Rational Number Project

Initial Fraction Ideas Lesson 14: Overview	Materials
Students continue to model fractions with chips. They determine possible fractions that can be shown with different sets of chips.	∞ Chips for students ∞ Student Pages A, B

Teaching Actions

Warm Up

Show $\frac{3}{4}$ using chips. You decide on the unit.

Draw a picture of your display.
Repeat using another unit.

Large Group Introduction

1. Put this chart on the board and ask children to tell you what fractions can be shown with each unit and why.

Unit in chips	Fractions you can show
6 chips	sixths, halves, thirds; not fourths
8 chips	
12 chips	
15 chips	
20 chips	

2. Ask students to name fractions that cannot be shown with the above sets.

3. Present these problems to students. Students model with chips. You draw pictures of models as students verbally describe their models to you.

   Show $\frac{1}{4}$ with chips.

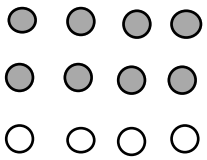
   Use 8 chips as a unit.

   Show $\frac{1}{4}$ with chips.

   Use a unit other than 8 chips.

Comments

To encourage communication, have students write out steps showing a fraction with chips.

Teaching Actions	Comments
Show $\frac{1}{6}$ with chips in 2 different ways. Use 6 chips and 12 chips as your units. Show $\frac{3}{5}$ with chips in two different ways. Use any two units. **Small Group/Partner Work** 4. Assign Student Pages A, B to reinforce chip model for fractions. **Wrap Up** 5. The next lesson is on equivalence with chips. Introduce this idea with this problem to end lesson 14: Ari showed the fraction $\frac{2}{3}$ using 12 chips. Erin said that his display really showed $\frac{8}{12}$ while Hamdi said it was $\frac{4}{6}$. Who is correct? Ari's display: 	

Translations:

- ∞ Written symbols to manipulative to verbal
- ∞ Written symbols to manipulative to pictures
- ∞ Real life to pictures

Show $\frac{3}{4}$ using chips. You decide on the unit.

Draw a picture of your display.

Repeat using another unit.

1. Show each of these fractions with chips in two ways.
   You decide on the unit.
   Draw pictures of your model.

	model 1	model 2
$\frac{2}{3}$		
$\frac{1}{5}$		
$\frac{1}{4}$		
$\frac{3}{6}$		
$\frac{4}{5}$		
$\frac{1}{2}$		

Draw pictures to model each story.

2. $\frac{2}{3}$ of Mr. Vega's math class are girls. There are 21 students in the class.

3. You can buy a box of 16 gum drops for 35 cents. If you share the box with three others, what fraction will each receive? How many gum drops will each receive?

4. William and his friend shared a small pizza evenly. How much did each eat?

5. Jessica and Jennifer shared their bag of m & m's with LeAnna. If each received a fair share, how much of the bag did Jessica and Jennifer get together?