

Name: \_\_\_\_\_

# CLASSIFYING VIBRANIUM

In “Fictional Element” (p. 12), you learned about a made-up element called vibranium. The article challenged you to determine where on the periodic table you think vibranium would fit if it existed. Use the graphic organizer below to guide you through finding a spot for the element.

## STEP 1: GATHER INFORMATION

Use what you learned in the article to answer the questions in the first column as best you can. Write your responses in column two. Then use the information in the third column to draw conclusions about how vibranium’s properties may affect where it would fit on the periodic table. Record your conclusions in the last column.

Questions about properties of an element	Properties of vibranium	Clues from the periodic table	Conclusions
Is it a gas, a solid, or a liquid at room temperature?		With the exception of hydrogen (H), nitrogen (N), oxygen (O), fluorine (F), and chlorine (Cl), all elements that are found in the gas state at room temperature are grouped with the noble gases.	
Does it have a shiny or dull appearance?		Elements that have a shiny appearance are either metals or <i>metalloids</i> (elements that have properties between metals and nonmetals).	
How well does it conduct electricity (allow an electric current to flow)?		Metals are good conductors of electricity. Nonmetals are not. Some metalloids are good conductors under certain conditions.	
Is it hard or soft?		The alkali metals are very soft compared with other metals. Most of the hardest metals are found in the transition metals group.	
How much does the element resemble a metal?		The metallic character of an element decreases as you move from left to right across a period and increases as you move down a group.	
Does the element melt at a high or low temperature?		Most elements with high melting points are metals.	
Is it radioactive?		Most radioactive elements are found in period 7 on the periodic table.	

