

Learn the Vocabulary

Objective Talk and write about fractions using the vocabulary words.

30 minutes



Teach this lesson:

- **Before** students begin work on fractions in their grade-level math textbooks
- **Before** students complete the activities on page 102 of the student worktext

You need these materials:

- egg carton
- scored crackers
- books
- Worksheet 26
- large sheet of chart paper and markers

Lesson Vocabulary

Essential Vocabulary

fraction	numerator	denominator
group (set)	whole (region)	

Additional Vocabulary

half/halves	third/thirds	fourth/fourths
eighth/eighths		

A Introduce

Introduce students to the game Hangman. Use *fractions* as the word to be guessed. When they guess a letter correctly, they get another turn. When they guess wrong, draw a head, neck, arm, etc.

Read the word *fractions* aloud with students when the letters have been guessed. Ask students to write a sentence about fractions in their own words. They may include information from the previous lesson. Encourage them to provide drawings or numbers if it would help them.

Have students form small groups and talk about their writing. Move around the room, helping students clarify their ideas.

Bring the group back together. Ask students to list words that were helpful in talking about fractions. Repeat each of these words, and write them on the board. Add other important words you heard in conversations, even if students don't mention them. For example, say: *I heard [Miguel] use the word group to talk about fractions. That's a good word! I'll add it to the list.*

Read the word list aloud. Add sketches or other examples that will help students understand the meanings of the words. Then add any other words from the Essential Vocabulary list that have not yet been brought up.

Choose any words from the Additional Vocabulary box that you think will be useful. Elicit or provide examples or definitions for these words.

Highlighted words and phrases may affect student comprehension.

Learn the Vocabulary

Objective Talk and write about fractions using the vocabulary words.

Learn the Words

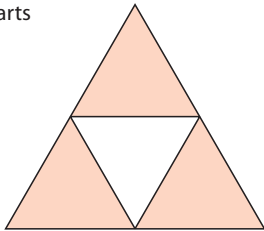
Directions Write the missing numbers and words.

A **fraction** names **equal parts**.

Fractions can name equal parts of a **whole** or a **region**.

3 out of 4 equal parts are **shaded**.

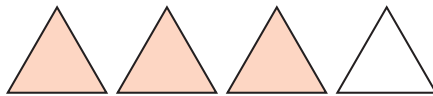
$\frac{3}{4}$ of the whole is shaded.



The **numerator** tells how many equal parts you are **choosing** or shading.

$\frac{3}{4}$ ← numerator

Fractions can name equal parts of a **group** or a **set**.



3 _____ out of 4 _____ equal parts are shaded.

$\frac{3}{4}$ _____ of the group is shaded.

The **denominator** tells how many equal parts in all.

$\frac{3}{4}$ ← denominator _____

Practice the Words

Directions Write the missing vocabulary words in the blanks. Then answer question 6 using a complete sentence.

- 1 The top number in a fraction is the **numerator** _____.
- 2 The bottom number in a fraction is the **denominator** _____.
- 3 A **fraction** _____ shows equal parts.
- 4 Some fractions show equal parts of a **group or whole** _____.
- 5 Other fractions show equal parts of a **whole or group** _____.
- 6 What information does the denominator of a fraction tell you? Use your own words to explain. **Possible answer: The denominator tells how many equal parts there are in all.**

B Teach and Learn

Read aloud with students the Lesson Objective on page 102 in the student worktext.

Explain that the words on the board will help them talk and write about fractions.

Read aloud the first line in the Learn the Words box. Ask students to point to classmates who used the phrase *equal parts* when talking about fractions in their small groups.

Remind students that there are two kinds of equal parts. Say: *One kind is _____. The other is _____.* Allow students to complete the sentences with *equal parts of a whole* and *equal parts of a group*. Say that there is also a third kind of equal parts: *equal parts of a number line*.

Point out the text above the two pictures in the Learn the Words box. Have volunteers read the text aloud. Explain that the words *whole* and *region* refer to the same thing, and *group* and *set* refer to the same thing.

Briefly review the difference between whole (or region) and group (or set). Display an egg carton. Establish that this is a whole because it is a single object. Then hold up several pencils. Establish that the pencils represent a group, because they are multiple objects. Finally, display ordinary objects such as a scored cracker (example of a whole) and a few books (example of a group). Have students tell if they are wholes or groups.

Draw students' attention to the pictures in the Learn the Words box. Ask students to talk with a partner about the two pictures. Ask them to tell each other how they are alike and how they are different. Establish that both pictures show equal parts, but the one on the left shows equal parts of a whole and the one on the right shows equal parts of a group.

Introduce the word *shaded*. Relate the word *shaded* to the *shade* that results when light is blocked; explain that *shaded* areas are darker, like areas that are in the shade. Have students point to the *shaded* triangles in the two pictures.


Say: *We can use fractions to tell about these pictures. We can use fractions because the pictures show ____.* Allow students to fill in the phrase *equal groups*.

Read aloud the text beside the left-hand picture. Ask: *How many parts are shaded?* (3) *How many are there in all?* (4) Explain that 3 of the 4 parts of the figure are shaded. Read aloud the fraction $\frac{3}{4}$ as *three-fourths* and have students repeat. Then read the line: *$\frac{3}{4}$ of the whole is shaded.*

Move on to the picture on the right. Have students work with a partner to read the text and fill in the missing numbers. Move around the room, offering help as necessary.


Point out the words *numerator* and *denominator* on the bottom row of the Learn the Words box. Say the words carefully and slowly, and have students repeat several times. You may find it useful to teach the words one syllable at a time, writing the syllables separately on the board and building up their pronunciation in parts.

Use the pictures and arrows to show students that the numerator is the top number in a fraction. Explain that the *numerator* refers to the number of equal parts that are shaded or chosen. Repeat with the denominator, the bottom number. Explain that the denominator refers to the total number of equal parts. Have students fill in the missing word *denominator* in the blank space.

 **Have students complete the Vocabulary Cards for the words in this module.**

C Review and Practice

BP 3 **Return to the list of Essential Vocabulary terms on the board.** Have students sketch a picture to show what each word means. Then have them talk about their pictures with a partner. Pay special attention to *numerator* and *denominator*, which are easy to confuse even for fluent speakers of English.

 **BP 3** **Distribute one copy of Worksheet 26 to pairs of students.** Have students work together to identify the numerators and the denominators. Encourage them to use their Vocabulary Cards and the information on page 102 of the student worktext.

Read aloud the directions for Practice the Words on page 102. Point out that question 6 asks for a complete sentence. Then have students solve the problems independently.

D Assess and Intervene

How well do students understand the meaning of the vocabulary words, judging from their work in Practice the Words on page 102? Use the rubric to identify students who need extra support through additional help and the Intervention activity.

Intermediate

- Identifies 4 of the words correctly.
- Writes a phrase or sentence that includes the idea of total equal parts; errors may make comprehension difficult.

Example of a sentence a student might write: *Tell you how many part.*

Advanced


- Identifies all the words correctly.
- Writes a complete sentence that includes the idea of total equal parts, with minimal errors.

Example of a sentence a student might write: *Denominator tell you the number of equal part there is.*

INTERVENTION

5 minutes



 **Students who cannot identify all of the vocabulary words may benefit from creating a web to organize information about them.** Have students use markers to create a web on a large sheet of chart paper. In the center of the web, have them place a Vocabulary Card with a word they are not yet familiar with. Help them list information about the word in the strands of the web going out from the center. If possible, have students work with others who struggle with different words, so they can help each other.