

PHYSICAL AND CHEMICAL PROPERTIES

Objectives	Activities	Days
<p>6th Grade GLE:</p> <p>Strand 1.1.A.a-d.-</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>1.1 Introduce Chemical and Physical Properties of substances.</p> <p>1.2 Notes from Study Island Physical Properties Lessons</p> <p>1.3 Assessment- Measurement labs. Students will accurately compute the volume of various objects by determining the correct method and tools for measurement.</p> <p>1.4 Assessment- More or less Mass. Students will use a triple beam balance to determine the mass of unknown objects to the nearest gram.</p> <p>1.5 Pure Substance and Mixture classification. Students will watch the video on Mixtures and Pure Substances. As they watch the video they must decide if Ice Cream is a mixture or pure substance.</p> <p>1.6 Assessment- Ice Cream Assessment. Once students have completed the Mixture and Pure Substance video students will write a 5 point paragraph classifying and defending whether Ice Cream is a pure substance or a mixture.</p> <p>Sources: Mixture and Pure Substance video- https://www.youtube.com/watch?v=pnpmPda3tbM</p>	8
<p>6th Grade GLE:</p> <p>Strand 1.1.B.a-c. –</p> <p>a. Describe the properties of each component in a mixture/solution and their distinguishing properties (e.g., salt water, oil and vinegar, pond water, Kool-Aid)</p> <p>b. Describe appropriate ways to separate the components of different types of mixtures (sorting, evaporation, filtration, magnets, boiling, chromatography, screening)</p> <p>c. Predict how various solids (soluble/insoluble) behave (e.g., dissolve, settle, float) when mixed with water</p>	<p>2.1 Mixture think pair share activities for introduction.</p> <p>2.2 Study Island Notes on Separation of Mixtures.</p> <p>2.3 Assessment- Mixture Lab. Students will predict the behavior of various materials in water; then students will mix salt, sand and pumice with water and record their observations.</p>	3
<p>6th Grade GLE:</p> <p>Strand 1.1.D. a-</p> <p>a. Describe the relationship between the change in the volume of water and changes in temperature as it relates to the properties of water (i.e., water expands and becomes less dense when frozen)</p>	<p>3.1 Introduce properties of Water.</p> <p>3.2 Notes from Physical Science book on Properties of Water.</p> <p>3.3 Bill Nye Video on States of Matter and Properties of Water.</p> <p>3.3 Assessment- Physical and Chemical Properties Test.</p> <p>Sources: Bill Nye - https://www.youtube.com/watch?v=VdEmxlnegfQ</p>	5

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<p>6th Grade GLE:</p> <p>Strand 1.1.G. a-c.-</p> <p>a. Identify and classify changes in matter as chemical and/or physical</p> <p>b. Identify chemical changes (i.e., rusting, oxidation, burning, decomposition by acids, decaying, baking) in common objects (i.e., rocks such as limestone, minerals, wood, steel wool, plants) as a result of interactions with sources of energy or other matter that form new substances with different characteristic properties</p> <p>c. Identify physical changes in common objects (e.g., rocks, minerals, wood, water, steel wool, plants) and describe the processes which caused the change (e.g., weathering, erosion, cutting, dissolving)</p>	<p>4.1 Intro Physical and Chemical Changes.</p> <p>4.2 Study Island Notes on Physical and Chemical Changes.</p> <p>4.3 Jigsaw activity: Assign groups. Each group will become an expert on their type of chemical change (rusting, oxidation, burning, decomposition with acid, baking or decaying) Then the groups will share their findings with the class in an oral report.</p> <p>4.4 Physical Changes worksheet. Students will read the scenario and determine what object is undergoing a physical change and describe what has caused the change.</p> <p>4.5 Wrap up Physical and Chemical Changes with Bill Nye video.</p> <p>4.6 Assessment- Physical or Chemical change labs. Students will conduct 2 labs. 1. Baking soda and vinegar. 2. Mentos and diet coke. Once both labs are complete, students will organize and analyze their findings and determine which change is physical and which change is chemical. They will then justify their findings in a 5 point paragraph.</p> <p>Sources: Bill Nye - https://www.youtube.com/watch?v=Rtcf6Pjahec</p>	<p>6</p>
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