

# Fractions

**Overview** Using their bodies, students will represent human fractions outside. They will then collect natural materials to bring inside to continue representing fractions. The concept of adding fractions with like denominators can be introduced at this time.

**Lesson  
Planner**

Time Required	45 minutes
Key Concepts/Terms	Numerator, Denominator, Fraction, Whole
Prerequisites	<ul style="list-style-type: none"><li>• Knowledge of expectations for outdoor classroom conduct.</li><li>• A basic understanding that a fraction is part of a whole.</li></ul>
Setting	<ul style="list-style-type: none"><li>• 20-minute field study outside</li><li>• Remainder of lesson inside</li></ul>

**Standards** MDSC 3rd Grade  
6.A.2.a. Read, write, and represent fractions as parts of a single region using symbols, words, and models  
6.A.2.b. Read, write, and represent fractions as parts of a set using symbols, words, and models

**Objectives** Students will use their bodies in order to demonstrate human fractions. Students will also use natural items they collect from outside in order to demonstrate fractions.

**Materials  
Required**

- Signs of fractions to use outside.
- Fractions worksheet.

**Background  
Information**

Students have already begun learning about fractions as equal parts. Later, they will begin adding fractions with like denominators.

The assessment limit for these standards is to include fractions with the denominators of 2, 3, or 4.

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Date: \_\_\_\_\_

**Procedure** Follow the steps in the table below to conduct the activity. **Sentences in bold are suggestions for what teachers might say to students.** *Items in italics are possible teacher answers to questions.*

Phase	Step	Action
Engage	1	<p><u>Establish rules and expectations (5 minutes)</u> Go over the rules and expectations for learning outside. A poster may be created to be kept in the classroom for future outdoor lessons.</p> <p>Have in mind some expectations for outdoor learning specific to your schoolyard that you want to be sure students include. For instance,</p> <ul style="list-style-type: none"><li>• <i>Regular school rules still apply (respect each other, listen to the speaker, follow directions, etc.)</i></li><li>• <i>No yelling, screaming, tapping on/waving into windows that will disrupt class learning inside the school building.</i></li><li>• <i>“Look, learn, and let go” when you see insects.</i></li></ul>

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	<b>2</b>	<p><u>Parts of a Whole (10 minutes) - Outside</u></p> <p>Take students outside and ask them to stand in a group. Divide the group in half. (The two halves must be equal, if necessary, ask a student to stand out of the group for now, and this student can be the sign holder.)</p> <p>Tell one half of the group to do something (i.e., put their hands on their hips). Ask students what fraction of the class has their hands on their hips. Students should say <math>\frac{1}{2}</math>. Hold up the sign showing the fraction <math>\frac{1}{2}</math>.</p> <p>Tell the other half of the group to do the same thing. Ask students what fraction of the group is doing that thing. Students should say <math>\frac{2}{2}</math>. Hold up the sign showing the fraction <math>\frac{2}{2}</math>. Explain that this equals one whole, and that the whole class is doing the same thing.</p> <p>Split the class into three equal groups. Repeat the above process with different fractions and actions.</p> <p>Split the class into four equal groups. Repeat the activity.</p>
<b>Explore</b>	<b>3</b>	<p><u>Parts of a Set (10 minutes) - Outside</u></p> <p>Split students into groups of 4. Again, if there are extra students, one can help hold the signs, others can check the groups to make sure they are correct.</p> <p>Ask <math>\frac{3}{4}</math> of each group to do something (i.e. touch their toes). Hold up a sign displaying the fraction. Check each group to make sure they are correct. Continue giving groups tasks to do to show fractions.</p> <p>Split students into groups of 3. Repeat activities and fractions. Split into groups of 2. Repeat activities and fractions.</p>

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Date: \_\_\_\_\_

<b>Explain</b>	<b>4</b>	<p><u>Model Skill (5 minutes)</u></p> <p>Before coming back into the classroom, ask students to collect one handful of natural objects (seeds, nuts, leaves, grasses, etc.).</p> <p>Back in the classroom, students should lay out their natural objects. Model for students how to use the natural objects to show a fraction (on the fraction worksheet).</p>
<b>Elaborate</b>	<b>5</b>	<p><u>Practice Skill (10 minutes)</u></p> <p>Ask students to work through the worksheet showing the fractions with their objects. Students can work in groups or independently.</p> <p>Display good examples on the visualizer, and have students verbalize how they came up with their model.</p>
<b>Evaluate</b>	<b>6</b>	<p><u>Quiz (5 minutes)</u></p> <p>Ask students to draw their answer for one of the fractions and to explain why their picture represents that fraction.</p>

**Vocabulary**

Understanding of the following terms is required in this activity.

Term	Definition
Numerator	the part of a fraction that is above the line
Denominator	the part of a fraction that is below the line
Fraction	a part of a whole
Whole	a number that is a natural number (as 1, 2, or 3)



**Written by Christa Haverly**

Name: \_\_\_\_\_

Date: \_\_\_\_\_

## Fun with Fractions

1.  $\frac{2}{3}$

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

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

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

