

CAPA Level V Science

Strand: CHEMISTRY: The periodic table displays the elements in increasing atomic number and shows how periodicity and chemical properties of the elements relates to atomic structure. As a basis for understanding this concept:

Standard: CH1.BL51: Students know how to use the periodic table to identify metals, semimetals, non-metals, and halogens.

Alternate Achievement Standard:

✓ Know that elements on the periodic table are classified as metals, non-metals, and inert gases.

Stimulus Cards (Drawing or Word Description):

#S261 diagram of left half of periodic table

#S262 diagram of right half of periodic table

Task Preparation:

Place on surface stimulus card #S261 and #S262 showing a modified periodic table. Point to symbol He and indicate that it is helium. Give first cue. Point to symbol C and indicate that it is carbon. Give second cue. Point to symbol Fe and indicate it is iron. Give third cue.

Cue/Direction:

Is helium a metal or noble gas?

Is carbon a noble gas or non-metal?

Is iron a non-metal or metal?

Scoring Rubric:

- (4) Completes task with 100% accuracy.
- (3) Partially completes task (2 correct).
- (2) Minimally completes task (1 correct).
- (1) Attempts task.
- (NR) No Response.

**CAPA Level V – Science
Sample Item**

Strand: CHEMISTRY: Solutions are homogeneous mixtures of two or more substances. As a basis for understanding this concept:

Standard: CH6.CL51: Students know temperature, pressure, and surface area affect the dissolving process.

Alternate Achievement Standard:

Know how stirring, temperature, and surface area of a substance can affect the dissolving process.

Task Preparation:

Tell student, “Watch me.” Place on surface cup of water and put one whole sugar cube into water. Give first cue. Remove cup of water with sugar cube in it. Place on surface two whole sugar cubes. Use knife to cut one cube into two pieces. Point to the whole sugar cube and the two smaller pieces of sugar cube as you give second cue. Crush an additional sugar cube and place on surface. Point to whole sugar cube, cut sugar cube, and crushed sugar cube as you give third cue.

Correct answers: stirring, heating, crushing and/or breaking cube; cut sugar cube; crushed sugar cube.

Cue/Direction:

What will help the sugar cube dissolve faster in the water?

Which will dissolve in water faster, the whole sugar cube or the cut sugar cube?

Which will dissolve in water faster, the whole sugar cube, the cut sugar cube, or the crushed sugar cube?

Manipulatives:

4 sugar cubes*

1 knife

1 clear plastic cup filled $\frac{3}{4}$ with water

Scoring Rubric:

(4) Completes task with 100% accuracy.

(3) Partially completes task (2 correct).

(2) Minimally completes task (1 correct).

(1) Attempts task.