

| Assumption Science Curriculum | K | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Apply the scientific method to the solution of problems. | K | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Develop basic knowledge of the scientific process. | | | | | | | | | |
| Identify the steps of the scientific method. | | | | | | | | | |
| Predict outcomes of experiments and projects. | | | | | | | | | |
| Formulate questions that will deepen understanding of the topic students are working on. | | | | | | | | | |
| Develop an awareness of the need to adapt to any scientific situation. | | | | | | | | | |
| State a problem, draw a model, list supplies needed, and construct an invention that will help rectify problem. | | | | | | | | | |
| Compose hypotheses using class discussion and data. | | | | | | | | | |
| Design experiments to test hypotheses. | | | | | | | | | |
| Use skills in identifying anomalies, formulating hypotheses, devising experiments, & interpreting data. | | | | | | | | | |
| Construct density experiment | | | | | | | | | |
| Demonstrate proper handling of lab equipment. | K | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Use various pieces of lab equipment to carry out experiments and record accurate data in metric units. | | | | | | | | | |
| Collect, record, and interpret data based on the study of earth & physical science. | K | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Describe behaviors of bubbles. | | | | | | | | | |
| Describe five characteristics of a house: furnishings, plumbing, paint, water, ventilation, heat/cool, electrical | | | | | | | | | |
| Collect and identify spiders and the appendages of the animal. | | | | | | | | | |
| Record class events on a learning calendar. | | | | | | | | | |
| Observe butterfly life cycle in classroom and then release adult butterflies. | | | | | | | | | |
| Measure butterfly larvae growth. | | | | | | | | | |
| Plant seeds and predict germination. | | | | | | | | | |
| Record and measure plant growth. | | | | | | | | | |
| Record effects of light on plants. | | | | | | | | | |
| Record effects of water changes on plants. | | | | | | | | | |
| Separate solids from liquids by evaporation. | | | | | | | | | |
| Observe and describe clouds associated with passing fronts. | | | | | | | | | |
| Explore sense of sight | | | | | | | | | |
| Build a three-dimensional paper model of the skeletal system. | | | | | | | | | |
| Observe how bones work together during specific activities using the skeletal models. | | | | | | | | | |
| Explore the sense of taste. | | | | | | | | | |
| Use a teeter-totter as a model to introduce levers. | | | | | | | | | |
| Demonstrate that the placement of mass or weight affects the balance of a teeter-totter. | | | | | | | | | |
| Find similarities between wheels and axles with teeter-totter. | | | | | | | | | |
| Examine density through the manipulation of the mass and volume of assorted objects and liquids. | | | | | | | | | |
| Analyze plant biomass by identifying its components and show that released plant energy meas as heat. | | | | | | | | | |
| Construct graphs and see relationships. | K | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Fill in a calendar including yesterday, today, tomorrow: days of week and months. | | | | | | | | | |
| Label temperature, wind, sunrise, sunset, seasons, moonrise, moon set, snow/rain, on learning calendar. | | | | | | | | | |
| Read a pictorial weather forecast. | | | | | | | | | |
| Extract information from the newspaper regarding weather. | | | | | | | | | |
| Follow passage of fronts across continental US and Pacific using newspaper weather maps. | | | | | | | | | |
| Follow a given path through a map. | | | | | | | | | |
| Locate north, south, east, west on a map including recognition of the symbol. | | | | | | | | | |
| Identify water and streets on a map. | | | | | | | | | |
| Draw a simple map such as a bedroom or classroom. | | | | | | | | | |
| Label a boundary. | | | | | | | | | |
| Create a classroom floor plan. | | | | | | | | | |
| Draw bar and picture graphs. | | | | | | | | | |
| Construct line and bar graphs showing assorted relationships among varying sources of data. | | | | | | | | | |
| Analyze graphs and answer questions from data | | | | | | | | | |
| Develop basic thinking skills. | K | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Develop labs and test hypothesis | | | | | | | | | |

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|---|---|---|---|---|---|---|---|---|---|
| Weather and Earth | | | | | | | | | |
| | K | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Define precipitation | | | | | | | | | |
| Label different kinds of precipitation. | | | | | | | | | |
| Define humidity and relative humidity as they relate to water vapor in the air leading to cloud formation. | | | | | | | | | |
| Draw four types of clouds. | | | | | | | | | |
| Describe a tornado and hurricane. | | | | | | | | | |
| Describe the differences between weather and climate. | | | | | | | | | |
| Identify four seasons. | | | | | | | | | |
| Draw the water cycle. | | | | | | | | | |
| Describe plate tectonics | | | | | | | | | |
| Animals | | | | | | | | | |
| | K | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Describe and identify living and nonliving things. | | | | | | | | | |
| Identify animals. | | | | | | | | | |
| Recite the stages in butterfly development | | | | | | | | | |
| Draw the butterfly life cycle and predict how long each stage will take. | | | | | | | | | |
| Compare body parts of insects. | | | | | | | | | |
| Identify and explain the parts of a fish. | | | | | | | | | |
| Explain the growth and reproduction of a fish. | | | | | | | | | |
| Write a short report on animals. | | | | | | | | | |
| State three differences and similarities between vertebrates and invertebrates. | | | | | | | | | |
| Name the five groups of vertebrates and two things about each. | | | | | | | | | |
| Plants | | | | | | | | | |
| | K | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Name different plants. | | | | | | | | | |
| Label basic plant parts: stem, roots, leaves, flowers, fruit, seeds | | | | | | | | | |
| Identify food, water, air, and sunlight as basic needs of plants. | | | | | | | | | |
| Identify root systems. | | | | | | | | | |
| Identify the different properties of vegetables. | | | | | | | | | |
| Classify and sort beans, pictures. | | | | | | | | | |
| Damage the hard coats on seeds and observe the effects on germination, recording data as percents. | | | | | | | | | |
| Identify the basic growing needs of a plant and formulate a plan to investigate propagation using sci method. | | | | | | | | | |
| Explain photosynthesis and define producer as any organism that carries on this process. | | | | | | | | | |
| Identify decomposition or organic matter as respiratory process; some substances resist decomposition. | | | | | | | | | |
| Define angiosperm and gymnosperm | | | | | | | | | |
| Health | | | | | | | | | |
| | K | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Identify four basic food groups. | | | | | | | | | |
| Distinguish between healthy versus other foods. | | | | | | | | | |
| Make wise choices from the lunch menu. | | | | | | | | | |
| List the ingredients on a recipe. | | | | | | | | | |
| Identify the five senses and the related organs. | | | | | | | | | |
| Name at least four healthy habits: enough sleep, exercise, drinking water, brushing teeth... | | | | | | | | | |
| Locate heart, lungs, stomach within a human body frame. | | | | | | | | | |
| Identify and count the bones they can feel in different bone groups of their bodies. | | | | | | | | | |
| Determine the kinds of movement of the different bone groups. | | | | | | | | | |
| Describe parts of the skeleton and explain the function of these bones. | | | | | | | | | |
| Explain and identify the function of muscles and tendons. | | | | | | | | | |
| Describe and compare the function of the three kinds of muscles. | | | | | | | | | |
| Label drawings of the eye. | | | | | | | | | |
| Observe the function of the iris of the human eye. | | | | | | | | | |
| Read a description of the human ear. | | | | | | | | | |
| Identify and explain the parts of the brain and the function of each. | | | | | | | | | |
| Keep a food journal | | | | | | | | | |

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| Energy, Light, and Matter | | | | | | | | | |
| | K | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Identify three sources of energy such as: light, heat, fuel, batteries, etc. | | | | | | | | | |
| Introduce physics concepts force, acceleration, momentum, speed | | | | | | | | | |
| Verify that sunlight is composed of the light spectrum and combining colored light produces white light. | | | | | | | | | |
| Analyze the interactions of transmitted, reflected, refracted and absorbed light with varying light source | | | | | | | | | |
| Define solid, liquid, and gas. | | | | | | | | | |
| Define three states of matter. | | | | | | | | | |
| Identify methods of gas collection and identification. | | | | | | | | | |
| Introduce chemistry concepts | | | | | | | | | |
| Define and explain energy. | | | | | | | | | |
| Explain and give examples of kinetic and potential energy. | | | | | | | | | |
| Describe the different forms of energy. | | | | | | | | | |
| Identify the relationship between temperature and heat and use this to develop methods to measure heat. | | | | | | | | | |
| Identify a calorie | | | | | | | | | |
| Establish that substances can be analyzed and synthesized by using heat. | | | | | | | | | |
| Describe energy transfer. | | | | | | | | | |
| Identify major uses of energy | | | | | | | | | |
| Define matter as anything that occupies space and has the property of density. | | | | | | | | | |
| Search for evidence of atoms to verify the atomic model of matter and develop a model of atoms & molecules. | | | | | | | | | |
| Compare the historical principles which led to the development of our present day atomic theory. | | | | | | | | | |
| Force and Work | | | | | | | | | |
| | K | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Define force and work. | | | | | | | | | |
| Develop and review definitions of forces as pushes or pulls. | | | | | | | | | |
| Name at least three simple machines and give examples. | | | | | | | | | |
| Classify levers by location of the fulcrum, resistance and effort. | | | | | | | | | |
| Identify the class of lever found in selected devices. | | | | | | | | | |
| Identify the kind of levers bone-muscle system make. | | | | | | | | | |
| Demonstrate the similarities and differences between screws and inclined planes. | | | | | | | | | |
| Explain different modes of transportation. | | | | | | | | | |
| Determine that the properties of mass seem to be more universal than the properties of volume. | | | | | | | | | |
| Define density as the relationship between mass and volume. Use to calculate densities of objects & liquids. | | | | | | | | | |
| Explain how the mass of an object and the density of a liquid determine the object's buoyancy. | | | | | | | | | |
| Observe friction, and other forces | | | | | | | | | |
| Space Exploration | | | | | | | | | |
| | K | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Name the planets in order, including the asteroid belt. | | | | | | | | | |
| Name objects in space | | | | | | | | | |
| Describe the structure of Earth | | | | | | | | | |
| Describe the gravitational effects of the sun and moon | | | | | | | | | |
| Name three features of our sun and four star colors. | | | | | | | | | |
| Identify and sequence the phases of the moon in order. | | | | | | | | | |
| Careers | | | | | | | | | |
| | K | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Identify a meteorologist as a scientist who studies and forecasts weather. | | | | | | | | | |

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|--|---|---|---|---|---|---|---|---|---|
| Inventions | K | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Name at least five inventors and their inventions. | | | | | | | | | |
| Measure pint, quart, liter, grams | | | | | | | | | |
| Describe the difference between liquid versus solid measurements. | | | | | | | | | |
| Measure and record their weight and growth. | | | | | | | | | |
| Measure temperature using a thermometer. | | | | | | | | | |
| Describe the function of a compass. | | | | | | | | | |
| Be able to measure using centimeter and/or inches. | | | | | | | | | |
| Differentiate between Celsius and Fahrenheit on a thermometer. | | | | | | | | | |
| State 0 C is freezing (cold) point and 100 C is point of boiling (hot). | | | | | | | | | |
| Measure length using metric. | | | | | | | | | |
| Measure mass using metric. | | | | | | | | | |
| Measure the same objects with metric and standard systems. | | | | | | | | | |
| Compare the differences between metric and standard measure and be able to state which is larger or smaller. | | | | | | | | | |
| Know the basic units of measurement | | | | | | | | | |
| Develop skills in cooperative group work. | | | | | | | | | |
| Cooperate & collaborate on projects, recognizing each other's talents and learning how to come to consensus. | | | | | | | | | |
| Work in teams to develop reasoning skills | | | | | | | | | |
| Work in teams on a lab project | | | | | | | | | |
| Identify practices necessary to become responsible citizens of the earth. | | | | | | | | | |
| List and describe different types of habitats with food, water, air, and shelter. | | | | | | | | | |
| Identify four sources of pollution | | | | | | | | | |
| Identify alternate sources of energy | | | | | | | | | |
| Define global warming | | | | | | | | | |
| Care for plant needs. | | | | | | | | | |
| Name two natural resources. | | | | | | | | | |
| Describe conservation and its importance. | | | | | | | | | |
| Make a list of safety rules. | | | | | | | | | |
| Recognize and explain safety and classroom rules using aphorisms. | | | | | | | | | |
| Dramatize fire safety rules and discuss impact of fire in our daily lives. | | | | | | | | | |
| Define recycling and decomposition. | | | | | | | | | |
| Classify objects according to recyclable, decomposable, or trash/other. | | | | | | | | | |
| Dramatize the phrase, "Reduce, Recycle, and Reuse" with aluminum. | | | | | | | | | |
| Recycle paper within the classroom. | | | | | | | | | |
| Care for the spiders the students collect. | | | | | | | | | |
| Recognize different types of soils and how plants grow in the soils. | | | | | | | | | |
| Evaluate the differences in the make-up and properties of soil samples using various tests. | | | | | | | | | |
| Analyze various ways water moves through soil and the impact this has on the environment. | | | | | | | | | |
| Discuss evidence of air pollution in the neighborhood and identifying these sources on a map of the area. | | | | | | | | | |
| Identify the six major air pollutants and their properties. | | | | | | | | | |
| Develop an understanding of the importance of conserving energy. | | | | | | | | | |
| Identify ways to take care of the body. | | | | | | | | | |
| Make a food chain with three strands. | | | | | | | | | |
| Create a food web using pictures. | | | | | | | | | |
| Individually investigate the food needs and problems of a specific country, sharing through oral & written reports | | | | | | | | | |
| Identify factors limiting food production in the world. | | | | | | | | | |
| Construct and design instruments for measuring. | | | | | | | | | |
| Construct and measure sunlight with a sun dial. | | | | | | | | | |
| Develop skills in critical listening and sharing ideas through oral reporting. | | | | | | | | | |
| Construct instruments for measuring wind direction. | | | | | | | | | |
| Construct instruments for measuring rainfall. | | | | | | | | | |
| Construct a barometer using students' definitions of pressure. | | | | | | | | | |
| Employ organizational skills. | | | | | | | | | |
| Explain and list ways to organize desk, notebook, and chairbacks. | | | | | | | | | |
| Compile notes in a science record book. | | | | | | | | | |
| Organize a science binder with tabs on each project. | | | | | | | | | |
| Effectively use technology within Science. | | | | | | | | | |
| Use smartboard technology to explain concepts | | | | | | | | | |
| Use smartboard technology to view educational films | | | | | | | | | |
| Use smartboard technology to view website | | | | | | | | | |
| Use laptops to research information | | | | | | | | | |