



# 2014-2015 Science Supply List

General Science II

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**UNIT 1: SCIENCE AND SOCIETY**

| Assignment Title          | Project Summary  | Video Demo | Materials Needed   |
|---------------------------|--|------------|--|
| Essay: Gregor Mendel      | In this essay, you will write an essay about Gregor Mendel.                              | No         | <ul style="list-style-type: none"> <li>research resources</li> </ul> |
| *Essay: Leonardo Da Vinci | In this essay, you will Write an essay about Leonardo daVinci's inventions.              | 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 2: STRUCTURE OF MATTER (PART 1)**

| Assignment Title                 | Project Summary  | Video Demo | Materials Needed   |
|----------------------------------|--|------------|--|
| Experiment: Determining Volume   | In this experiment, you will attempt to determine the volume of two objects, using two different methods.  | No         | <ul style="list-style-type: none"> <li>a metric ruler</li> <li>an object with linear sides or a common geometric shape</li> <li>string</li> <li>water</li> <li>small rock</li> <li>graduated cylinder</li> </ul> |
| *Experiment: Metric Measurement  | In this experiment, you will utilize a balance to find mass, calculate volume from measurements, calculate density from data on mass and volume, and read a Celsius thermometer. | Yes        | <ul style="list-style-type: none"> <li>a balance</li> <li>a metric ruler</li> <li>a small, rectangular wooden block</li> </ul>   |
| Experiment: Separating A Mixture | In this experiment, you will utilize a filter to separate a mixture of sand and water and summarize your findings.   | Yes        | <ul style="list-style-type: none"> <li>salt</li> <li>water</li> <li>sand</li> <li>a measuring cup</li> <li>a balance</li> <li>filter 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 3: STRUCTURE OF MATTER (PART 2)**

| Assignment Title                  | Project Summary  | Video Demo | Materials Needed  |
|-----------------------------------|--|------------|---|
| Experiment: Phase Changes         | In this experiment you will observe phase changes in water.  | No         | <ul style="list-style-type: none"> <li>• crushed ice</li> <li>• string</li> <li>• burner or alcohol lamp</li> <li>• beaker</li> <li>• ceramic pad</li> </ul> <ul style="list-style-type: none"> <li>• thermometer</li> <li>• ring stand or alcohol stand</li> <li>• ethyl alcohol for use with alcohol lamp</li> <li>• time piece with a second hand</li> </ul>   |
| Experiment: Forms Of Change       | In this investigation, you will be conducting a simple experiment. You will classify the result as a physical or chemical change.                              | No         | <ul style="list-style-type: none"> <li>• sugar</li> <li>• beaker</li> </ul> <ul style="list-style-type: none"> <li>• water</li> <li>• stirring rod or teaspoon</li> </ul>   |
| Experiment: The Cabbage Indicator | In this experiment, you will use indicator for each substance to determine if substance is an acid or a base and summarize results and the experimental method | Yes        | <ul style="list-style-type: none"> <li>• red cabbage</li> <li>• 6 small test tubes</li> <li>• knife</li> <li>• crayons</li> <li>• a pot</li> <li>• a stove or other heat source</li> </ul> <ul style="list-style-type: none"> <li>• a small jar</li> <li>• a spoon</li> <li>• baking soda in water</li> <li>• lemon juice</li> <li>• vinegar</li> <li>• water</li> <li>• ammonia</li> <li>• milk</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: HEALTH AND NUTRITION**

| Assignment Title               | Project Summary  | Video Demo | Materials Needed  |
|--------------------------------|--|------------|---|
| Experiment: Weekly Food Record | In this experiment, you will record your diet for a week utilizing the chart and write a description of the foods eaten in each category | No         | <ul style="list-style-type: none"> <li>• access to a printer</li> </ul> |
| Essay: Nutrition               | In this essay, you will write about nutrition.   | 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 5: ENERGY (PART 1)**

| Assignment Title               | Project Summary  | Video Demo | Materials Needed   |
|--------------------------------|--|------------|--|
| *Essay: Entropy And God's Plan | In this essay, you will write a report on the implications of entropy to a Christian     | No         | <ul style="list-style-type: none"> <li>a Christian friend</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: ENERGY (PART 2)**

| Assignment Title           | Project Summary  | Video Demo | Materials Needed  |
|----------------------------|--|------------|---|
| Experiment: Magnetism      | In this experiment, you will diagram the magnetic fields around the magnets.             | Yes        | <ul style="list-style-type: none"> <li>two bar magnets</li> <li>one horseshoe magnet</li> <li>iron filings</li> <li>sheet of glass or plastic</li> <li>several sheets of paper</li> </ul> |
| Experiment: Hot Dog Cooker | In this investigation you will harness the sun's power to make your lunch!               | No         | <ul style="list-style-type: none"> <li>hot dog</li> <li>long segment of metal coat hanger</li> <li>aluminum foil</li> <li>scissors</li> <li>cardboard</li> <li>glue</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: MACHINES (PART 1)**

| Assignment Title  | Project Summary   | Video Demo | Materials Needed   |
|-------------------|---|------------|--|
| Essay: Scientists | In this essay, you will write a report on one of the Christian scientists listed in the lesson. | 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 8: MACHINES (PART 2)**

| Assignment Title                   | Project Summary  | Video Demo | Materials Needed   |
|------------------------------------|--|------------|--|
| Experiment: Friction Investigation | In this investigation, you will determine the coefficient of friction for the same mass under two different conditions.                      | No         | <ul style="list-style-type: none"> <li>• small match box</li> <li>• pebbles</li> <li>• coins (pennies are best)</li> <li>• string (about 24 inches long)</li> </ul> <ul style="list-style-type: none"> <li>• small plastic bag</li> <li>• 8 or 10 round sticks (pencils, Tinker Toys, dowels)</li> <li>• small scale or balance</li> </ul> |
| *Experiment: Pencil Sharpener      | In this investigation you will use a wall-mounted pencil sharpener as a wheel, axle, and lever, observing how it decreases the effort force. | No         | <ul style="list-style-type: none"> <li>• wall mounted pencil sharpener</li> <li>• book</li> <li>• 2 meters of string</li> </ul> <ul style="list-style-type: none"> <li>• metric ruler</li> <li>• electronic balance or bathroom 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: BALANCE IN NATURE**

| Assignment Title | Project Summary  | Video Demo | Materials Needed |
|------------------|--|------------|------------------|
| *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: SCIENCE AND TECHNOLOGY**

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

\*indicates alternate project/experiments