



# 2014-2015 Science Supply List

Science 500

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**UNIT 1: CELLS**

<b>Assignment Title</b>	<b>Project Summary</b>	<b>Video Demo</b>	<b>Materials Needed</b>
Experiment: Skin Cells	In this experiment you will study the structure of skin cells.	Yes	<ul style="list-style-type: none"> <li>• small eye dropper or toothpick</li> <li>• knife</li> <li>• diluted iodine solution</li> </ul>
Experiment: Onion Cells	In this experiment you will examine cells from different parts of an onion plant.	Yes	<ul style="list-style-type: none"> <li>• onion bulb with leaves and roots</li> <li>• knife</li> <li>• tweezers</li> <li>• slide cover</li> </ul>
Experiment: Pond Water Examination	In this experiment you will use a microscope to see protozoa in pond water.	Yes	<ul style="list-style-type: none"> <li>• microscope</li> <li>• slide</li> <li>• slide cover</li> </ul>
Experiment: Cheek Cells	In this experiment you will find out the answer to this question.	Yes	<ul style="list-style-type: none"> <li>• microscope</li> <li>• slide</li> <li>• iodine stain</li> </ul>
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"> <li>• microscope</li> <li>• two slides</li> <li>• rubbing alcohol</li> <li>• cotton ball</li> </ul>
*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"> <li>• 2 flowers</li> <li>• microscope</li> <li>• 2 microscope slides</li> <li>• 2 slide covers</li> <li>• magnifying glass</li> </ul> <ul style="list-style-type: none"> <li>• straight pins</li> <li>• paper</li> <li>• dropper</li> <li>• sharp knife</li> </ul>
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"> <li>• lima bean seed</li> <li>• knife</li> <li>• corn seed</li> </ul> <ul style="list-style-type: none"> <li>• baby food jar half full of water</li> <li>• tweezers</li> </ul>
Experiment: 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"> <li>• male and female pine cones</li> </ul>
*Experiment: 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"> <li>• various seeds</li> </ul>
Project: 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"> <li>• research resources</li> </ul>
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"> <li>• slice of bread</li> <li>• large jar with lid</li> </ul> <ul style="list-style-type: none"> <li>• magnifying glass</li> </ul>
*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: ANIMALS: LIFE CYCLES**

<b>Assignment Title</b>	<b>Project Summary</b>	<b>Video Demo</b>	<b>Materials Needed</b>
*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"> <li>research resources</li> </ul>
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"> <li>baby-food jar with lid</li> <li>bran flakes or oatmeal</li> <li>potato</li> <li>magnifying glass</li> <li>mealworm</li> <li>knife</li> </ul>
*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"> <li>research resources</li> </ul>
*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"> <li>research resources</li> </ul>
*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"> <li>chicken egg</li> <li>dropper</li> <li>small dish</li> <li>tissue paper</li> <li>magnifying glass</li> <li>food coloring</li> </ul>
*Report: Mammals	In this report you will learn more about a mammal species.	No	<ul style="list-style-type: none"> <li>research resources</li> </ul>
*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**

<b>Assignment Title</b>	<b>Project Summary</b>	<b>Video Demo</b>	<b>Materials Needed</b>
*Project: Cycles	In this project you will review the water cycle, carbon cycle, and chemical cycle.	No	<ul style="list-style-type: none"> <li>• paper</li> <li>• pencil</li> </ul>
*Project: Prairie Land	In this project you will find out where prairies are located in North America.	No	<ul style="list-style-type: none"> <li>• a map of North America</li> <li>• reference resources</li> </ul>
*Report: Prairie Birds	In this report you will learn more about one species of prairie bird.	No	<ul style="list-style-type: none"> <li>• research resources</li> </ul>
*Project: Special Environments	In this project you will think and learn about another type of environment.	No	<ul style="list-style-type: none"> <li>• research resources</li> <li>•</li> </ul>
*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: TRANSFORMATION OF ENERGY**

<b>Assignment Title</b>	<b>Project Summary</b>	<b>Video Demo</b>	<b>Materials Needed</b>
*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"> <li>• yellow construction paper</li> <li>• a thermometer</li> </ul>
*Experiment: Heat From Bending	In this experiment you will examine the effect of movement on heat energy.	No	<ul style="list-style-type: none"> <li>• 2 paper clips</li> </ul>
*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"> <li>• 3 liquid ounces of vinegar</li> <li>• 1 glass jar</li> <li>• 1 thermometer</li> <li>• 1 tablespoon of baking soda</li> </ul>
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"> <li>• a baby-food jar filled with water</li> <li>• a thermometer</li> </ul>
*Special Project	Special Project assignments are used by teachers to create their own projects if needed.	No	N/A

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**UNIT 6: RECORDS IN THE ROCK: THE FLOOD**

Assignment Title	Project Summary	Video Demo	Materials Needed
*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"> <li>research resources</li> </ul>
*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"> <li>a small plastic container (about 10 centimeters across)</li> <li>modeling clay</li> <li>a seashell or bone</li> </ul>
*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"> <li>the mold fossil copy from the earlier activity</li> <li>molding plaster</li> <li>a tin can and stick</li> <li>a jar of water</li> </ul>
*Project: Plant And Animal Fossils	In this project you will learn about some extinct organisms.	No	<ul style="list-style-type: none"> <li>glyptodon</li> <li>trilobite</li> <li>ginkgo</li> <li>dunbarella</li> <li>birch</li> <li>bothriolepis</li> <li>belemnite</li> <li>stromatoporoid</li> <li>rhynia</li> </ul>
*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"> <li>paper</li> <li>pencil</li> </ul>
*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**

<b>Assignment Title</b>	<b>Project Summary</b>	<b>Video Demo</b>	<b>Materials Needed</b>
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"> <li>• orange</li> <li>• magnifying glass</li> </ul>
*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"> <li>• small amount of table salt</li> <li>• magnifying glass</li> <li>• colored paper</li> </ul>
Report: Rocks	In this report, you will research and write about a type of rock or mineral	No	<ul style="list-style-type: none"> <li>• research resources</li> </ul>
*Project: Rock Hunt	In this project you will hunt for and learn about rocks near your home.	No	<ul style="list-style-type: none"> <li>• rocks</li> </ul>
*Experiment: Erosion	In this experiment you will observe the powerful force of running water.	Yes	<ul style="list-style-type: none"> <li>• plastic tub or metal pan</li> <li>• short board</li> <li>• mixture of soil, sand, large and small pebbles</li> <li>• glass of water</li> </ul>
*Project: Volcano Summary	In this project you will learn about famous volcanoes.	No	<ul style="list-style-type: none"> <li>• research resources</li> </ul>
*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**

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

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

\*indicates alternate project/experiments