

Odysseyware®

# SUPPLY LIST

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Science 400



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**UNIT 1: PLANTS**


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Assignment	Summary	Video Demo	Supplies
Project: Things Made of Wood	Look around your house tonight and make a list of all the things you can find that are made of wood.	No	N/A
*Project: Fruit	In a paragraph, write a short description and history of one of the fruits that come from another country.	No	<ul style="list-style-type: none"> <li>research resources</li> </ul>
*Project: Plant Products	Write a paragraph about a product made from plants.	No	<ul style="list-style-type: none"> <li>research resources</li> </ul>
Experiment: Celery	In this experiment you will prove that the stem carries water through the whole plant. This experiment may take several days to complete.	Yes	<ul style="list-style-type: none"> <li>fresh celery stalk (stem) with leaves on top</li> <li>red ink or red food coloring</li> <li>a knife</li> <li>a glass of water</li> </ul>
*Special Project	Use this Special Project template to create your own assignment for this unit.	N/A	N/A

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**UNIT 2: ANIMALS**


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Assignment	Summary	Video Demo	Supplies
Project: Insects	Write a three-paragraph report of 150 words about an insect.	No	<ul style="list-style-type: none"> <li>research resources</li> </ul>
*Project: Reptiles	Construct a simple classification system for reptiles.	No	<ul style="list-style-type: none"> <li>research resources</li> </ul>
Project: Endangered Species	Write a three-paragraph report of 150 words about an endangered animal.	No	<ul style="list-style-type: none"> <li>research resources</li> </ul>
*Special Project	Use this Special Project template to create your own assignment for this unit.	N/A	N/A

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**UNIT 3: THE ENVIRONMENT**


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Assignment	Summary	Video Demo	Supplies
*Project: Your Environment	In this project you will study your environment.	No	<ul style="list-style-type: none"> <li>drawing paper</li> </ul>
*Project: Populations	In this project you will study about the populations of both plant and animal in your environment.	No	<ul style="list-style-type: none"> <li>drawing paper</li> </ul>

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*Project: Balance of Nature	Type a 150-word report of what happened when rabbits were introduced into the Australian ecosystem.	No	<ul style="list-style-type: none"> <li>research resources</li> </ul>	
*Experiment: Still Water Life	Still-water ponds and marshes offer another treasure chest of living things. Catch some animals to observe. In this way you can observe them closely. This project is one that you should work on with an adult.	Yes	<ul style="list-style-type: none"> <li>one or more kitchen strainers</li> <li>a number of wide-mouthed jars</li> <li>an aquarium if one is available</li> <li>a hand-held magnifying glass</li> </ul>	<ul style="list-style-type: none"> <li>some cloth or netting to put over jars</li> <li>some string</li> <li>a microscope</li> </ul>
*Project: Terrarium or Diorama	Build a desert terrarium.	No	<ul style="list-style-type: none"> <li>a clean, empty two-liter plastic bottle (with the top cut off)</li> <li>one cup of gravel (tiny rocks)</li> <li>one-half cup of broken pieces charcoal</li> </ul>	<ul style="list-style-type: none"> <li>two cups of sand</li> <li>one cup of potting soil</li> <li>desert plants, like cactus</li> <li>water</li> </ul>
*Project: Land Community	Write a three-paragraph report of 150 words about a community.	No	<ul style="list-style-type: none"> <li>research resources</li> </ul>	
*Project: Endangered Species	Research an endangered species and write a paragraph about what is being done to help save it.	No	<ul style="list-style-type: none"> <li>research resources</li> </ul>	
*Project: How to Save Energy	Make a list with a friend of ways to save energy.	No	<ul style="list-style-type: none"> <li>research resources</li> </ul>	
*Project: Special Treasures	Discover special treasures in National Parks.	No	<ul style="list-style-type: none"> <li>research resources</li> </ul>	
*Special Project	Use this Special Project template to create your own assignment for this unit.	N/A		N/A

## UNIT 4: MACHINES

Assignment	Summary	Video Demo	Supplies
*Report: Galileo	Read about Galileo and answer some questions.	No	<ul style="list-style-type: none"> <li>research resources</li> </ul>
*Experiment: Gravity	In this experiment you will test gravity.	No	<ul style="list-style-type: none"> <li>a sheet of paper</li> <li>a ball</li> </ul>

Experiment: Hammer and Nail	In the experiment you will see if it is easier to remove a nail from a piece of wood with your hand or a hammer.	Yes	<ul style="list-style-type: none"> <li>a large nail</li> <li>a hammer</li> </ul>	<ul style="list-style-type: none"> <li>a block of wood</li> </ul>
*Experiment: Seesaw	Find out if the distance between the fulcrum, the effort, and the load makes a difference in the amount of force needed to raise the load.	No	<ul style="list-style-type: none"> <li>a friend who weighs about the same as you</li> <li>a seesaw</li> </ul>	
*Experiment: Inclined Plane	In this experiment you will learn about inclined planes.	Yes	<ul style="list-style-type: none"> <li>four textbooks, each at least 3 cm thick</li> <li>a toy truck or car</li> </ul>	<ul style="list-style-type: none"> <li>a board about 1 meter long that is wider than the toy truck</li> <li>a spring scale</li> </ul>
*Experiment: Screw and Nail	In this investigation you will learn about the differences between a screw and a nail.	Yes	<ul style="list-style-type: none"> <li>one wood screw and one nail—each about 21/2 cm long</li> <li>two thin pieces of wood less than 1 cm thick</li> </ul>	<ul style="list-style-type: none"> <li>two thicker pieces of wood</li> <li>one hammer</li> <li>one screwdriver</li> </ul>
* Experiment: Pulleys	In this experiment you will learn about pulleys.	Yes	<ul style="list-style-type: none"> <li>two pulleys</li> <li>a light rope about two meters long</li> </ul>	<ul style="list-style-type: none"> <li>a two-kilogram weight</li> <li>a spring scale</li> <li>a broomstick</li> </ul>
*Special Project	Use this Special Project template to create your own assignment for this unit.	N/A		N/A

## UNIT 5: ELECTRICITY AND MAGNETISM

Assignment	Summary	Video Demo	Supplies
Project: Thomas Edison	In this project you will pretend that you are a newspaper reporter and write a news story about Thomas Edison.	No	research resources
Experiment: Static Electricity	In this experiment you will learn about static electricity.	No	<ul style="list-style-type: none"> <li>string</li> <li>two balloons</li> <li>piece of woolen cloth</li> <li>rubber comb or hard rubber rod</li> </ul>

Project: Conductors	In this project you will learn about insulators and conductors.	No	<ul style="list-style-type: none"> <li>metal spoon</li> <li>screwdriver handle</li> <li>screwdriver blade</li> <li>chalkboard eraser</li> <li>glass dish</li> <li>tin can</li> <li>rubber ball</li> <li>paper</li> </ul>	<ul style="list-style-type: none"> <li>paper clip</li> <li>wood</li> <li>silk</li> <li>wool</li> <li>chalk</li> <li>lemon juice</li> <li>vinegar</li> <li>pencil lead</li> <li>distilled water</li> <li>salt water</li> </ul>
* Experiment: Wet Cell	In this experiment you will make a wet cell using a lemon.	Yes	<ul style="list-style-type: none"> <li>three strips each of copper and zinc (15 x 3 cm)</li> <li>four lengths of covered copper wire, each about 50 cm long.</li> </ul>	<ul style="list-style-type: none"> <li>a glass of vinegar</li> <li>a juicy lemon</li> <li>galvanometer</li> <li>a sharp knife</li> </ul>
* Project: Electric Objects	Make a list of objects in your home that require either an electric current or a battery to make them operate.	No		N/A
Project: Fuses	For this project, you will need adult supervision and the permission of someone who owns a car. Tell where you found the fuse block, how many fuses there were, and whether or not any were burned out.	No	<ul style="list-style-type: none"> <li>access to a fuse box in a car</li> </ul>	
Experiment: Use a Magnet	In this experiment you will learn about magnets.	No	<ul style="list-style-type: none"> <li>one magnet</li> <li>one small piece of paper</li> <li>two paper clips</li> <li>one penny</li> <li>two rubber bands</li> <li>one nickel</li> </ul>	<ul style="list-style-type: none"> <li>five pins</li> <li>one tin can</li> <li>one piece of chalk</li> <li>one small plastic cup</li> <li>two bits of wood</li> <li>two sewing needles</li> </ul>
Experiment: Make a Magnet	In this experiment you will make a magnet.	Yes	<ul style="list-style-type: none"> <li>some iron filings</li> <li>a bar magnet</li> </ul>	<ul style="list-style-type: none"> <li>a large iron nail</li> </ul>
* Experiment: Magnetic Poles	In this experiment you will discover the north and south poles of a magnet.	Yes	<ul style="list-style-type: none"> <li>bar magnet</li> <li>iron filings</li> </ul>	<ul style="list-style-type: none"> <li>one sheet of paper</li> </ul>

*Experiment: Testing a Magnet	In this experiment you will test to see if a magnet will point to the north.	Yes	<ul style="list-style-type: none"> <li>a compass</li> <li>about 40 cm of heavy string</li> <li>a bar magnet</li> </ul>	<ul style="list-style-type: none"> <li>a stack of books</li> <li>meter stick</li> </ul>
* Experiment: Generate Electricity	In this experiment you will generate electricity.	Yes	<ul style="list-style-type: none"> <li>galvanometer</li> <li>a bar magnet</li> <li>bell wire</li> </ul>	<ul style="list-style-type: none"> <li>a mailing tube or the cardboard tube from a roll of paper towels</li> </ul>
* Experiment: Electromagnet	In this experiment you will learn about electromagnets.	Yes	<ul style="list-style-type: none"> <li>a large iron nail</li> <li>a knife switch</li> <li>some bell wire</li> </ul>	<ul style="list-style-type: none"> <li>small metal objects</li> <li>a dry cell</li> </ul>
*Special Project	Use this Special Project template to create your own assignment for this unit.	N/A		N/A

## UNIT 6: MATTER AND WATER

Assignment	Summary	Video Demo	Supplies
Experiment: Ice	In this experiment you will study water as a solid	No	<ul style="list-style-type: none"> <li>a plastic bowl large enough to hold 3 or 4 cups of water</li> <li>2 or 3 ice cubes</li> </ul>
*Experiment: Ice Volume	In this experiment you will demonstrate how ice is larger in volume than water.	Yes	<ul style="list-style-type: none"> <li>1 small paper cup</li> <li>enough crushed ice to fill the cup</li> </ul>
*Experiment: Potato	In this experiment you will learn how much of a potato is water.	Yes	<ul style="list-style-type: none"> <li>1 raw potato</li> <li>1 scale (to weigh ounces or grams)</li> <li>1 heavy-duty plastic knife</li> <li>a paper towel</li> </ul>
*Experiment: Forming Dew	In this experiment you will demonstrate how water exists as a gas.	Yes	<ul style="list-style-type: none"> <li>1 small tin can, fruit juice type (be sure there are no sharp edges)</li> <li>enough ice to fill the can</li> </ul>
Experiment: Make a Cloud	In this experiment, you will make your own cloud in a jar.	No	<ul style="list-style-type: none"> <li>large glass jar</li> <li>warm water</li> <li>food coloring</li> <li>large plastic bag ice</li> <li>match</li> <li>black construction paper</li> </ul>
*Experiment: Molecules	In this experiment you will learn about the travel of molecules.	No	<ul style="list-style-type: none"> <li>1 bottle of strong smelling perfume</li> <li>1 bottle of household ammonia</li> </ul>

*Special Project	Use this Special Project template to create your own assignment for this unit.	N/A	N/A
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## UNIT 7: WEATHER

Assignment	Summary	Video Demo	Supplies
*Experiment: Air and Space	In this experiment you will find out if air takes up space.	Yes	<ul style="list-style-type: none"> <li>a water glass</li> <li>a pan full of water</li> </ul>
Experiment: Temperature	In this experiment you will study the absorption of heat on different surfaces.	No	<ul style="list-style-type: none"> <li>sheet of black paper</li> <li>window</li> <li>sunlight shining through the window</li> </ul>
Experiment: Air Pressure	In this experiment you will find another property of air pressure.	Yes	<ul style="list-style-type: none"> <li>drinking glass full of water</li> <li>piece of cardboard large enough to cover the glass</li> <li>sink or large basin to catch the water after the experiment</li> </ul>
*Project: Hurricanes	Use an encyclopedia to gather information about two or more hurricanes. Write a report answer the questions in the assignment.	No	<ul style="list-style-type: none"> <li>encyclopedia</li> </ul>
*Project: Thermometers	In this project you will examine two thermometers and answer some questions.	No	<ul style="list-style-type: none"> <li>a Fahrenheit thermometer</li> <li>a Celsius thermometer</li> </ul>
*Special Project	Use this Special Project template to create your own assignment for this unit.	N/A	N/A

## UNIT 8: THE UNIVERSE AND SOLAR SYSTEM

Assignment	Summary	Video Demo	Supplies
Project: Astronomy Tools	Write, in your own words, complete sentences that tell something about the instrument you selected that is not explained in the section.	No	<ul style="list-style-type: none"> <li>research resources</li> </ul>
*Project: Astronomy	Write a paragraph explaining why astronomers' minds are more important than the instruments they use.	No	N/A
* Project: Sun Myths	Choose a culture from the list in the assignment. Write a 130-word essay describing their beliefs about the sun.	No	<ul style="list-style-type: none"> <li>research resources</li> </ul>



* Project: Isaac Newton	Write two or three paragraphs of 150 words about Isaac Newton.	No	• research resources	
Experiment: Moon Phases	Draw each of phase of the moon in the order they appear. Then answer some questions.	No	• drawing paper • pencil	• research resources
*Special Project	Use this Special Project template to create your own assignment for this unit.	N/A		N/A

## UNIT 9: THE PLANET EARTH

Assignment	Summary	Video Demo	Supplies	
Experiment: Condensation	In this experiment you will learn about condensation.	Yes	• a drinking glass • some ice cubes	• some flavored beverage • a clean cloth or tissue
*Experiment: Currents	In this experiment you will learn about currents.	Yes	• a glass • two ice cubes	• some hot water • a paper towel
Experiment: Shadows	In this experiment you will learn about shadows.	Yes	• a ball (3 to 5 inches) • a light source	• a disk (3 to 5 inches)
*Special Project	Use this Special Project template to create your own assignment for this unit.	N/A		N/A

## UNIT 10: REVIEW

Assignment	Summary	Video Demo	Supplies	
*Project: Weather Scrapbook	Make a scrapbook containing about weather.	No	• magazines or newspapers	• Paper • scissors
* Project: Alessandro Volta	Use the library and other resources to research Volta. Write a two-paragraph report about what you learn.	No	• research resources	
* Project: Passenger Pigeon	Type a couple paragraphs on Passenger Pigeon using 130 words about this extinct bird.	No	• research resources	
*Special Project	Use this Special Project template to create your own assignment for this unit.	N/A		N/A

\* indicates an alternative assignment