I. What is a Fraction?

1. **Explore:** Take 5 minutes to explore the sim before beginning this worksheet.

First Tab: Intro
Check that the "Max" button is set on 1.

2. Choose a representation and make a fraction. Then write and sketch the fraction.

Fraction Name:	
Sketch/ Drawing:	

3. Increase or decrease the top number of the fraction. What happens? Write and sketch the new fraction.

Fraction Name:	
Sketch/ Drawing:	

4. Go back to your original fraction. Increase or decrease the bottom number of the fraction. What happens? Write and sketch the new fraction.

Fraction Name:	
Sketch/ Drawing:	

5. Try different representations.

6. <u>Think-Pair-Share:</u>

- How would you describe the top number of a fraction? How does changing the top number change the amount? Do you and your partner agree on the meaning of the top number?

- How would you describe the bottom number of a fraction? How does changing the bottom number of a fraction change the amount? Do you and your partner agree on the meaning of the top number?
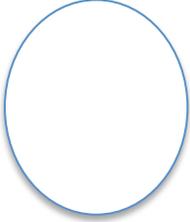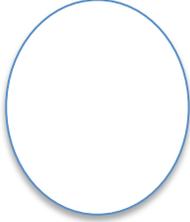
Second Tab: Build a Fraction

7. Click on the second tab. Select "Level 1" in the top row to begin the activity. Using your knowledge of the top/bottom numbers in a fraction, build fractions that match the numeric representations.
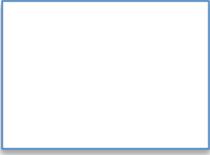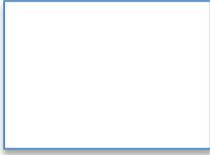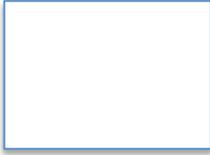
II. Ordering and Comparing Fractions

Mrs. Hixson & Mr. Huey have apple pies that are the same size. Mrs. Hixson eats 1/8 of her apple pie. Mr. Huey eats ½ of his. Who ate more pie?

Choose the **Intro Tab** or the **Fraction Lab** tab. Build Mrs. Hixson's & Mr. Huey's pies and sketch them below.

Mrs. Hixson's pie	Mr. Huey's pie

Order the following fractions from least to greatest. ___, ___, ___, ___

$\frac{2}{4}$	$\frac{2}{3}$	$\frac{2}{8}$	$\frac{2}{5}$

Talk with your partner. Is there a rule for ordering/comparing fractions when the top number, the numerator, is the same?

What if the bottom number (the denominator) remains the same, but the top number changes? Try out these fractions. Can you come up with a rule?

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

III. Equivalent Fractions

1. Play with the third tab, "Equality Lab," for 5 minutes.
2. Play with the 5th tab, "Fraction Lab" for 5 minutes.

Fifth Tab: Fraction Lab

2. Find three or more fractions that are equal to ½. Sketch your findings below.

½			

How many ways can you represent $\frac{4}{6}$?

$\frac{4}{6}$			

How can you explain to a student who has not played the sim that $\frac{1}{3}$ = $\frac{2}{6}$?

$\frac{1}{3}$ = $\frac{2}{6}$ are **equivalent fractions**. So are $\frac{2}{4}$ = $\frac{6}{12}$.

How can you tell when fractions are equivalent. Can you come up with a rule?