



monarch

2018 - 2019 Science Supply List

Earth Science

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UNIT 1: DYNAMIC STRUCTURE OF EARTH

Assignment	Summary	Video Demo	Supplies
Project: Research a Career	Choose one of the scientific career fields listed in this project and write a report that will give you a closer look at what this type of scientist does in his/her work.	No	<ul style="list-style-type: none"> research resources
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"> research resources
Project: Flow of Energy	In this project, you will construct a food web.	No	<ul style="list-style-type: none"> Computer-based, graphics program <p>or</p> <ul style="list-style-type: none"> Poster board Colored pencils or markers
*Special Project	Use this Special Project template to create your own assignment for this unit.	N/A	N/A

UNIT 2: FORCES AND FEATURES OF EARTH

Assignment	Summary	Video Demo	Supplies
*Project: Create a Topographic Map	Create a topographic map of an area.	No	<ul style="list-style-type: none"> pencil crayons or colored pencils paper
*Special Project	Use this Special Project template to create your own assignment for this unit.	N/A	N/A

UNIT 3: FEATURES OF EARTH'S CRUST

Assignment	Summary	Video Demo	Supplies
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"> • paper • scissors • glue or tape • printer
Project: Nuclear Energy	In this project, you will research nuclear energy.	No	<ul style="list-style-type: none"> • research resources
*Special Project	Use this Special Project template to create your own assignment for this unit.	N/A	N/A

UNIT 4: SHAPING EARTH'S CRUST

Assignment	Summary	Video Demo	Supplies
Project: Soil Particles	The size of particles in soil determines how much water the soil will hold. Small particles hold more water than large particles. In this experiment, you will observe how particle size affects the soil profile.	No	<ul style="list-style-type: none"> • 1 1/2 cups potting soil • 1/2 cup sand • 2 wide-mouthed juice bottles with lids • Masking tape • Pen • Spoon • Water
Project: Ice Erosion	In this experiment, you will investigate how glaciers change Earth's surface.	No	<ul style="list-style-type: none"> • 10 lbs. sand • Square of window screen or kitchen strainer • 2 plastic trays, about 8 x 24 inches • Water • Freezer • Ruler • Bucket • Measuring cup
*Special Project	Use this Special Project template to create your own assignment for this unit.	N/A	N/A

UNIT 6: EARTH’S WATER

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

UNIT 7: EARTH'S ATMOSPHERE

Assignment	Summary	Video Demo	Supplies
Project: Layers of the Atmosphere	This project will test your knowledge of each layer of the atmosphere and its characteristics.	No	<ul style="list-style-type: none"> • Crayons, markers, or colored pencils • Poster board
Project: Solar Energy	In this project, you will illustrate the Sun's relationship with Earth.	No	<ul style="list-style-type: none"> • Crayons, markers, or colored pencils • Poster board
*Alternate Project: Temperature	Observe the relative heat absorption of different materials. Predict a material's albedo and heat absorption capability.	No	<ul style="list-style-type: none"> • Sheet of black paper • Sheet of white paper • Window • Sunlight shining through the window
*Alternate Project: Barometers	For this project, you'll build your own barometer and discover the air pressure around you.	No	<ul style="list-style-type: none"> • Coffee can or glass jar • Large balloon • Rubber band (big enough to fit around the top of the coffee can or jar) • Toothpick • Glue • Straw • Index card
Project: Greenhouse Effect	In this investigation, you will create your own "greenhouse" to demonstrate the greenhouse effect.	No	<ul style="list-style-type: none"> • 2 shoe boxes or any other boxes that are similar in size • Sheet of clear plastic (plastic wrap) or a pane of glass • 2 thermometers for measuring air temperatures • Watch or stop watch • Paper and pen to record temperature results • 2 lamps (only needed if it's a cloudy day)
*Special Project	Use this Special Project template to create your own assignment for this unit.	N/A	N/A

UNIT 8: EARTH'S WEATHER AND CLIMATE

Assignment	Summary	Video Demo	Supplies
Project: Clouds and Rain	In this lesson, you'll not only make a cloud, but you will also prepare for rain, by making a rain gauge.	No	<ul style="list-style-type: none"> • 2 -2-liter plastic soda bottle • Matches (adult supervision required) • Hot tap water • Black paper • Masking tape <ul style="list-style-type: none"> • Scissors or cutting tool • Ruler • Permanent marker • An adult to assist
Project: Research Your Climate	In this lesson, you'll learn more about your area's climate by conducting research on it. You will also create a poster to illustrate your climate's features.	No	<ul style="list-style-type: none"> • Poster board • Markers or crayons • Paper • Pen or pencil • Research resources
Project: Predict the Weather	In this project, you'll be able to build some of the tools, record weather conditions, and make your own prediction about the weather in your area. The project is presented in two sections.	No	<ul style="list-style-type: none"> • Paper • Pencil • Coffee can or glass jar • Large balloon • Rubber band (big enough to fit around the top of the coffee can or jar) <ul style="list-style-type: none"> • Toothpick • Glue • Straw • Index card
*Special Project	Use this Special Project template to create your own assignment for this unit.	N/A	N/A

UNIT 9: ASTRONOMY

Assignment	Summary	Video Demo	Supplies
Project: Newton's Law	This experiment will allow you to test some of Newton's laws of gravity and motion.	Yes	<ul style="list-style-type: none"> • Water • Bucket with a handle
*Special Project	Use this Special Project template to create your own assignment for this unit.	N/A	N/A

* indicates an alternative assignment