

Element Code Hunt

Read closely to connect element names with their chemical symbols.

6.5.c “elements may be represented by chemical symbols;”

NAME _____

DATE _____

1 READ AND MARK _____ Read it twice

YOUR JOB Underline every chemical symbol, circle the element name it represents, and draw a small box around the lowercase letter in each two-letter symbol to notice the capitalization pattern.

Garden Science Labels

- ① At a community garden, a water-testing team checks what is in the soil and water. Their report uses chemical symbols, short letter codes that represent elements. An element is one kind of atom. Carbon is written as C, and oxygen is written as O. Each symbol begins with a capital letter. A symbol with one letter, such as C, uses only that capital letter. These codes help scientists make labels that fit on small sample jars.
- ② Some symbols contain two letters. In those symbols, the first letter is capitalized and the second letter is lowercase. Iron has the symbol Fe, not FE or fe. Sodium has the symbol Na, and calcium has the symbol Ca. The letters do not always match the English name closely. Scientists use the same approved symbol for an element in reports, lab notes, and science books. This shared system helps people identify the same element.
- ③ During the garden project, Maya sees a bag labeled N, P, and K. The labels represent nitrogen, phosphorus, and potassium, elements found in many plant fertilizers. She does not read N as the word nitrogen. Instead, she recognizes it as nitrogen’s chemical symbol. A scientist may place symbols next to measurements or in a formula, but a symbol still stands for one element. Careful capitalization keeps the meaning clear when students record observations.

2 ANSWER WITH EVIDENCE Use the passage

1 What chemical symbols represent carbon and oxygen?

2 Which element has the symbol Fe? Why is FE not written correctly?

3 The fertilizer bag has the labels N, P, and K. What elements do those symbols represent?

4 How should you write a two-letter chemical symbol? Use one example from the passage.

3 YOUR TURN Your own words

Use a periodic table to complete the table with four elements that are not named in the reading. Write each element's correct chemical symbol and an everyday place or object where it is used or found.

ELEMENT	CHEMICAL SYMBOL	EVERYDAY PLACE OR OBJECT

PART 1 • READ AND MARK

Underline every chemical symbol, circle the element name it represents, and draw a small box around the lowercase letter in each two-letter symbol to notice the capitalization pattern. Accept any marking that follows this job and points at the right text.

PART 2 • ANSWERS

#	QUESTION	ANSWER
1	What chemical symbols represent carbon and oxygen?	Carbon is C, and oxygen is O.
2	Which element has the symbol Fe? Why is FE not written correctly?	Fe represents iron. FE is incorrect because the second letter in a two-letter symbol must be lowercase.
3	The fertilizer bag has the labels N, P, and K. What elements do those symbols represent?	N represents nitrogen, P represents phosphorus, and K represents potassium.
4	How should you write a two-letter chemical symbol? Use one example from the passage.	Write the first letter as a capital and the second letter as lowercase. For example, calcium is Ca.

PART 3 • YOUR TURN (SAMPLE ANSWER)

ELEMENT	CHEMICAL SYMBOL	EVERYDAY PLACE OR OBJECT
Helium	He	balloon
Copper	Cu	electrical wire
Silver	Ag	jewelry
Chlorine	Cl	pool chemical

Accept any four elements not named in the passage if each chemical symbol has correct capitalization. Everyday examples should reasonably connect to the named element or a common material containing it.