Activity 1

Organizing a Store

GOALS

In this activity you will:

• Plan the arrangement of the items for sale in a store.
• Analyze trends in the arrangement of the store.
• Relate the arrangement of items in the store to the arrangement of elements in the periodic table.

What Do You Think?

Some supermarkets now sell books, flowers, and prescription drugs in addition to eggs, meat, and cereal.

• How many different items do you think that a supermarket has in its inventory?

Record your ideas about this question in your Active Chemistry log. Be prepared to discuss your responses with your small group and the class.

Investigate

1. Suppose that you decided to go into the business of opening and running a supermarket grocery store. In your group, brainstorm a list of between 50 and 100 items you would sell at your supermarket.

A member of your group should volunteer to record the items suggested by all members of the group. Everyone, including the person serving as recorder, should participate in suggesting items to be sold.

a) Make a map showing the locations of all of the items in your store. Give some thought to what will be at the
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Reflecting on the Activity and the Challenge

Organizing 50 to 100 items in your store is not unlike the problem faced by Mendeleev when he organized about the same number of chemical elements into the periodic table. In the following activities you will learn about the properties of chemical elements that led Mendeleev to arrange the elements the way he did and the information about them provided by the periodic table. This activity, in which you were asked to organize a group of items familiar in your everyday experience, was designed to acquaint you with some of the problems Mendeleev faced in the hope that you can better appreciate what he did. You may wish to build this experience into the game you design.

1. What is the pattern or arrangement in your store’s aisles?
2. Choose one aisle in your store. Describe the arrangement of items going from the front of the store to the back of the store. What is the trend (or general drift) in that aisle?
3. A new item is brought into the store — chocolate covered peanuts. Where would you place this item? Provide an explanation for your decision.
4. Your store decides to sell napkins, plates, and other decorations for Thanksgiving. How will you adapt your store arrangement to accommodate these items?
5. You would like people to purchase a certain item because it gives you a big profit. Where would you place it in your store and why?
6. One of the characteristics of Mendeleev’s original periodic table was a series of blank spots. Since As and Se didn’t have anything in common with Al and Si, but do with P and S, Mendeleev decided there must be a couple of other elements yet to be discovered. He left spaces for them and put As under P and Se under S where they belong. What would such a “blank” correspond to in your store?