



Science Toolkit: Grade 8 Objective 1.C.1.b

Student Handout: Science: Grade 8 Objective 1.C.1.b

Standard 1.0 Skills and Processes

Topic C. Communicating Scientific Information

Indicator 1. Develop explanations that explicitly link data from investigations conducted, selected readings and, when appropriate, contributions from historical discoveries.

Objective b. Interpret tables and graphs produced by others and describe in words the relationships they show.

Selected Response (SR) Item

Question

Use [The Periodic Table of the Elements](#) and the information below to answer the following.

In class, students investigated patterns of elements in The Periodic Table of the Elements. Their teacher pointed out a few properties of some common elements. Helium is the lightest inert gas in air. Magnesium burns with a bright white flame. Gold and silver are dense metals. Table salt (sodium chloride) is a combination of two reactive elements. Some properties of common elements are shown in the data table below.

PROPERTIES OF SOME COMMON ELEMENTS

Element	Symbol	Atomic Number	State of Matter at Room Temperature
Helium	He	2	Gas
Chlorine	Cl	17	Gas
Gold	Au	79	Solid
Magnesium	Mg	12	Solid
Silver	Ag	47	Solid
Sodium	Na	11	Solid

Which statement correctly describes a pattern in the data table, based on the state of matter of the elements at room temperature?

- A. Gases are usually nonmetals.
- B. Reactive elements are usually gases.
- C. Solids always have large atomic numbers.
- D. Metals always have large atomic numbers.

Correct Answer

- A. Gases are usually nonmetals.

Question

Use [The Periodic Table of the Elements](#) and the information below to answer the following.

In class, students investigated patterns of elements in The Periodic Table of the Elements. Their teacher pointed out a few properties of some common elements. Helium is the lightest inert gas in air. Magnesium burns with a bright white flame. Gold and silver are dense metals. Table salt (sodium chloride) is a combination of two reactive elements. Some properties of common elements are shown in the data table below.

PROPERTIES OF SOME COMMON ELEMENTS

Element	Symbol	Atomic Number	State of Matter at Room Temperature
Helium	He	2	Gas
Chlorine	Cl	17	Gas
Gold	Au	79	Solid
Magnesium	Mg	12	Solid
Silver	Ag	47	Solid
Sodium	Na	11	Solid

Which statement correctly describes a pattern in the data table, based on the state of matter of the elements at room temperature?

- A. Gases are usually nonmetals.
- B. Reactive elements are usually gases.
- C. Solids always have large atomic numbers.
- D. Metals always have large atomic numbers.

Handouts

The Periodic Table of the Elements