SS2.3, 2.4, 2.5

ACTIVITY 7.1

Shape Sorts

Have students work in groups of four with a set of 2-D Shapes similar to those in Figure 7.2. Here are several related activities that might be done in order:

- Each child randomly selects a shape. In turn, the students tell one or two things they find interesting about their shape. There are no right or wrong responses.
- Children each randomly select two shapes. The task is to find something that is alike about their two shapes and something that is different. (Have them select their shapes before they know the task.)
- The group selects one shape at random and places it in the center of the workspace. Their task is to find all other shapes that are like the target shape, but all according to the same rule. For example, if they say "This one is like our shape because it has a curved side and a straight side," then all other shapes that they put in the collection must have these properties. Challenge them to do a second sort with the same target shape but using a different property.
- Have students share their sorting rules with the class and show examples. All students then draw a new shape that will also fit in the group according to the same rule. They should write about their new shape and why it fits the rule.
- Do a "secret sort." You or one of the students creates a small collection of about five shapes that fit a secret rule. Leave others that belong in your group in the pile. The other students try to find additional pieces that belong to the set and/or guess the secret rule.

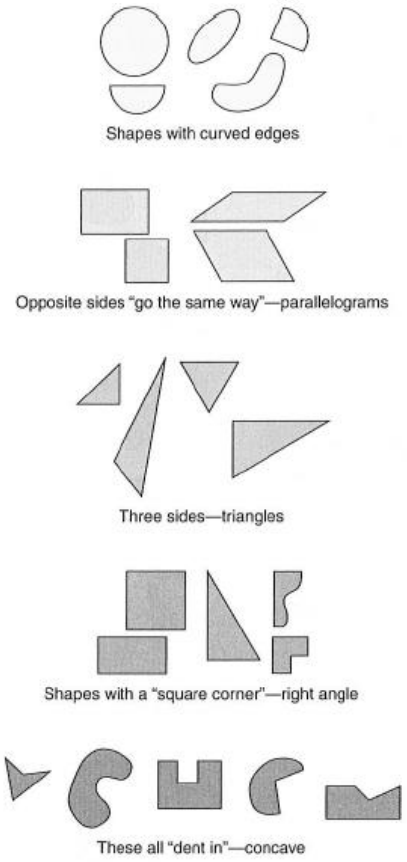

FIGURE 7.3
By sorting shapes, students begin to recognize properties.

Why do you think that the teacher should not say things such as, "Find all the pieces with straight sides," or "Find the triangles," and instead have students choose how to sort?

In any sorting activity, the students should decide how to sort, not the teacher. This allows the students to do the activity using ideas *they* own and understand. By listening to the kinds of attributes that they use in their sorting, you will be able to tell what properties they know and use and how they think about shapes. Figure 7.3 illustrates a few of the many possible ways a set might be sorted.

The secret sorting activity is one option for introducing a new property. For example, sort the shapes so that all have at least one right angle or "square corner." When students discover your rule, you have an opportunity to talk more about that property.

From Van de Walle, J. A. & Lovin, L.H. (2006). *Teaching Student-Centered Mathematics Grades K – 3*. Toronto: Pearson Education, Inc. (p. 194).