



Proficiency Scale

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GRADE LEVEL: 8 COURSE NAME: SCIENCE

MEASUREMENT TOPIC: DESCRIBE THE STRUCTURE AND PHYSICAL PROPERTIES OF MATTER

4	<ul style="list-style-type: none">• Research an element from the periodic table to identify its physical properties and illustrate its atomic molecular structure.
3	<ul style="list-style-type: none">• Plan and carry out investigations to support the claim that pure substances can be described and defined by their properties, including solubility, electrical conductivity, and density. (1)• Analyze and interpret data to differentiate among elements based on their properties and classify the elements as metals, nonmetals, or metalloids. (4a)
2	<ul style="list-style-type: none">• Justify a claim, based on evidence from investigations, that pure substances differ from mixtures, including solutions. (3)• Use models to analyze the physical properties of pure substances based on phase changes.• Obtain and communicate information from the periodic table, including atomic number, number of electrons and neutrons, average atomic mass, groups, and periods, to illustrate the structure and composition of atoms of different elements. (4)

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With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.

Key Vocabulary:

Atoms, Elements, valence electrons, periodic table, Physical properties, phase changes, pure substances, mixtures and solutions