main reproductive parts of seed-bearing and spore-bearing organism.	No	<ul style="list-style-type: none"> • male and female pine cones
*Project: Seed Hunt	In this experiment, you will identify the main reproductive parts of seed-bearing and spore-bearing organism.	No	<ul style="list-style-type: none"> • various seeds
*Report: Walking Fern	In this activity, you will explain differences between the main categories of plants, fungi, and protists.	No	<ul style="list-style-type: none"> • research resources
Experiment: Mold	In this experiment, you will Describe the life cycles of plants, fungi, and some protists and relate the structure of plants, fungi, and protists with their reproduction in a life cycle.		<ul style="list-style-type: none"> • slice of bread • large jar with lid <ul style="list-style-type: none"> • magnifying glass
*Special Project	Special Project assignments are used by teachers to create their own projects if needed.	No	N/A

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UNIT 3: ANIMALS: LIFE CYCLES

Assignment Title	Project Summary	Video Demo	Materials Needed
*Report: Protozoa	In this report you will find information about a protozoan type other than the amoeba or paramecium.	No	<ul style="list-style-type: none"> research resources
*Experiment: Mealworm	In this experiment, you will observe the development of a small larva called a mealworm into an adult grain beetle over several weeks.	Yes	<ul style="list-style-type: none"> baby-food jar with lid bran flakes or oatmeal potato magnifying glass mealworm knife
*Report: The Spider	Spiders are invertebrate animals in the arachnid group. In this report you will learn more about these animals.	No	<ul style="list-style-type: none"> research resources
*Report: Insect Study	In this report, you will choose an unusual insect to study and write a 200 word report about it.	No	<ul style="list-style-type: none"> research resources
*Experiment: Chicken Egg	In this experiment you will take a closer look at the structure of a bird egg.	No	<ul style="list-style-type: none"> chicken egg dropper small dish tissue paper magnifying glass food coloring
*Report: Mammals	In this report you will learn more about a mammal species.	No	<ul style="list-style-type: none"> research resources
*Essay: God and Animals	In this essay you will think and write about a Bible passage on animals.	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 4: BALANCE IN NATURE

Assignment Title	Project Summary	Video Demo	Materials Needed
*Project: Cycles	In this project you will review the water cycle, carbon cycle, and chemical cycle.	No	<ul style="list-style-type: none"> • paper • pencil
Project: Terrarium Project	In this experiment, you will build a terrarium if conditions permit.	No	<ul style="list-style-type: none"> • large container with lid • gravel • potting soil • several cans or small jars • sand • small sprinkling can • bottle cap • something to punch holes in lid • water
*Project: Prairie Land	In this project you will find out where prairies are located in North America.	No	<ul style="list-style-type: none"> • a map of North America • reference resources
*Report: Prairie Birds	In this report you will learn more about one species of prairie bird.	No	<ul style="list-style-type: none"> • research resources
*Project: Prairie Food Chain	You have learned about different food chains in the prairie. In this project you will think about other possible prairie food chains.	No	<ul style="list-style-type: none"> • research resources
*Project: Special Environments	In this project you will think and learn about another type of environment.	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

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UNIT 5: TRANSFORMATION OF ENERGY

Assignment Title	Project Summary	Video Demo	Materials Needed
*Experiment: Heat From The Sun	In this experiment, you will use a thermometer to observe the effect of direct and indirect sunlight on the heat energy of matter.	No	<ul style="list-style-type: none"> yellow construction paper a thermometer
*Experiment: Heat From Bending	In this experiment you will examine the effect of movement on heat energy.	No	<ul style="list-style-type: none"> 2 paper clips
*Experiment: Heat Energy In A Chemical Reaction	In this experiment, you will conduct a safe chemical reaction with simple kitchen materials and observe the change in heat energy from the reaction.	Yes	<ul style="list-style-type: none"> 3 liquid ounces of vinegar 1 glass jar 1 thermometer 1 tablespoon of baking soda
Experiment: Solar Energy For Heat	In this experiment, you will investigate how light energy and water temperature are related	No	<ul style="list-style-type: none"> a baby-food jar filled with water a thermometer
*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: RECORDS IN THE ROCK: THE FLOOD

Assignment Title	Project Summary	Video Demo	Materials Needed
*Project: Interview with Noah	You have learned that scientists have found physical evidence of the Flood. In this project you will think about Noah and his construction of the ark.	No	N/A
*Report: Ancient Flood Stories	In this report you will, research and answer questions about flood stories from other cultures	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 7: RECORDS IN THE ROCK: FOSSILS

Assignment Title	Project Summary	Video Demo	Materials Needed
Experiment: Mold Fossil Copy	In this experiment you will create a copy of a fossil mold.	Yes	<ul style="list-style-type: none"> a small plastic container (about 10 centimeters across) modeling clay a seashell or bone
*Project: Make A Cast Fossil Copy	In this project you will learn how a cast fossil is made.	No	<ul style="list-style-type: none"> the mold fossil copy from the earlier activity molding plaster a tin can and stick a jar of water
*Project: Plant And Animal Fossils	In this project you will learn about some extinct organisms.	No	<ul style="list-style-type: none"> glyptodon trilobite ginkgo dunbarella birch bothriolepis belemnite stromatoporoid rhynia
*Project: Fossil Clues	In this project you will look for fossil clues like a scientist.	No	N/A
*Project: Fill in the Skeleton	In this project you will make inferences and draw conclusions about an animal from its skeleton.	No	<ul style="list-style-type: none"> colored pencils
*Project: Be Creative	In this project you will show how reconstructions can give incorrect information about an animal.	No	<ul style="list-style-type: none"> paper pencil
*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: RECORDS IN THE ROCK: GEOLOGY

Assignment Title	Project Summary	Video Demo	Materials Needed
Project: Compare An Orange And The Earth	In this project you will use a model to "view" the earth up close and from a distance.	No	<ul style="list-style-type: none"> orange magnifying glass
*Experiment: Examine A Mineral	In this project you will take a closer look at the geometric shape of salt.	No	<ul style="list-style-type: none"> small amount of table salt magnifying glass colored paper
*Report: Rocks	In this report, you will research and write about a type of rock or mineral	No	<ul style="list-style-type: none"> research resources
*Project: Rock Hunt	In this project you will hunt for and learn about rocks near your home.	No	<ul style="list-style-type: none"> rocks
*Experiment: Erosion	In this experiment you will observe the powerful force of running water.	Yes	<ul style="list-style-type: none"> plastic tub or metal pan short board mixture of soil, sand, large and small pebbles glass of water
*Project: Volcano Summary	In this project you will learn about famous volcanoes.	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 9: CYCLES IN NATURE

Assignment Title	Project Summary	Video Demo	Materials Needed
Experiment: Volume	In this experiment you will use water displacement to find the volume of a sphere.	Yes	<ul style="list-style-type: none"> tall, thin jar (Alka-Seltzer bottle) small marble large marble masking tape ruler
*Experiment: Water Container	In this experiment you will examine the ability of water to change shape.	No	<ul style="list-style-type: none"> 4 differently shaped clear containers paper water
*Experiment: Types of Changes	In this experiment you will change the physical and chemical structure of matter.	Yes	<ul style="list-style-type: none"> candle in candle holder large glass plate or pan match
*Experiment: Conservation Of Matter	In this experiment you will make a prediction. Your prediction will be based on the section you have finished reading, conservation of matter.	Yes	<ul style="list-style-type: none"> equal-arm balance 2 baby-food jars with equal mass 2 baby-food jar lids with equal mass ice cube dropper
*Project: Globe	In this project you will use a globe to observe how the earth's tilt causes seasons.	Yes	<ul style="list-style-type: none"> globe with a tilted axis
*Report: Famous Comets	In this report you will learn about a famous comet.	No	<ul style="list-style-type: none"> research resources
*Experiment: Water Evaporation	In this experiment you will compare the evaporation of cold and hot water.	No	<ul style="list-style-type: none"> liquid measure two identical pans funnel
*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: LOOK AHEAD

Assignment Title	Project Summary	Video Demo	Materials Needed
*Special Project	Special Project assignments are used by teachers to create their own projects if needed.	No	N/A

*indicates alternate project/experiments