

<p><b>Skills—To be addressed all year long</b></p>	<p>(a) Make qualitative observations using the five senses.</p> <p><b>(b) Determine the appropriate tools and techniques to collect data.</b></p> <p>(c) Use a variety of tools and equipment to gather data (e.g., microscopes, thermometers, analog and digital meters, computers, spring scales, balances, metric rulers, <b>graduated cylinders</b>, stopwatches).</p> <p>(d) Measure length to the nearest millimeter, mass to the nearest gram, volume to the nearest milliliter, temperature to the nearest degree Celsius, force (weight) to the nearest Newton, time to the nearest second.</p> <p><b>(e) Compare amounts/measurements.</b></p> <p>(f) Judge whether measurements and computation of quantities are reasonable.</p>	<p>V.1.A</p> <p>(a) Formulate testable questions and hypotheses.</p> <p><b>(b) Recognize the importance of the independent variable, dependent variables, control of constants, and multiple trials to the design of a valid experiment.</b></p> <p><b>(c) Design and conduct a valid experiment.</b></p> <p>(d) Evaluate the design of an experiment and make suggestions for reasonable improvements or extensions of an experiment.</p> <p>(e) Recognize that different kinds of questions suggest different kinds of scientific investigations (e.g., some involve observing and describing objects, organisms, or events; some involve collecting specimens'; some involve experiments; some involve making observations in nature; some involve discovery of new objects and phenomena; and some involve making models).</p> <p>(f) Acknowledge that there is no fixed procedure called “the scientific method”, but that some investigations involve systematic observations, carefully collected, relevant evidence, logical reasoning, and imagination in developing hypotheses and other explanations.</p>	<p>I.1.A</p> <p>(a). Identify matter is anything that has mass and volume.</p> <p>(b). Describe and compare the volumes (the amount of space an object occupies) of objects or substances directly, using a graduated cylinder, and/or indirectly, using displacement methods</p> <p>(c). Describe and compare the masses (amounts of matter) of objects to the nearest gram using a balance.</p> <p>(d). Classify the types of matter in an object into pure substances or mixtures using their specific physical properties</p> <p>(e) Identify elements (unique atoms) and compounds (molecules or crystals) are pure substances that have characteristic properties.</p> <p>(f) Describe the physical and chemical properties (e.g., magnetic attraction, conductivity, melting point and boiling point, reactivity) of pure substances (elements or compounds) (e.g., copper wire, aluminum wire, iron, charcoal, sulfur, water, salt, sugar, (sodium bicarbonate, galena, quartz, magnetite, pyrite).</p>	<p>I.2.C</p> <p>(a) Recognize and describe how energy from the Sun is transferred to Earth in range of wavelengths and energy levels, including visible light, infrared radiation, and ultraviolet radiation</p> <p>(b) Recognize and apply the fact that energy from the Sun is the source of almost all energy used to produce the food for living organisms</p> <p>(c) Identify solar radiation as the primary source of energy for weather phenomena.</p> <p>1.2.A</p> <p>s) Recognize and describe how chemical energy is stored in chemical compounds (e.g., energy stored in and released from food molecules, batteries, nitrogen explosives, fireworks, organic fuels).</p>
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