



ODYSSEYWARE®

2010-2011 Science Lab List

Earth Science

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EARTH SCIENCE (2010): UNIT 1 - ORIGIN OF THE EARTH

Assignment Number	Assignment Title	Project Summary and Supply List	Video Demo
2	Project: Research a Career	Your goals for this assignment are to research a career field in science and to write a report describing a scientific field. Supply List: N/A	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
5	Project: Doppler Effect	Your goal for this assignment is to apply the Doppler effect to determine the motion of an object. Supply List: N/A	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
10	Project: Newton's Law	Your goal for this assignment is to examine Newton's laws of gravity and motion in an experiment. Supply List: <ul style="list-style-type: none"> • Water • Bucket with a handle 	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (Animation Demo)
13	Project: Earth Comparisons	Your goal for this assignment is to compare and contrast factors essential to life on Earth to conditions on other planets. Supply List: N/A	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
15	Special Project	Special Project assignments are used by teachers to create their own projects if needed.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

EARTH SCIENCE (2010): UNIT 2 - HISTORY OF THE EARTH

Assignment Number	Assignment Title	Project Summary and Supply List	Video Demo
3	Project: Relative Dating	Your goal for this assignment is to identify and apply stratigraphic laws to rock strata. Supply List:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
7	Project: The Clock of Eons	Your goals for this assignment are to compare the lengths of the major eons of geologic time and to identify significant events in each eon. Supply List: <ul style="list-style-type: none"> • Computer-based graphics program or Posterboard • Colored pencils or markers 	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
9	Project: Before, During, and After a Mass Extinction	Your goal for this assignment is to analyze the earth's structure and living organisms during a mass extinction. Supply List: <ul style="list-style-type: none"> • Internet access • Large paper folded into 3 equal sections • Colored pens or pencils 	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
11	Project: Greenhouse Effect	Your goals for this assignment are to hypothesize about the effect of carbon dioxide on temperature, to discover if carbon dioxide has an effect on temperature, and to discuss possible effects of current carbon dioxide emissions on today's climate. Supply List: <ul style="list-style-type: none"> • 2 clear, 2-liter bottles • 2 seltzer tablets • 2 thermometers that can measure room temperatures (at least 60°F to 100°F) • table-top lamp to use as a source of heat • 1 cup of water • molding clay 	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
13	Special Project	Special Project assignments are used by teachers to create their own projects if needed.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

EARTH SCIENCE (2010): UNIT 3 - DYNAMIC STRUCTURE OF EARTH

Assignment Number	Assignment Title	Project Summary and Supply List	Video Demo
2	Project: Building a Model of the Earth	Your goal for this assignment is to distinguish the layers of the interior of the earth by creating a model of Earth. Supply List: N/A	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
5	Project: Mantle Convection	Your goal for this assignment is to use a process of convection to explain how Earth's crustal plates move. Supply List: N/A	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
7	Project: Plate Boundaries	Your goals for this assignment are to distinguish types of plate boundaries and to identify the results of plate interactions. Supply List: N/A	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
10	Project: Sphere Interaction Lab	Your goal for this assignment is to identify a variety of sphere interactions of Earth. Supply List: N/A	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
13	Project: The Story of the Spheres	Your goal for this assignment is to construct a story about Earth's spheres and cycles. Supply List: N/A	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
15	Project: Flow of Energy	Your goals for this assignment are to draw a food web representing the flow of energy in an ecosystem and to investigate how changes in an ecosystem affect a food web. Supply List: <ul style="list-style-type: none"> • Computer-based, graphics program or posterboard • Colored pencils or markers 	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
17	Special Project	Special Project assignments are used by teachers to create their own projects if needed.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

EARTH SCIENCE (2010): UNIT 4 - FORCES AND FEATURES OF EARTH

Assignment Number	Assignment Title	Project Summary and Supply List	Video Demo
4	Project: Earthquake Features Lab	Your goals for this assignment are to identify geological features involved with earthquake activity and to relate earthquake features to plate tectonics. Supply List: N/A	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
10	Project: Volcanic Features Lab	Your goal for this assignment is to identify and distinguish various geological features involved with volcanic activity. Supply List: N/A	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
14	Project: Mapping	Your goals for this assignment are to identify features of areas using geologic and topographic maps and to create a topographic map of an area. Supply List: N/A	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
16	Special Project	Special Project assignments are used by teachers to create their own projects if needed.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

EARTH SCIENCE (2010): UNIT 5 - FEATURES OF EARTH'S CRUST			
Assignment Number	Assignment Title	Project Summary and Supply List	Video Demo
2	Project: Crystal Systems	Your goal for this assignment is to use models to explore the structure of mineral crystals. Supply List: <ul style="list-style-type: none"> • Paper • Printer • Scissors • Glue or tape 	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
4	Project: Identifying a Mineral	Your goal for this assignment is to identify unknown minerals using their physical properties. Supply List: N/A	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
10	Project: Identifying a Rock	Your goal for this assignment is to identify unknown rocks using their physical properties. Supply List: N/A	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
14	Project: Nuclear Energy	Your goal for this assignment is to research nuclear energy and its use for generating electricity. Supply List: N/A	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
16	Special Project	Special Project assignments are used by teachers to create their own projects if needed.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

EARTH SCIENCE (2010): UNIT 6 - SEMESTER REVIEW AND EXAM			
Assignment Number	Assignment Title	Project Summary and Supply List	
N/A	N/A	N/A	

EARTH SCIENCE (2010): UNIT 7 - SHAPING EARTH'S CRUST

Assignment Number	Assignment Title	Project Summary and Supply List	Video Demo
4	Project: Soil Particles	<p>Your goal for this assignment is to describe how particle size affects the settling of soil.</p> <p>Supply List:</p> <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 	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
8	Project: Ice Erosion	<p>Your goal for this assignment is to observe ice erosion.</p> <p>Supply List:</p> <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 	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
14	Special Project	Special Project assignments are used by teachers to create their own projects if needed.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

EARTH SCIENCE (2010): UNIT 8 - EARTH'S WATER

Assignment Number	Assignment Title	Project Summary and Supply List	Video Demo
2	Project: Water Purification	<p>Your goal for this assignment is to explain how evaporation and condensation can be used to purify water.</p> <p>Supply List:</p> <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 	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
5	Project: Water Conservation	<p>Your goal for this assignment is to describe ways to conserve water.</p> <p>Supply List:</p> <ul style="list-style-type: none"> • Posterboard • Colored pencils or markers 	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
8	Experiment: Porosity and Permeability	<p>Your goals for this assignment are to measure soil porosity and to compare the permeability of different soils.</p> <p>Supply List:</p> <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 	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
13	Experiment: Fresh Water vs. Saltwater	<p>Your goal for this assignment is to compare and contrast physical properties of freshwater and saltwater.</p> <p>Supply List:</p> <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 	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
17	Special Project	Special Project assignments are used by teachers to create their own projects if needed.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

EARTH SCIENCE (2010): UNIT 9 - EARTH'S ATMOSPHERE

Assignment Number	Assignment Title	Project Summary and Supply List	Video Demo
2	Project: Evolution of the Atmosphere	Your goal for this assignment is to label the evolution of the atmosphere timeline with graphic descriptions. Supply List: N/A	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
4	Project: Layers of the Atmosphere	Your goals for this assignment are to distinguish the layers of the atmosphere and to create a model of the atmospheric layers. Supply List: <ul style="list-style-type: none"> • Crayons, markers, or colored pencils • Posterboard 	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
8	Project: Solar Energy	Your goal for this assignment is to illustrate how the Sun affects Earth. Supply List: <ul style="list-style-type: none"> • Crayons, markers, or colored pencils • Posterboard 	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
9	Alternate Project: Temperature	Your goals for this assignment are to predict a material's albedo and heat absorption capability and to observe the relative heat absorption of different materials. Supply List: <ul style="list-style-type: none"> • Sheet of black paper • Sheet of white paper • Window • Sunlight shining through the window 	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
11	Project: Air Circulation	Your goals for this assignment are to identify air circulation patterns and to relate pressure and temperature to air flow. Supply List: N/A	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
12	Alternate Project: Barometers	Your goals for this assignment are to create a barometer and measure air pressure and to relate air pressure to weather conditions. Supply List: <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 	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
15	Project: Greenhouse Effect	Your goals for this assignment are to demonstrate the greenhouse effect and to relate your greenhouse to the global greenhouse effect. Supply List: <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) 	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
17	Special Project	Special Project assignments are used by teachers to create their own projects if needed.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

EARTH SCIENCE (2010): UNIT 10 - EARTH'S WEATHER AND CLIMATE

Assignment Number	Assignment Title	Project Summary and Supply List	Video Demo
2	Project: Weather or Climate?	Your goal for this assignment is to distinguish between weather and climate conditions. Supply List: N/A	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
4	Project: Clouds and Weather	Your goals for this assignment are to identify different types of clouds and to relate clouds to weather conditions. Supply List: N/A	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
5	Project: Clouds and Rain	Your goals for this assignment are to create a cloud in a bottle and to examine rainfall amounts in your local area. Supply List: <ul style="list-style-type: none"> • 2-liter plastic soda bottle • Matches (adult supervision required) • Hot tap water • Black paper 	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
9	Project: Control the Weather	Your goal for this assignment is to describe how temperature differences and humidity produce weather conditions. Supply List: N/A	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
12	Project: Research Your Climate	Your goal for this assignment is to illustrate and describe your climate. Supply List: <ul style="list-style-type: none"> • Posterboard • Markers or crayons • Paper • Pen or pencil 	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
16	Project: Predict the Weather	Your goals for this assignment are to create weather instruments and to monitor weather conditions and make a weather forecast. Supply List: <ul style="list-style-type: none"> • Paper • Pen or pencil • 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 • 2 thermometers • Tape • Wet piece of cotton, gauze, or cloth • Rubber band • Piece of cardboard 	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
18	Special Project	Special Project assignments are used by teachers to create their own projects if needed.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

=EARTH SCIENCE (2010): UNIT 11 - ASTRONOMY

Assignment Number	Assignment Title	Project Summary and Supply List	Video Demo
3	Project: Scale of the Solar System	Your goal for this assignment is to compare the sizes of the Sun and the planets. Supply List: N/A	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
9	Project: Life Histories of Stars	Your goal for this assignment is to review the life histories of stars and create one or two posters that depict the lifetimes of two stars. Supply List: <ul style="list-style-type: none"> • Computer graphics program or posterboard • Colored pencils or markers 	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
12	Project: Identifying Galaxies	Your goal for this assignment is to distinguish among the types of galaxies. Supply List: N/A	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
15	Special Project	Special Project assignments are used by teachers to create their own projects if needed.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

EARTH SCIENCE (2010): UNIT 12 - SEMESTER REVIEW AND EXAM

Assignment Number	Assignment Title	Project Summary and Supply List
N/A	N/A	N/A

EARTH SCIENCE (2010): UNIT 13 - FINAL EXAM

Assignment Number	Assignment Title	Project Summary and Supply List
N/A	N/A	N/A