



# 2014-2015 Science Supply Lists

Earth Science

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**UNIT 1: DYNAMIC STRUCTURE OF EARTH**

<b>Assignment Title</b>	<b>Project Summary</b>	<b>Video Demo</b>	<b>Materials Needed</b>
Project: Research a Career	In this project, you will research a career field in science, and write a report describing a scientific field.	No	<ul style="list-style-type: none"> <li>research resources</li> </ul>
Project: Earth Comparisons	For this project, you'll make a chart of some of the basic characteristics of each planet so that you can compare and contrast these characteristics to those of Earth.	No	<ul style="list-style-type: none"> <li>research resources</li> </ul>
Project: Flow of Energy	In this project, you will Investigate how changes in an ecosystem affect a food web.	No	<ul style="list-style-type: none"> <li>Computer-based, graphics program</li> <li>or →</li> <li>posterboard</li> <li>colored pencils or markers</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: FORCES AND FEATURES OF EARTH**

<b>Assignment Title</b>	<b>Project Summary</b>	<b>Video Demo</b>	<b>Materials Needed</b>
*Project: Create a Topographic Map	In this project, you will create a topographic map of an area.	No	<ul style="list-style-type: none"> <li>pencil</li> <li>paper</li> <li>crayons</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: FEATURES OF EARTH'S CRUST**

<b>Assignment Title</b>	<b>Project Summary</b>	<b>Video Demo</b>	<b>Materials Needed</b>
Project: Crystal Systems	In this project, you will create three-dimensional models of crystals in each crystal system.	No	<ul style="list-style-type: none"> <li>• paper</li> <li>• pencil</li> <li>• scissors</li> <li>• glue or tape</li> </ul>
Project: Nuclear Energy	In this project, you will research nuclear energy.	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: SHAPING EARTH'S CRUST**

<b>Assignment Title</b>	<b>Project Summary</b>	<b>Video Demo</b>	<b>Materials Needed</b>
Project: Soil Particles	In this experiment, you will observe how particle size affects the soil profile.	No	<ul style="list-style-type: none"> <li>• 1 1/2 cups potting soil</li> <li>• 1/2 cup sand</li> <li>• 2 wide-mouthed juice bottles with lids</li> <li>• Masking tape</li> <li>• Pen</li> <li>• Spoon</li> <li>• Water</li> </ul>
Project: Ice Erosion	In this experiment, you will investigate how glaciers change Earth's surface.	No	<ul style="list-style-type: none"> <li>• 10 lbs. sand</li> <li>• Square of window screen or kitchen strainer</li> <li>• 2 plastic trays, about 8 x 24 inches</li> <li>• Water</li> <li>• Freezer</li> <li>• Ruler</li> <li>• Bucket</li> <li>• Measuring cup</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 6: EARTH'S WATER

Assignment Title	Project Summary	Video Demo	Materials Needed
Project: Water Purification	In this experiment, you will purify water using a solar still.	No	<ul style="list-style-type: none"> <li>• 1 cup of dirt</li> <li>• 4 cups of water</li> <li>• Small glass</li> <li>• Large glass bowl</li> </ul> <ul style="list-style-type: none"> <li>• Clear plastic wrap</li> <li>• Small, round rock</li> <li>• Sunshine</li> </ul>
Project: Water Conservation	In this project, you will research ways to conserve water.	No	<ul style="list-style-type: none"> <li>• posterboard</li> <li>• colored pencils or markers</li> </ul>
Experiment: Porosity and Permeability	In this experiment, you will measure porosity and permeability.	No	<ul style="list-style-type: none"> <li>• Water</li> <li>• Graduated cylinder</li> <li>• 6 clear, plastic cups</li> <li>• Permanent marker</li> <li>• Metric ruler</li> <li>• Large, medium, and small pebbles (about 1 cup each)</li> </ul> <ul style="list-style-type: none"> <li>• Gravel, sand, and dirt (about 1 cup each)</li> <li>• Funnel</li> <li>• 3 coffee filters</li> <li>• Ring stand</li> <li>• Stopwatch or watch with a second hand</li> </ul>
Experiment: Fresh Water vs. Saltwater	In this experiment, you will compare freshwater and saltwater.	No	<ul style="list-style-type: none"> <li>• 4 tablespoons salt</li> <li>• Water</li> <li>• 2 clear glasses</li> <li>• Measuring cup</li> <li>• Tablespoon</li> <li>• 2 eggs</li> <li>• 2 plastic cups</li> <li>• Spoon</li> <li>• Marker</li> </ul> <ul style="list-style-type: none"> <li>• Freezer</li> <li>• Stove</li> <li>• Small pot</li> <li>• Stopwatch or watch with a second hand</li> <li>• 2 pie plates or shallow pans about the same size</li> <li>• Paper</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: EARTH'S ATMOSPHERE**

<b>Assignment Title</b>	<b>Project Summary</b>	<b>Video Demo</b>	<b>Materials Needed</b>
Project: Layers of the Atmosphere	In this project, you will distinguish the layers of the atmosphere, and create a model of the atmospheric layers.	No	<ul style="list-style-type: none"> <li>• crayons, markers, or colored pencils</li> <li>• posterboard</li> </ul>
Project: Solar Energy	In this project, you will illustrate the Sun's relationship with Earth.	No	<ul style="list-style-type: none"> <li>• posterboard</li> <li>• crayons, markers or colored pencils</li> </ul>
* Alternate Project: Temperature	In this project, you will Predict a material's albedo and heat absorption capability.	No	<ul style="list-style-type: none"> <li>• sheet of black paper</li> <li>• sheet of white paper</li> <li>• window with sunlight shining through</li> </ul>
Alternate Project: Barometers	For this project, you'll build your own barometer and discover the air pressure around you. You'll also learn about the weather conditions associated with pressure zones.	No	<ul style="list-style-type: none"> <li>• Coffee can or glass jar</li> <li>• Large balloon</li> <li>• Rubber band (big enough to fit around the top of the coffee can or jar)</li> <li>• Toothpick</li> <li>• Glue</li> <li>• Straw</li> <li>• Index card</li> </ul>
Project: Greenhouse Effect	In this investigation, you will create your own "greenhouse" to demonstrate the greenhouse effect.	No	<ul style="list-style-type: none"> <li>• 2 shoe boxes or any other boxes that are similar in size</li> <li>• Sheet of clear plastic (plastic wrap) or a pane of glass</li> <li>• 2 thermometers for measuring air temperatures</li> <li>• 2 shoe boxes or any other boxes that are similar in size</li> <li>• Sheet of clear plastic (plastic wrap) or a pane of glass</li> <li>• 2 thermometers for measuring air temperatures</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: EARTH'S WEATHER AND CLIMATE**

Assignment Title	Project Summary	Video Demo	Materials Needed
*Project: Clouds and Rain	For this project, you will use these key ingredients to create your own cloud.	No	<ul style="list-style-type: none"> <li>• 2-liter plastic soda bottle</li> <li>• Matches (adult supervision required)</li> <li>• Hot tap water</li> <li>• Black paper</li> </ul>
Project: Research Your Climate	In this lesson, you'll learn more about your area's climate by conducting research on it.	No	<ul style="list-style-type: none"> <li>• Posterboard</li> <li>• Markers or crayons</li> <li>• Paper</li> <li>• Pen or pencil</li> </ul>
Project: Predict the Weather	In this project, you'll be able to build some tools, record weather conditions, and make your own prediction about the weather in your area.		<ul style="list-style-type: none"> <li>• pen</li> <li>• paper</li> <li>• coffee can or glass jar</li> <li>• large balloon</li> <li>• rubber band (big enough to fit around the top of the coffee can or jar)</li> <li>• toothpick</li> <li>• glue</li> <li>• straw</li> <li>• index card</li> <li>• 2 thermometers</li> <li>• tape</li> <li>• wet piece of cotton, gauze, or cloth</li> <li>• rubber band</li> <li>• piece of cardboard</li> <li>• compass</li> <li>• beaufort scale</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: ASTRONOMY**

Assignment Title	Project Summary	Video Demo	Materials Needed
Project: Newton's Law	In this experiment, you will examine Newton's laws of gravity and motion in an experiment.	No	<ul style="list-style-type: none"> <li>• water</li> <li>• bucket with handle</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