PEOPLE SORT

Big Idea Focus: Attributes can be used to sort collections into sets. A collection can be sorted in many different ways.

In this lesson, children:

- Identify and describe observable attributes of children and clothing
- Physically form sets according to given attributes
- Use rules to sort and re-sort each other into sets using various attributes (KG goal)

Materials

- *Five Creatures* by Emily Jenkins
- Two large circles made with masking tape or yarn for children to stand in, or two hula-hoops
- Dress-up clothes (for children wearing school uniforms)

1. Review *Five Creatures* and Introduce Activity

Gather a group of about 10 children in an open space where you can place two tape circles or hula-hoops on the floor. Show children the book and remind them how the same five creatures were described in many different ways. Tell them that you are now going to use various descriptions to sort five of them into two different groups, or sets. Five children will form sets by standing in the hoops; other children will be the "audience."

2. Sort and Re-sort Children

Choose easily observable attributes for sorting. For example,

- *I see five children on this rug. Some have curly hair* [point to one hoop], *and some have straight hair* [point to other hoop].

  or

- *I see a child who is wearing a belt* [point to one hoop], *and some who are not* [point to other hoop].

Assist children as necessary to sort themselves into the two sets you have described. Have children in the audience "check" that each set of children shares the same attribute. Ask, *Why do these children belong together? What could we name the group?*

Sort children several more times using other directly observable attributes—color of shirt, type of shoes, wearing of glasses, and so on. (If children wear school uniforms, you can

Planning Tips

Read *Five Creatures* at least once prior to this lesson.

It is best to introduce this activity with a **group of about 10 children**. Later, this is a good whole-group or transition activity. For example, call all children with tie shoes to line up, then children wearing shoes with straps.

Math Note

This lesson is an ***open sort*** in which the categories can include a wide range of attributes that must be identified and described by the sorter.

Most commercially available sorting materials have a limited number of attributes. This leads to a ***closed sort*** in which color and/or size are often the only possible categories.

Why is sorting a precursor to algebra? Sorting is governed by rules that describe relationships. Thus, sorting lays a foundation for algebraic thinking, which is about numeric patterns and relationships, and the rules that govern them.

Differentiation

For a challenge, sort children according to a have/have not rule. For example, group children who have on blue and children who do not have on blue. Help children see that children in the *have not* set are alike in that they are not wearing blue, though they may be wearing many different other colors.

include dress-up clothes for greater variety.) Then, switch roles so that all children get to both be sorted and be in the audience.

3. Scaffold Children Sorting

Some children may now be ready to take on the role of the sorter. Choose a child to be the sorter; you become one of the people to be sorted.

Children may need support to think of attributes for sorting. Ask questions that help them notice observable attributes, such as, *Does everyone have long sleeves? Is anyone wearing short sleeves?* It is best to stick with binary attributes for sorting since it can be challenging for young children to use the same categories with more than 2 sets.

4. Close the Lesson

Remind children that groups of objects or people can be sorted and re-sorted in different ways. Tell them that you will make the hoops available so that they can play People Sort at center time.

Math Language Learning

Attribute words such as *long, straight, yellow, pointy,* and so on give children's language greater precision. Be as specific as possible with the language you model for children.

For English Language Learners, consider the following strategies for this activity:

- Pair attribute words with gestures or props
- Accept children's non-verbal participation
- Ask yes/no questions such as *Do you have a red shirt? Do you have a blue shirt?*

Observation

*How easy is it for children to **sort** themselves according to a given attribute?*

Can any children suggest new ways to sort the group? Do they change categories in the middle of sorting?

Teacher as Learner

Most adults remember algebra as a high school course devoted to learning about equations containing variables. However, the foundations of algebraic thinking begin much earlier.

What do you remember about algebra in school? How do you think your memories influence your teaching of algebraic thinking today?