

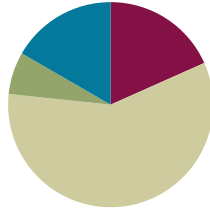
Lesson 4

Objective: Represent and identify fractional parts of different wholes.

Related Topics: [More Lesson Plans for the Common Core Math](#)

Suggested Lesson Structure

■ Fluency Practice	(11 minutes)
■ Application Problem	(4 minutes)
■ Concept Development	(35 minutes)
■ Student Debrief	(10 minutes)
Total Time	(60 minutes)



Fluency Practice (11 minutes)

- Dividing by Six Sprint **3.OA.4** (9 minutes)
- Skip Counting **3.OA.4** (2 minutes)

Dividing by Six Sprint (9 minutes)

Materials: (S) Dividing by Six Sprint

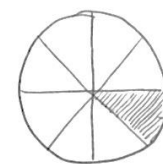
Skip Counting (2 minutes)

Skip count forward and backward by sixes, eights, and/or nines without exceeding ten multiples of each number.

Application Problems (4 minutes)

Mr. Ramos sliced an orange into 8 equal pieces. He ate 1 slice. Draw a picture to represent the 8 slices of an orange. Shade in the slice Mr. Ramos ate. What fraction of the orange did Mr. Ramos eat? What fraction did he not eat?

Remember that students should always answer a problem with a complete statement.



What he ate.
1 eighth

Mr Ramos ate 1 eighth.
He did not eat 7 eighths.

NOTES ON MULTIPLE MEANS OF ACTION AND EXPRESSION:

If students struggle with higher multiples, have them work with the first 3 or 4 multiples of each number (e.g., 8, 16, 24, 32, 24, 16, 8, 0).

Stop before students become frustrated. End with success.

Concept Development (35 minutes)

Exploration: Designate the following stations for 3 students per station (More than 3 not suggested.).

- Station A: Halves
- Station B: Fourths
- Station C: Eighths
- Station D: Thirds
- Station E: Sixths
- Station F: Ninths
- Station G: Fifths
- Station H: Tenths



NOTES ON MULTIPLE MEANS OF ENGAGEMENT:

Organize students below grade level at the stations with the easier fractional units and students above grade level stations with the most challenging fractional units.

Equip each station with the following suggested materials:

- 1 meter length of yarn
- 1 rectangular piece of yellow construction paper (1" by 12")
- 1 piece of brown construction paper (candy bar) (2" by 6")
- 1 square piece of orange construction paper (4" by 4")
- A number of 12 ounce cups corresponding to the denominator of the station's fractional unit and 12 ounces of water in a separate larger cup.
- A 200 ggram ball of clay or play dough (The key is to have precisely the same amount at each station.)

(Optional stations for sevenths and/or twelfths.)

The students are to represent their fraction using the materials at their station.

Note:

- Each item at their station represents one whole.
- They are to show the whole partitioned into equal parts as designated by their station.
- The entire quantity of each item must be used. So, for example, if showing thirds, all the clay must be used to do so, all the water must be used.
- The clay is to be partitioned by subdividing it into smaller equal pieces formed into equal sized balls. Demonstrate for the students.

To get them going, give as little direction as possible but enough for your particular class. Ask for clarification of the task by the students.

Note: It is suggested to work without scissors or cutting. Paper and yarn are folded. Clay is formed into smaller balls. Pencil can be used on the paper to designate equal parts rather than folding.

Give the students 15 minutes to create their display. Next, conduct a "museum walk" where they tour the work of the other stations.



NOTES ON MULTIPLE MEANS OF ACTION AND EXPRESSION:

As the students move around the room during the "museum walk", have students gently and respectfully pick up the materials to encourage better analysis. This will encourage more talk, too.

Before the “museum walk” review the following charted analysis points. If analysis dwindles during the tour, circulate and refer them back to the chart.

- Identify the fractional unit.
- Think about how that unit relates to your own and to other units.
- Think about how the units relate to each other at that station.
- Compare the yarn to the yellow strip.
- Compare the yellow strip to the brown paper or candy bar.
- Compare the water to the clay.

Problem Set (10 minutes)

Students should do their personal best to complete the Problem Set within the allotted 10 minutes. For some classes, it may be appropriate to modify the assignment by specifying which problems they work on first. Some problems do not specify a method for solving. Students solve these problems using the RDW approach used for Application Problems.

Student Debrief (10 minutes)

Lesson Objective: Represent and identify fractional parts of different wholes.

The Student Debrief is intended to invite reflection and active processing of the total lesson experience.

Invite students to review their solutions for the Problem Set. They should check work by comparing answers with a partner before going over answers as a class. Look for misconceptions or misunderstandings that can be addressed in the Debrief. Guide students in a conversation to debrief the Problem Set and process the lesson.

You may choose to use any combination of the questions below to lead the discussion.

- What were the different wholes we saw at each station that were the same?
- What different fractional units did you see as you went from station to station?
- What did you notice about different fractional units at the stations?

Name: Gina Date: _____

A. Draw a picture of the yellow strip at 3 (or 4) different stations. Shade and label one fractional unit of each.

B. Draw a picture of the brown bar at 3 (or 4) different stations. Shade and label one fractional unit of each.

C. Draw a picture of the square at 3 (or 4) different stations. Shade and label one fractional unit of each.

D. Draw a picture of the clay at 3 (or 4) different stations. Shade and label one fractional unit of each.

E. Draw a picture of the water at 3 (or 4) different stations. Shade and label one fractional unit of each.

F. Challenge: Draw a picture of the yarn at 3 (or 4) different stations.

- Which fractional units had the most and the smallest equal parts?
- Which fractional units had the least and the largest equal parts?
- What surprised you when you were looking at the different fractional units?

Exit Ticket (3 minutes)

After the Student Debrief, instruct students to complete the Exit Ticket. A review of their work will help you assess the students' understanding of the concepts that were presented in the lesson today and plan more effectively for future lessons. You may read the questions aloud to the students.

A

Correct _____

Multiply or divide.

1	$2 \times 6 =$		23	$__ \times 6 = 60$	
2	$3 \times 6 =$		24	$__ \times 6 = 12$	
3	$4 \times 6 =$		25	$__ \times 6 = 18$	
4	$5 \times 6 =$		26	$60 \div 6 =$	
5	$1 \times 6 =$		27	$30 \div 6 =$	
6	$12 \div 6 =$		28	$6 \div 6 =$	
7	$18 \div 6 =$		29	$12 \div 6 =$	
8	$30 \div 6 =$		30	$18 \div 6 =$	
9	$6 \div 6 =$		31	$__ \times 6 = 36$	
10	$24 \div 6 =$		32	$__ \times 6 = 42$	
11	$6 \times 6 =$		33	$__ \times 6 = 54$	
12	$7 \times 6 =$		34	$__ \times 6 = 48$	
13	$8 \times 6 =$		35	$42 \div 6 =$	
14	$9 \times 6 =$		36	$54 \div 6 =$	
15	$10 \times 6 =$		37	$36 \div 6 =$	
16	$48 \div 6 =$		38	$48 \div 6 =$	
17	$42 \div 6 =$		39	$11 \times 6 =$	
18	$54 \div 6 =$		40	$66 \div 6 =$	
19	$36 \div 6 =$		41	$12 \times 6 =$	
20	$60 \div 6 =$		42	$72 \div 6 =$	
21	$__ \times 6 = 30$		43	$14 \times 6 =$	
22	$__ \times 6 = 6$		44	$84 \div 6 =$	

B

Improvement _____

Correct _____

Multiply or divide.

1	$1 \times 6 =$		23	$__ \times 6 = 12$	
2	$2 \times 6 =$		24	$__ \times 6 = 60$	
3	$3 \times 6 =$		25	$__ \times 6 = 18$	
4	$4 \times 6 =$		26	$12 \div 6 =$	
5	$5 \times 6 =$		27	$6 \div 6 =$	
6	$18 \div 6 =$		28	$60 \div 6 =$	
7	$12 \div 6 =$		29	$30 \div 6 =$	
8	$24 \div 6 =$		30	$18 \div 6 =$	
9	$6 \div 6 =$		31	$__ \times 6 = 18$	
10	$30 \div 6 =$		32	$__ \times 6 = 24$	
11	$10 \times 6 =$		33	$__ \times 6 = 54$	
12	$6 \times 6 =$		34	$__ \times 6 = 42$	
13	$7 \times 6 =$		35	$48 \div 6 =$	
14	$8 \times 6 =$		36	$54 \div 6 =$	
15	$9 \times 6 =$		37	$36 \div 6 =$	
16	$42 \div 6 =$		38	$42 \div 6 =$	
17	$36 \div 6 =$		39	$11 \times 6 =$	
18	$48 \div 6 =$		40	$66 \div 6 =$	
19	$60 \div 6 =$		41	$12 \times 6 =$	
20	$54 \div 6 =$		42	$72 \div 6 =$	
21	$__ \times 6 = 6$		43	$13 \times 6 =$	
22	$__ \times 6 = 30$		44	$78 \div 6 =$	

Name _____

Date _____

A. Draw a picture of the yellow strip at 3 (or 4) different stations. Shade and label one fractional unit of each.

B. Draw a picture of the brown bar at 3 (or 4) different stations. Shade and label one fractional unit of each.

C. Draw a picture of the square at 3 (or 4) different stations. Shade and label one fractional unit of each.

D. Draw a picture of the clay at 3 (or 4) different stations. Shade and label one fractional unit of each.

E. Draw a picture of the water at 3 (or 4) different stations. Shade and label one fractional unit of each.

F. Challenge: Draw a picture of the yarn at 3 (or 4) different stations.

Name _____

Date _____

Each shape is 1 whole. Estimate to equally partition the image to show the fractional unit of:

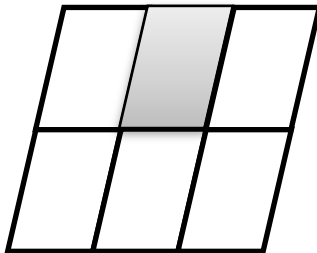
1. $\frac{1}{4}$



2. $\frac{1}{5}$



3. The shape represents 1 whole. Write the fractional unit of the shaded part.



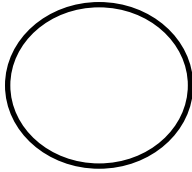
The shaded part is _____

Name _____

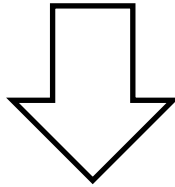
Date _____

Each shape is 1 whole. Estimate to equally partition the following images to show the fractional unit of:

1. $\frac{1}{2}$



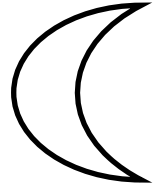
A



B

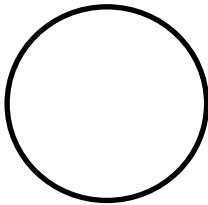


C



D

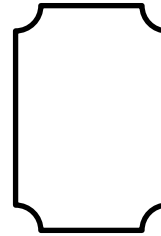
2. $\frac{1}{4}$



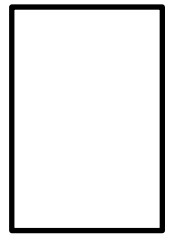
A



B

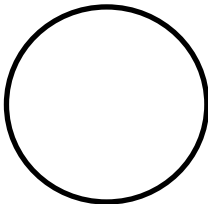


C



D

3. $\frac{1}{3}$



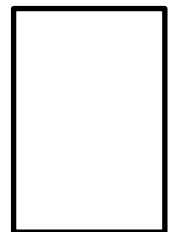
A



B



C



D

4. Each of the shapes represent 1 whole. Match each shape to its unit fraction.

$\frac{1}{12}$

$\frac{1}{3}$

$\frac{1}{4}$

$\frac{1}{2}$

$\frac{1}{8}$

$\frac{1}{10}$

$\frac{1}{5}$

$\frac{1}{6}$

