Lakeshore®

FRACTIONS & DECIMALS
ELEMENTARY FOLDER GAMES

HH336

Targets standards in these areas:

- **Number & Operations – Fractions**
- **Number & Operations in Base Ten**
- **Mathematical Practice**

For full description, see page 2.

What's Included

- 10 activity folders
- 10 storage pouches with manipulatives
- 10 answer cards
- Flip-top storage box
- Reproducible assessment (on page 3 of this guide)
- Reproducible versions of game pieces (on pages 4–8 of this guide)

Before You Begin

- To set up the folder games, place the game pieces and answer cards in their corresponding storage pouches. (The pieces are color-coded to match the pouches and folders.) Place the pawn in the Jungle Crossing pouch. You will also need to attach one spinner to the Jungle Crossing folder and two spinners to the Hoop It Up folder. Simply snap the front and back of each spinner together through the hole in the folder. Slip the pouches inside their folders in the storage box, and your folder games are ready to use!
- **Note:** For your convenience, reproducible versions of the game pieces are included on pages 4–8 of this guide. If any Fly Away! runway tokens or Hoop It Up basketball tiles are lost, you can photocopy the reproducible versions or use plastic chips instead.

About the Folder Games

Ten easy-to-play folder games provide independent, hands-on practice with fractions and decimals. Each folder includes materials and simple, illustrated instructions for an engaging, focused activity—plus a bonus activity to reinforce the new concept. You can set the games in your math center and have students rotate through, or invite students to select games to play on their own at their desks. However you use them in your classroom, these folder games are a great way to boost students' math skills!

Getting Started

Before students play the games on their own, be sure to model each one. Invite volunteers to help you. Select a folder and point out that the front of the folder shows the materials students need. Next, read the instructions together. Remind students to look at the illustrations to make sure they understand what to do. Have volunteers take turns playing the game and prompt them to check their work with the answer card.

Assessment

- An assessment can be found on page 3 of this guide. The assessment can be used as a pre-assessment tool to identify which folders students should be able to work on independently. It can also be used to identify which skill sets students need to develop further before they play the games independently.
- As a post-assessment tool, the questions can be used to check student understanding and record student progress. The assessment questions correspond to the numbers on the folders, with each question corresponding to the skill covered on a specific folder. (For example, question 1 refers to folder 1.) See below for a complete listing.

Folder Skills

Folder	Skill
Save the Town	Matching Equivalent Fractions
Tennis Match	Equivalent Fractions & Decimals
Wacky Machines	Comparing Fractions
Fly Away!	Adding Like Fractions
Surf's Up!	Subtracting Like Fractions
Hoop It Up	Adding Unlike Fractions
Tropical Island	Subtracting Unlike Fractions
Jungle Crossing	Multiplying Fractions & Whole Numbers
Blast Off!	Dividing Whole Numbers & Unit Fractions
Decimal Express	Decimals to the Thousandths

Standards Correlation

Folder(s)	Number & Operations - Fractions
Save the Town	Explaining why fractions are equivalent (i.e., 1/2 = 2/4); recognizing and generating **equivalent fractions**
Wacky Machines	**Comparing two fractions** with different numerators and denominators using >, =, or <
Fly Away!; Surf's Up!	Understanding **addition and subtraction of fractions** as joining and separating parts of the same whole
Tennis Match	Using **decimal notation for fractions** with denominators 10 or 100
Hoop It Up; Tropical Island	**Adding and subtracting fractions** with unlike denominators (including mixed numbers)
Jungle Crossing	Interpreting the product (a/b) × q as *a* parts of a partition of *q* into *b* equal parts, and as the result of a sequence of operations a × q ÷ b
Blast Off!	Interpreting **division of a whole number by a unit fraction**, and computing such quotients
Blast Off	Solving **real-world problems involving division** of unit fractions by non-zero whole numbers, and division of whole numbers by unit fractions
Folder	**Number & Operations in Base Ten**
Decimal Express	Reading and writing decimals to thousandths in **number, name, and expanded form**
Decimal Express	**Comparing two decimals** to thousandths based on meanings of the digits in each place, using >, =, and <
Folder(s)	**Mathematical Practice**
Save the Town; Tennis Match; Wacky Machines; Fly Away!; Surf's Up!; Hoop It Up; Tropical Island; Jungle Crossing; Blast Off!; Decimal Express	Making sense of problems and persevering in solving them
Fly Away!; Surf's Up!; Hoop It Up; Tropical Island; Jungle Crossing; Blast Off!; Decimal Express	Attending to precision

Assessment Answers

1. **B.** 4/7
2. **C.** 6/10
3. **B.** 3/5 < 7/8
4. **C.** 4/5
5. **1/4**
6. **B.** 7/12
7. **C.** 1/10
8. **C.** 1 1/2
9. **A.** 10/11
10. **C. 0.493**

Meeting Individual Needs

❑ ELL

Review any unfamiliar vocabulary before students begin the game. Then have students create a flash card for each of the 10 topics covered in the set. Have them label each card with the name of the folder that covers that topic. On the cards, students can record information about the topics. For example, the Save the Town folder covers equivalent fractions. On the flash card for that folder, students could draw equivalent fractions such as ½ of a circle and ¾ of a circle. Or select a problem from the game and write it on your board or chart paper. Walk students through the problem and have them record their work on a flash card. Students can keep their cards in an envelope or on a binder ring and use them for reference when playing the games.

❑ Reteach/Extra Support

- Work with students in small groups or one-on-one. Read through the three-step illustrated instructions on a selected folder together. Then model the activity. Make sure students have a clear understanding of game play.
- Review the correlation between fractions and decimals. Give students a sheet of paper showing two hundreds blocks. Have students shade in the first five columns of each block. Under the first block, have students write 50/100. Under the next block, have students write *.50*. Have students repeat this for .10, .25, .75, and 1.0.
- Review addition and subtraction of like fractions. Have students create their own set of flash cards to practice each operation. For example, ⅓ + ⅓ would be written on the front of the flash card, and ⅔ would be written on the back.
- Invite students to play one of the games with a partner. Have students take turns placing game pieces or solving problems.

❑ Challenge

- Have students complete the bonus activity on the front of each folder.
- Have students create and solve additional problems similar to the ones found in each folder.
- Have students time themselves each time they play the game. Have them graph or record the data to see if their time improves.

Name _____ Date _____

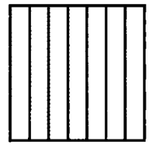
FRACTIONS & DECIMALS

1 Which fraction is equivalent to this picture?

A. $1\frac{3}{4}$

B. $\frac{4}{7}$

C. $\frac{7}{4}$



2 Which fraction is equivalent to 0.6?

A. $\frac{6}{100}$

B. $\frac{1}{6}$

C. $\frac{6}{10}$

3 Which number sentence is true?

A. $\frac{2}{10} > \frac{1}{2}$

B. $\frac{3}{5} < \frac{7}{8}$

C. $\frac{3}{6} < \frac{3}{9}$

4 Add the fractions and reduce your answer to its lowest terms.

$$\frac{5}{10} + \frac{3}{10}$$

A. $\frac{3}{5}$ B. $\frac{8}{10}$ C. $\frac{4}{5}$

5 Solve the problem. Reduce your answer and write it on the line.

$\frac{11}{12} - \frac{8}{12} =$ _____

6 Add the fractions and reduce your answer to its lowest terms.

$$\frac{1}{4} + \frac{1}{3}$$

A. $\frac{2}{7}$ B. $\frac{7}{12}$ C. $\frac{11}{12}$

7 Subtract the fractions.

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

A. $\frac{9}{10}$ B. $\frac{3}{8}$ C. $\frac{1}{10}$

8 Multiply and reduce your answer to its lowest terms.

$$\frac{3}{8} \times 4$$

A. $\frac{12}{32}$ B. $\frac{4}{32}$ C. $1\frac{1}{2}$

9 Divide the fractions and reduce your answer to its lowest terms.

$$\frac{5}{6} \div \frac{11}{12}$$

A. $\frac{10}{11}$ B. $\frac{55}{72}$ C. $\frac{60}{66}$

10 What is the equivalent to $(4 \times \frac{1}{10}) + (9 \times \frac{1}{100}) + (3 \times \frac{1}{1{,}000})$?

A. 4.93

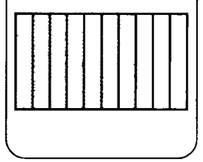
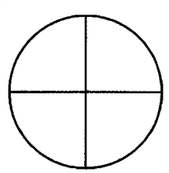
B. 40.93

C. 0.493

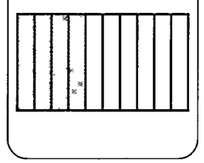
FOLDER 1 – SAVE THE TOWN

BANG! | 	 | $\frac{4}{10}$	 | $\frac{8}{18}$	$\frac{4}{9}$ | 
 | $\frac{3}{5}$	$\frac{10}{18}$ | 	 | POW!	BOOM! | 
$\frac{2}{4}$ | 	$\frac{3}{12}$ | 	 | $\frac{1}{5}$	$\frac{10}{12}$ | 
 | $\frac{5}{6}$	ZAP! | 		

FOLDER 2 – TENNIS MATCH

$\frac{5}{10}$	.8		$\frac{75}{100}$
$\frac{1}{10}$	$\frac{2}{10}$	.08	.3
.6		$\frac{12}{100}$	$\frac{83}{100}$

FOLDER 2 – TENNIS MATCH (CONTINUED)

.98	.9	$\frac{25}{100}$	

FOLDER 3 – WACKY MACHINES

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FOLDER 4 – FLY AWAY!

$\frac{4}{12}+\frac{2}{12}$	$\frac{3}{5}+\frac{2}{5}$	$\frac{3}{9}+\frac{3}{9}$	$\frac{10}{24}+\frac{8}{24}$	$\frac{3}{10}+\frac{5}{10}$
$\frac{1}{16}+\frac{1}{16}$	$\frac{3}{20}+\frac{2}{20}$	$\frac{7}{25}+\frac{3}{25}$	$\frac{5}{30}+\frac{1}{30}$	$\frac{4}{27}+\frac{5}{27}$
$\frac{37}{100}+\frac{23}{100}$	$\frac{8}{64}+\frac{16}{64}$	$\frac{1}{14}+\frac{1}{14}$	$\frac{28}{50}+\frac{17}{50}$	$\frac{13}{45}+\frac{12}{45}$

FOLDER 5 – SURF'S UP!

$\frac{20}{24}$	$\frac{15}{16}$	$\frac{12}{20}$	$\frac{15}{50}$	
$-\frac{3}{8}$	$-\frac{10}{24}$	$-\frac{2}{12}$	$-\frac{10}{50}$	$\frac{9}{81}$
$\frac{2}{4}$	$\frac{15}{25}$	$\frac{6}{36}$	$\frac{2}{16}$	$\frac{8}{12}$

FOLDER 6 – HOOP IT UP

FOLDER 7 – TROPICAL ISLAND

$\frac{4}{9} - \frac{1}{6}$	$\frac{5}{8} - \frac{6}{10}$	$\frac{5}{9} - \frac{1}{3}$	$\frac{10}{16} - \frac{3}{12}$	$\frac{1}{2} - \frac{3}{10}$
$\frac{3}{9} - \frac{3}{12}$	$\frac{7}{8} - \frac{3}{4}$	$\frac{9}{10} - \frac{8}{9}$	$\frac{13}{15} - \frac{7}{10}$	$\frac{15}{14} - \frac{1}{2}$
$\frac{11}{20} - \frac{3}{10}$	$\frac{9}{10} - \frac{2}{3}$	$\frac{2}{3} - \frac{1}{4}$	$\frac{3}{5} - \frac{1}{2}$	$\frac{3}{4} - \frac{9}{12}$

FOLDER 9 – BLAST OFF!

$4 \div \frac{1}{2}$	$\frac{1}{8} \div 3$	$1 \div \frac{1}{10}$	$\frac{1}{4} \div 4$	$3 \div \frac{1}{8}$
$\frac{1}{5} \div 3$	$6 \div \frac{1}{8}$	$\frac{1}{10} \div 2$	$3 \div \frac{1}{4}$	$\frac{1}{6} \div 3$
$2 \div \frac{1}{10}$	$\frac{1}{3} \div 3$	$6 \div \frac{1}{3}$	$\frac{1}{2} \div 4$	$5 \div \frac{1}{5}$

FOLDER 10 – DECIMAL EXPRESS

0.003	0.06	0.006	0.9	0.086	32.48
0.13	0.644	420.64	0.246	0.049	0.72
	0.010	0.4	0.609	0.6	

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