### Overview
Lesson provides guided exploration with fractions circles. Students start to become familiar with colors and relationships like 3 browns cover 1 black and 1 brown is bigger than 1 red.

### Materials
- Fraction Circles for students and teacher
- Student Page A
- Transparency 1

### Teaching Actions
1. Start the Lesson by asking children to sort through their fraction circles to answer these questions:
   - a) How many blues cover the black circle?
   - b) Which is bigger, 1 brown or 1 gray?
   - c) How many pinks cover 1 yellow?
   - d) How many browns cover the black?
   - e) Which is bigger, 1 brown or 2 reds?
   - f) How many purples cover 1 yellow?
   - g) How many dark blues are there? Light blues?

2. Explain to the students that they are to continue their exploration by using the circles to complete Student Page A.

### Comments
1. Students need to play with the fraction circles before developing a formal language for describing relationships among the pieces.

2. There are two different blues: a set of 4 dark blue pieces; a set of 7 light blue pieces. In the lessons the color “blue” refers to the set of 4 dark blue pieces. “Light blue” will refer to the set of 7 blues.

3. Different ways to approach Student Page A:
   - Students do page individually and then compare with a partner.
   - Students do page with a partner.
   - Do a few problems together and then students finish on their own.
Teaching Actions

3. End the lesson by working through Transparency 1. The figure on the left represents the circle art you want to cover. To the right are the circle parts. Students are to determine which combination of parts will cover the shape on the left. All pieces selected do not have to be the same color.

Example:

1 Yellow + 2 Blues cover 1 Black

4. Encourage students to guess first and then use their fraction circles to find the exact combination.

Comments

4. If some students finish Student Page A ahead of others, ask them to create their own problems and record them on the back of the page or put them on the board for others to solve.

5. You may want to duplicate Transparency 1 for students.

6. To encourage students to guess you might want to emphasize making “hypotheses”. Write the word hypothesis on the board. Record students’ guesses, test them out and reach a group consensus.
Exploring with the Fraction Circles

1. ____________ browns equal 1 whole circle.
2. 1 whole circle equals _______________ pinks.
3. ____________ reds equal 1 whole circle.
4. ____________ pinks equal 1 brown.
5. 1 brown equals ________________ reds.
6. 1 brown is (less than, equal to, greater than) 1 pink.
7. 1 red is (less than, equal to, greater than) 1 brown.
8. 1 yellow is (less than, equal to, greater than) 1 brown.
9. 1 yellow and 1 brown and 1 _____________ equals 1 whole circle.
10. 1 yellow equals 1 brown and 2 ________________.
11. 3 pinks and 1 ________________ equal 1 whole circle.
12. ___________ grays and 1 blue and 1 yellow equals 1 whole circle.
13. 2 grays and ___________ blue equals 1 yellow.
14. 1 pink equals ________ reds.
15. 4 ________________ equal 1 yellow.