

# "It's in the Cards" Worksheet

## Table of the Elements

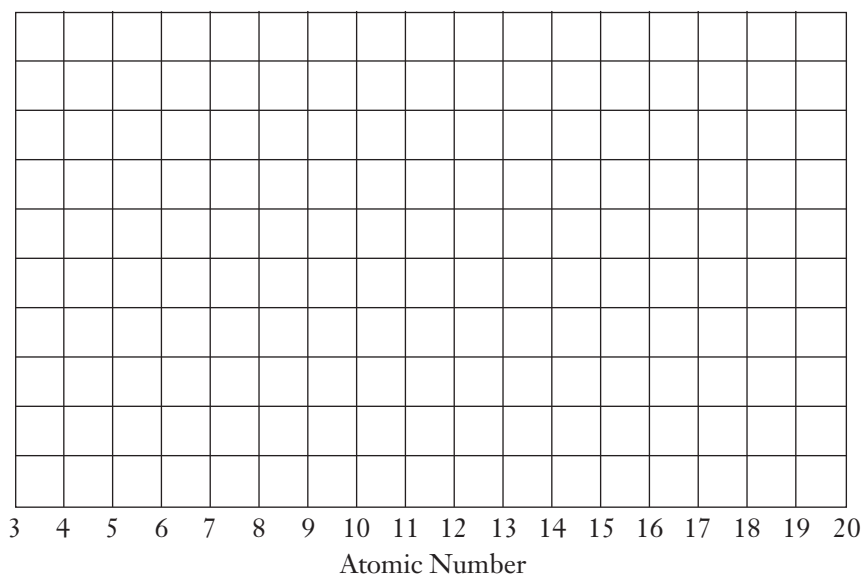
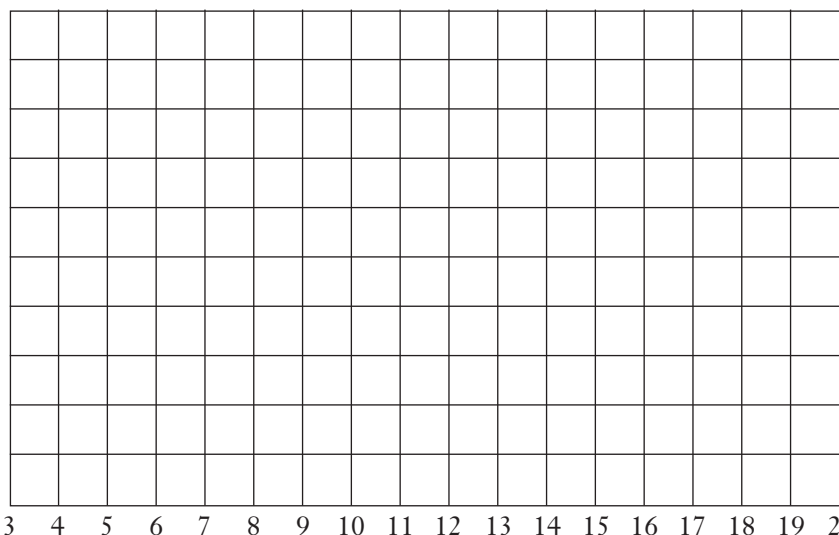

## Properties of the Missing Element

<b>Ionization energy</b>	<b>Atomic radius</b>
<b>Atomic mass</b>	<b>Formula of its oxide</b>
<b>Formula of its chloride</b>	<b>Melting point</b>
<b>Density</b>	<b>Formula of its hydride</b>
<b>Electro-negativity</b>	

# “It’s in the Cards” Worksheet

(Use a separate sheet of paper to answer the following questions.)

1. Mendeleev’s Periodic Law can be stated: “*The physical and chemical properties of elements are periodic functions of their atomic masses*”. Looking at your arrangement of the element cards, describe in your own words what the term “periodic function” means.
2. Some of the properties listed on each card are periodic properties, others are not. Name one property that is periodic and one that is not.
3. The elements in the modern periodic table are arranged in order of increasing atomic number (instead of increasing atomic mass). Why didn’t Mendeleev use atomic number to arrange the elements?
4. From your instructor, obtain a handout showing one possible arrangement of the element cards. Identify each element on the handout with its *atomic number* and *chemical symbol*. Use your textbook to obtain this information.
5. Using the possible arrangement of the element cards obtained from your instructor, pick two of the *numerical properties* of the elements that are periodic and plot their values on the graphs below. Give each graph a descriptive title and label the axes.





# "It's in the Cards" Worksheet

8. On the outline of the periodic table shown below, locate the following: *groups or families of elements, periods or series of elements, noble gases, alkali metals, alkaline earth metals, and halogens*. Use your textbook to define these terms, if necessary.

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9. On the outline of the Periodic Table shown below, locate the following: *transition elements, inner transition elements, representative elements*. Use your textbook to define these terms, if necessary.

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