

LESSON

9

ACTIVITY

Create a Table Properties of the Elements

Name _____

Date _____ Period _____

Purpose

To create your own periodic table of the elements from data given on element cards.

Materials

Create a Table card deck

Instructions

1. Work in your groups with one set of cards.
2. Find Be, Mg, Ca, and Sr in the deck of cards, and arrange them in a column the way Mendeleev did. These cards are all yellow. Look for similarities and differences in these cards. Find at least one pattern or trend, and describe it to your group.
3. With your team, decide how to organize the rest of the cards into a table. Try to organize them in a way that produces as many patterns as possible.

Questions

1. What characteristics did you use to sort the cards?
2. What patterns appear in your arrangement? List at least four.
3. Where did you put H and He? What was your reasoning for their placement?
4. Did you notice any cards that didn't quite fit or that seemed out of order? Explain.

Beryllium	hard, dull gray solid <i>metal</i>
Be 9.0	
does not react with water	found in solid BeCl ₂
Magnesium	moderately hard, silvery solid <i>metal</i>
Mg 24.3	
reacts only slightly with water	found in solid MgCl ₂
Calcium	moderately hard, silvery solid <i>metal</i>
Ca 40.1	
reacts with water	found in solid CaCl ₂
Strontium	moderately soft, silvery white solid <i>metal</i>
Sr 87.6	
reacts vigorously with water	found in solid SrCl ₂

5. Making Sense Below are four possible cards for the element germanium, Ge.

a. Where does germanium belong in the table?

b. Which card seems most accurate to you? What is your reasoning?

A. B. C. D.

c. Copy your selection from part b. What would you add to the three empty corners to complete the card?

Germanium

Ge

6. If You Finish Early The element cesium, Cs, is located just below rubidium, Rb, on the modern periodic table. Create an element card for cesium.