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CD-104646

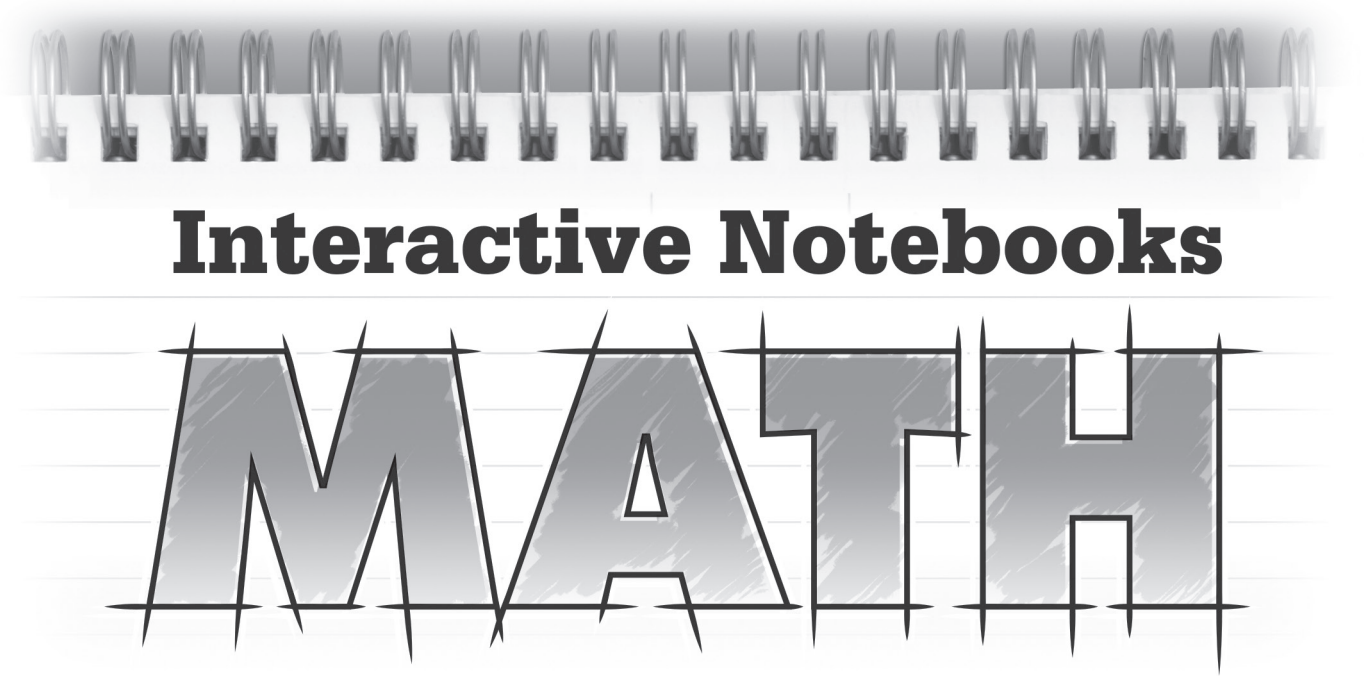
Interactive Notebooks

MATH

Grade 1

CORRELATED TO Current State Standards CARSONDELLOSA.COM

- *Ideal for organizing information and applying learning*
- *Perfect for addressing the needs of individual learners*
- *Includes step-by-step instructions for each page*
- *Great for introducing new math topics*



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MATH

Grade 1

Credits

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Visit *carsondellosa.com* for correlations to Common Core, state, national, and Canadian provincial standards.

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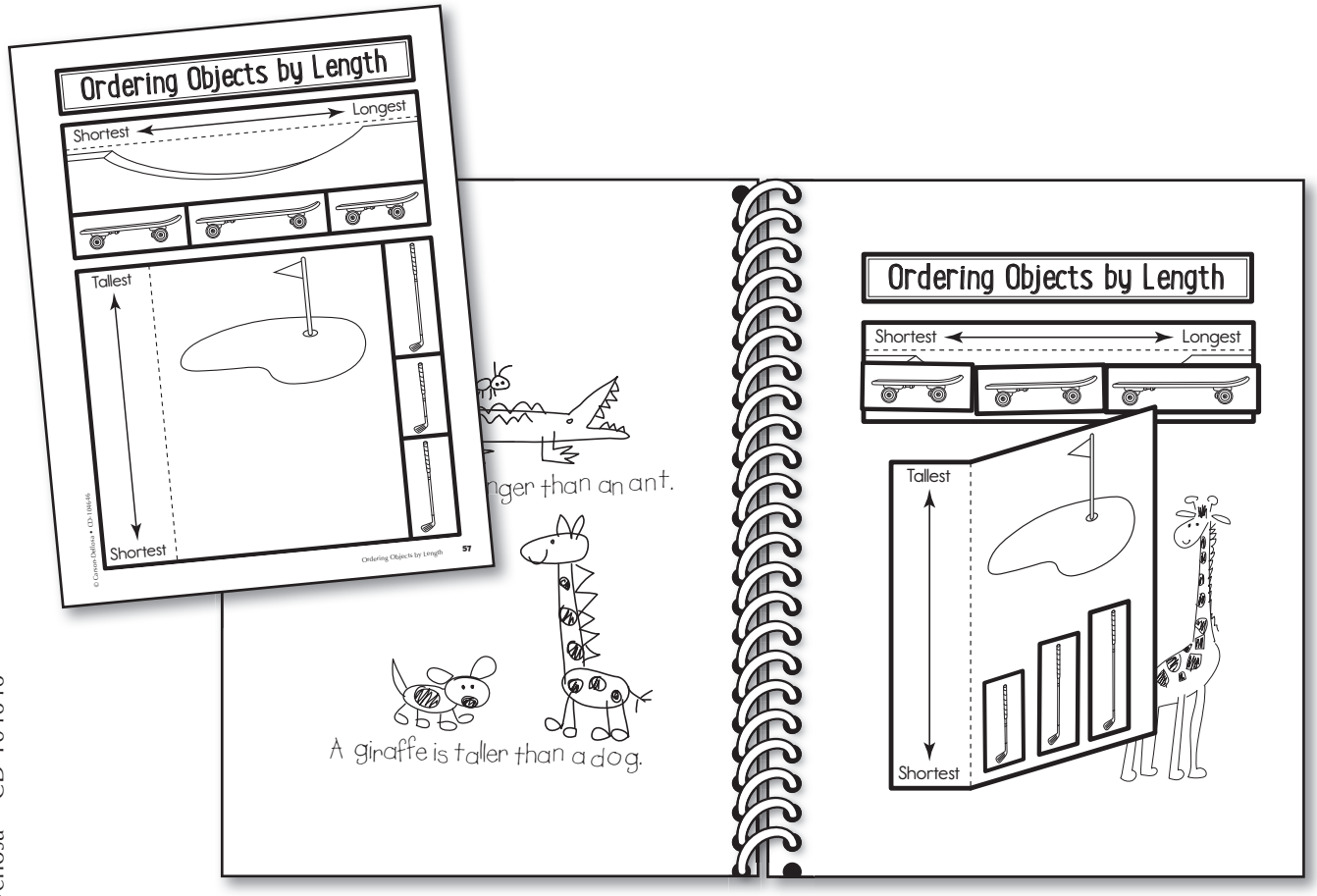
Table of Contents

What Are Interactive Notebooks?

Interactive notebooks are a unique form of note taking. Teachers guide students through creating pages of notes on new topics. Instead of being in the traditional linear, handwritten format, notes are colorful and spread across the pages. Notes also often include drawings, diagrams, and 3-D elements to make the material understandable and relevant. Students are encouraged to complete their notebook pages in ways that makes sense to them. With this personalization, no two pages are exactly the same.

Because of their creative nature, interactive notebooks allow students to be active participants in their own learning. Teachers can easily differentiate pages to address the levels and needs of each learner. The notebooks are arranged sequentially, and students can create tables of contents as they create pages, making it simple for students to use their notebooks for reference throughout the year. The interactive, easily personalized format makes interactive notebooks ideal for engaging students in learning new concepts.

Using interactive notebooks can take as much or as little time as you like. Students will initially take longer to create pages but will get faster as they become familiar with the process of creating pages. You may choose to only create a notebook page as a class at the beginning of each unit, or you may choose to create a new page for each topic within a unit. You can decide what works best for your students and schedule.



A student's interactive notebook for length

Getting Started

You can start using interactive notebooks at any point in the school year. Use the following guidelines to help you get started in your classroom. (For more specific details, management ideas, and tips, see page 10.)

1. Plan each notebook.

Use the planning template (page 9) to lay out a general plan for the topics you plan to cover in each notebook for the year.

2. Choose a notebook type.

Interactive notebooks are usually either single-subject, spiral-bound notebooks, composition books, or three-ring binders with loose-leaf paper. Each type presents pros and cons. See page 5 for a more in-depth look at each type of notebook.

3. Allow students to personalize their notebooks.

Have students decorate their notebook covers, as well as add their names and subjects. This provides a sense of ownership and emphasizes the personalized nature of the notebooks.

4. Number the pages and create the table of contents.

Have students number the bottom outside corner of each page, front and back. When completing a new page, adding a table of contents entry will be easy. Have students title the first page of each notebook "Table of Contents." Have them leave several blank pages at the front of each notebook for the table of contents. Refer to your general plan for an idea of about how many entries students will be creating.

5. Start creating pages.

Always begin a new page by adding an entry to the table of contents. Create the first notebook pages along with students to model proper format and expectations.

This book contains individual topics for you to introduce. Use the pages in the order that best fits your curriculum. You may also choose to alter the content presented to better match your school's curriculum. The provided lesson plans often do not instruct students to add color. Students should make their own choices about personalizing the content in a way that makes sense to them. Encourage students to highlight and color the pages as they desire while creating them.

After introducing topics, you may choose to add more practice pages. Use the reproducibles (pages 78–96) to easily create new notebook pages for practice or to introduce topics not addressed in this book.

Use the grading rubric (page 11) to grade students' interactive notebooks at various points throughout the year. Provide students copies of the rubric to glue into their notebooks and refer to as they create pages.

What Type of Notebook Should I Use?

Spiral Notebook

The pages in this book are formatted for a standard one-subject notebook.

Pros

- Notebook can be folded in half.
- Page size is larger.
- It is inexpensive.
- It often comes with pockets for storing materials.

Cons

- Pages can easily fall out.
- Spirals can snag or become misshapen.
- Page count and size vary widely.
- It is not as durable as a binder.

Tips

- Encase the spiral in duct tape to make it more durable.
- Keep the notebooks in a central place to prevent them from getting damaged in desks.

Composition Notebook

Pros

- Pages don't easily fall out.
- Page size and page count are standard.
- It is inexpensive.

Cons

- Notebook cannot be folded in half.
- Page size is smaller.
- It is not as durable as a binder.

Tips

- Copy pages meant for standard-sized notebooks at 85 or 90 percent. Test to see which works better for your notebook.

Binder with Loose-Leaf Paper

Pros

- Pages can be easily added, moved, or removed.
- Pages can be removed individually for grading.
- You can add full-page printed handouts.
- It has durable covers.

Cons

- Pages can easily fall out.
- Pages aren't durable.
- It is more expensive than a notebook.
- Students can easily misplace or lose pages.
- Larger size makes it more difficult to store.

Tips

- Provide hole reinforcers for damaged pages.

How to Organize an Interactive Notebook

You may organize an interactive notebook in many different ways. You may choose to organize it by unit and work sequentially through the book. Or, you may choose to create different sections that you will revisit and add to throughout the year. Choose the format that works best for your students and subject.

An interactive notebook includes different types of pages in addition to the pages students create. Non-content pages you may want to add include the following:

Title Page

This page is useful for quickly identifying notebooks. It is especially helpful in classrooms that use multiple interactive notebooks for different subjects. Have students write the subject (such as "Math") on the title page of each interactive notebook. They should also include their full names. You may choose to have them include other information such as the teacher's name, classroom number, or class period.

Table of Contents

The table of contents is an integral part of the interactive notebook. It makes referencing previously created pages quick and easy for students. Make sure that students leave several pages at the beginning of each notebook for a table of contents.

Expectations and Grading Rubric

It is helpful for each student to have a copy of the expectations for creating interactive notebook pages. You may choose to include a list of expectations for parents and students to sign, as well as a grading rubric (page 11).

Unit Title Pages

Consider using a single page at the beginning of each section to separate it. Title the page with the unit name. Add a tab (page 78) to the edge of the page to make it easy to flip to the unit. Add a table of contents for only the pages in that unit.

Glossary

Reserve a six-page section at the back of the notebook where students can create a glossary. Draw a line to split in half the front and back of each page, creating 24 sections. Combine Q and R and Y and Z to fit the entire alphabet. Have students add an entry as each new vocabulary word is introduced.

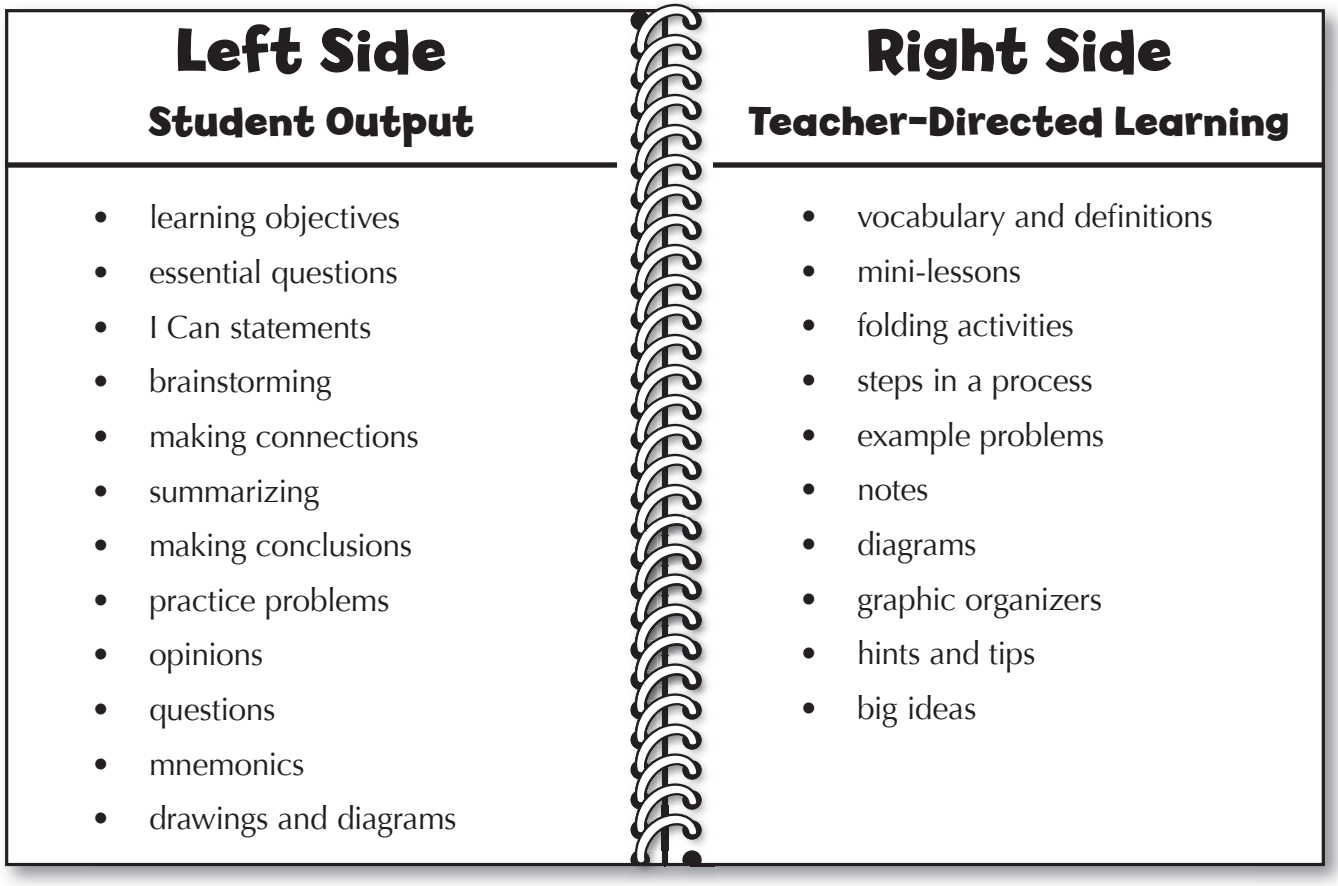
Formatting Student Notebook Pages

The other major consideration for planning an interactive notebook is how to treat the left and right sides of a notebook spread. Interactive journals are usually viewed with the notebook open flat. This creates a left side and a right side. You have several options for how to treat the two sides of the spread.

Traditionally, the right side is used for the teacher-directed part of the lesson, and the left side is used for students to interact with the lesson content. The lessons in this book use this format. However, you may prefer to switch the order for your class so that the teacher-directed learning is on the left and the student input is on the right.

It can also be important to include standards, learning objectives, or essential questions in interactive notebooks. You may choose to write these on the top-left side of each page before completing the teacher-directed page on the right side. You may also choose to have students include the "Introduction" part of each lesson in that same top-left section. This is the *in, through, out* method. Students enter *in* the lesson on the top left of the page, go *through* the lesson on the right page, and exit *out* of the lesson on the bottom left with a reflection activity.

The following chart details different types of items and activities that you could include on each side.



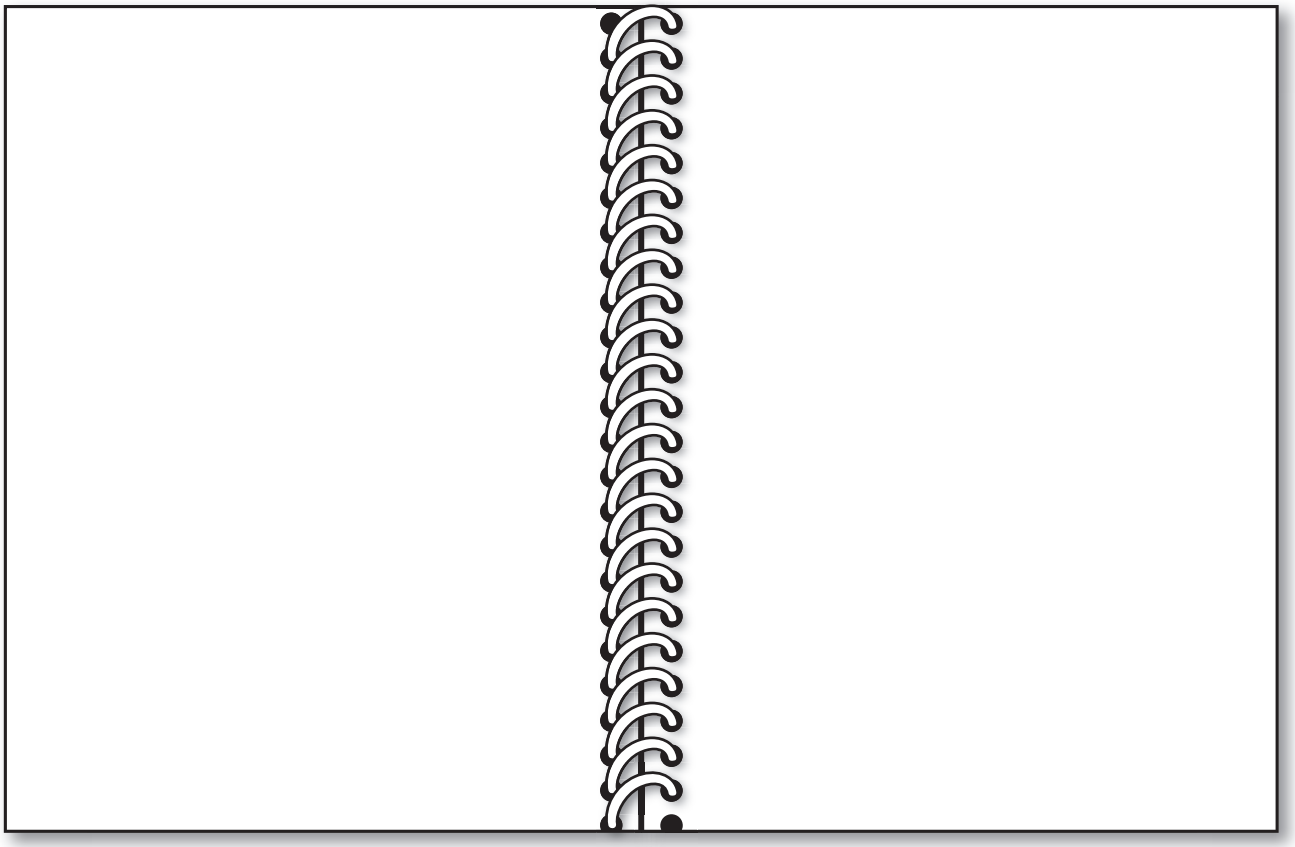
Left Side Student Output	Right Side Teacher-Directed Learning
• learning objectives • essential questions • I Can statements • brainstorming • making connections • summarizing • making conclusions • practice problems • opinions • questions • mnemonics • drawings and diagrams	• vocabulary and definitions • mini-lessons • folding activities • steps in a process • example problems • notes • diagrams • graphic organizers • hints and tips • big ideas

Planning for the Year

Making a general plan for interactive notebooks will help with planning, grading, and testing throughout the year. You do not need to plan every single page, but knowing what topics you will cover and in what order can be helpful in many ways.

Use the Interactive Notebook Plan (page 9) to plan your units and topics and where they should be placed in the notebooks. Remember to include enough pages at the beginning for the non-content pages, such as the title page, table of contents, and grading rubric. You may also want to leave a page at the beginning of each unit to place a mini table of contents for just that section.

In addition, when planning new pages, it can be helpful to sketch the pieces you will need to create. Use the following notebook template and notes to plan new pages.



Left Side **Right Side**

Notes

Interactive Notebook Plan

Page	Topic	Page	Topic
1		51	
2		52	
3		53	
4		54	
5		55	
6		56	
7		57	
8		58	
9		59	
10		60	
11		61	
12		62	
13		63	
14		64	
15		65	
16		66	
17		67	
18		68	
19		69	
20		70	
21		71	
22		72	
23		73	
24		74	
25		75	
26		76	
27		77	
28		78	
29		79	
30		80	
31		81	
32		82	
33		83	
34		84	
35		85	
36		86	
37		87	
38		88	
39		89	
40		90	
41		91	
42		92	
43		93	
44		94	
45		95	
46		96	
47		97	
48		98	
49		99	
50		100	

Managing Interactive Notebooks in the Classroom

Working with Younger Students

- Use your yearly plan to preprogram a table of contents that you can copy and give to students to glue into their notebooks, instead of writing individual entries.
- Have assistants or parent volunteers precut pieces.
- Create glue sponges to make gluing easier. Place large sponges in plastic containers with white glue. The sponges will absorb the glue. Students can wipe the backs of pieces across the sponges to apply the glue with less mess.

Creating Notebook Pages

- For storing loose pieces, add a pocket to the inside back cover. Use the envelope pattern (page 81), an envelope, or a resealable plastic bag. Or, tape the bottom and side edges of the two last pages of the notebook together to create a large pocket.
- When writing under flaps, have students trace the outline of each flap so that they can visualize the writing boundary.
- Where the dashed line will be hidden on the inside of the fold, have students first fold the piece in the opposite direction so that they can see the dashed line. Then, students should fold the piece back the other way along the same fold line to create the fold in the correct direction.
- To avoid losing pieces, have students keep all of their scraps on their desks until they have finished each page.
- To contain paper scraps and avoid multiple trips to the trash can, provide small groups with small buckets or tubs.
- For students who run out of room, keep full and half sheets available. Students can glue these to the bottom of the pages and fold them up when not in use.

Dealing with Absences

- Create a model notebook for absent students to reference when they return to school.
- Have students cut a second set of pieces as they work on their own pages.

Using the Notebook

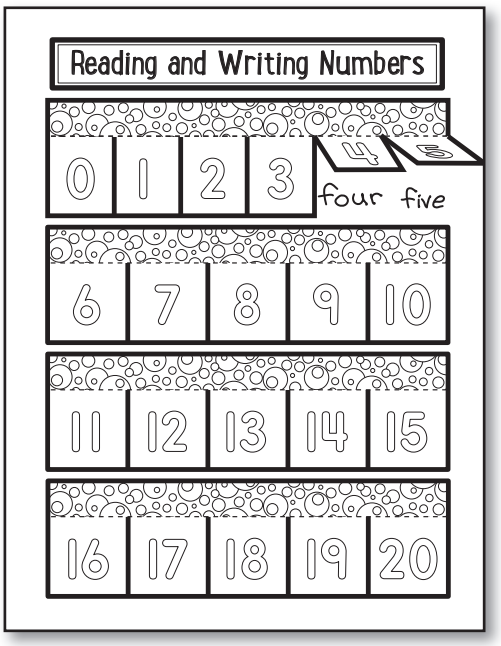
- To organize sections of the notebook, provide each student with a sheet of tabs (page 78).
- To easily find the next blank page, either cut off the top-right corner of each page as it is used or attach a long piece of yarn or ribbon to the back cover to be used as a bookmark.

Interactive Notebook Grading Rubric

4	_____ Table of contents is complete. _____ All notebook pages are included. _____ All notebook pages are complete. _____ Notebook pages are neat and organized. _____ Information is correct. _____ Pages show personalization, evidence of learning, and original ideas.
3	_____ Table of contents is mostly complete. _____ One notebook page is missing. _____ Notebook pages are mostly complete. _____ Notebook pages are mostly neat and organized. _____ Information is mostly correct. _____ Pages show some personalization, evidence of learning, and original ideas.
2	_____ Table of contents is missing a few entries. _____ A few notebook pages are missing. _____ A few notebook pages are incomplete. _____ Notebook pages are somewhat messy and unorganized. _____ Information has several errors. _____ Pages show little personalization, evidence of learning, or original ideas.
1	_____ Table of contents is incomplete. _____ Many notebook pages are missing. _____ Many notebook pages are incomplete. _____ Notebook pages are too messy and unorganized to use. _____ Information is incorrect. _____ Pages show no personalization, evidence of learning, or original ideas.

Reading and Writing Numbers

Introduction



Ask students to share what they know about numbers. For example, students may say that numbers are used for counting or that numbers can be written in different ways. Then, play a number and number word matching game. Provide each student (or a pair of students) with an index card that has a number or a number word 0 to 20 written on it. Each student should try to find the matching number or number word card. Write the numbers and the number words on the board as the students find matches.

Creating the Notebook Page

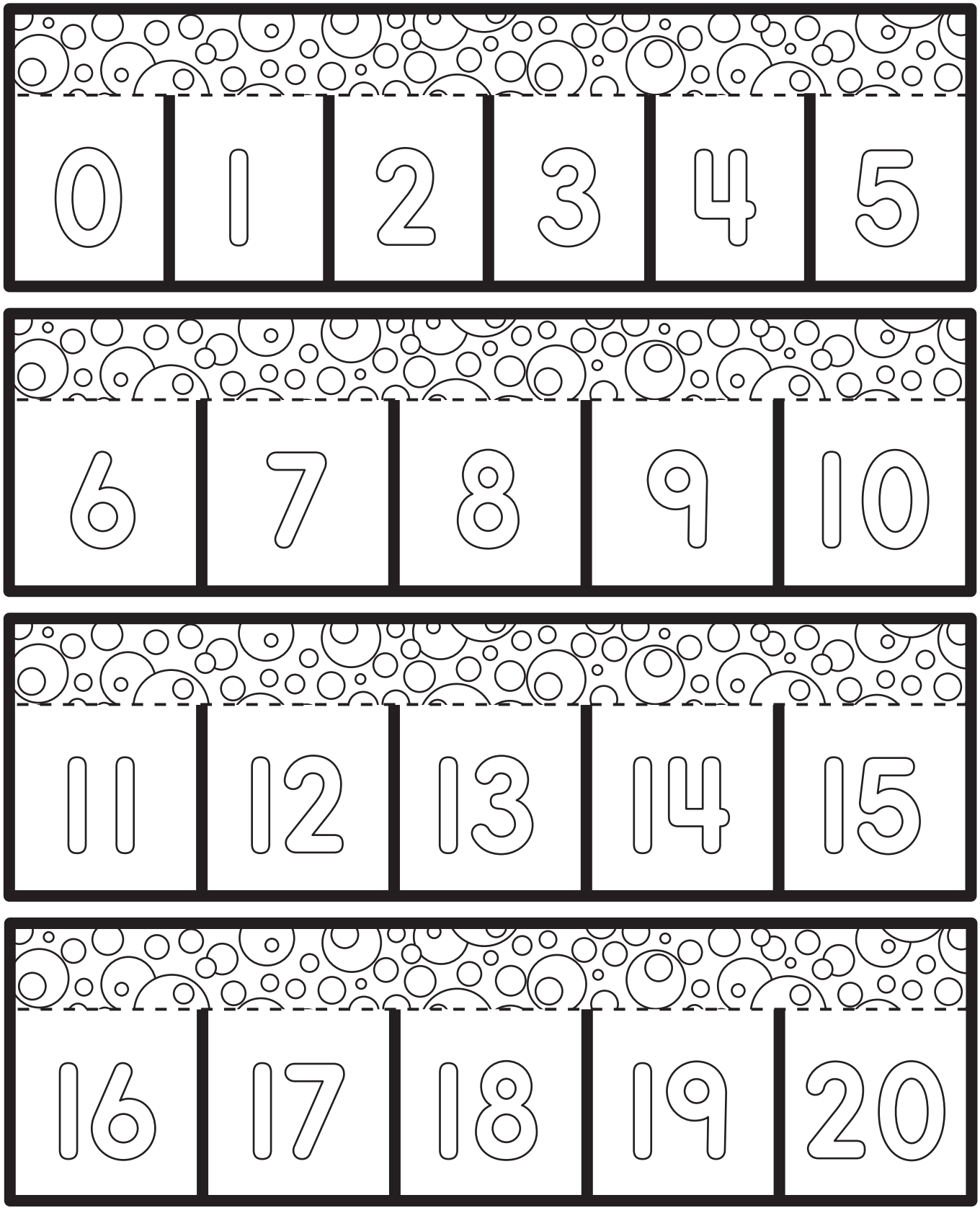
Guide students through the following steps to complete the right-hand page in their notebooks.

1. Add a Table of Contents entry for the Reading and Writing Numbers pages.
2. Cut out the title and glue it to the top of the page.
3. Cut out the number flap books. Cut on the solid lines to create five flaps (six flaps on the 0–5 book) on each book. Apply glue to the back of the top section of each book. Attach the flap books one below the other on the page.
4. Trace each number with your finger. Then, color each number. Finally, write the number under each flap.

Reflect on Learning

To complete the left-hand page, provide students with magazines and newspapers. Students should find and cut out numbers and number words to create number collage pictures.

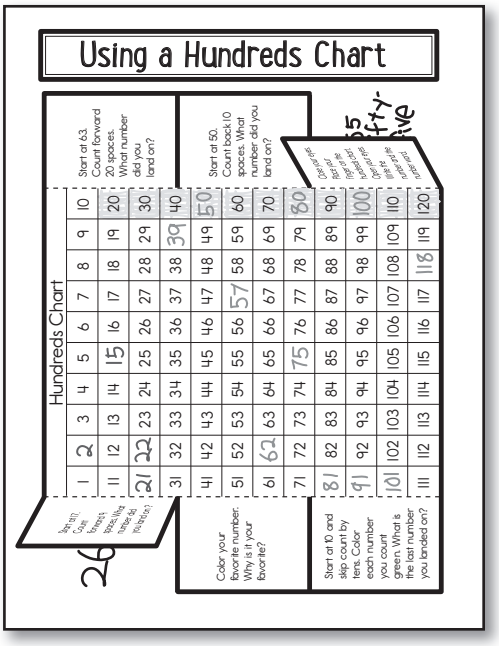
Reading and Writing Numbers



Using a Hundreds Chart

Each student will need a blank copy of a hundreds chart to complete the left-hand side of the notebook page.

Introduction



Display a hundreds chart. Ask students to tell you what patterns they see on the hundreds chart. A possible answer may be that all of the numbers in the last column end in zero. Model examples of how to use a hundreds chart such as counting forward to add on to a given number or counting backward to subtract from a given number. Encourage students to use a hundreds chart as a resource tool for solving math problems.

Creating the Notebook Page

Guide students through the following steps to complete the right-hand page in their notebooks.

1. Add a Table of Contents entry for the Using a Hundreds Chart pages.
2. Cut out the title and glue it to the top of the page.
3. Cut out the hundreds chart piece. Cut on the solid lines to create three flaps on each side. Apply glue to the back of the center section and attach it vertically to the page.
4. Count to fill in the missing numbers on the hundreds chart.
5. Read and complete the activities on each flap. Write the answers for the activities under the flaps.

Reflect on Learning

To complete the left-hand page, provide each student with a copy of a blank hundreds chart. Have students fill in the charts. Then, say the following clues and have students color the number for each clue: *One more than 23, one less than 29, ten more than 36, one less than 60, one more than 52, one less than 65, one more than 67, ten more than 65, ten less than 86, and one less than 78*. The correct answers will create a smiling face on the hundreds chart. Have students glue their hundreds charts onto their pages.

Using a Hundreds Chart

Start at 17. Count forward 9 spaces. What number did you land on ?

Color your favorite number. Why is it your favorite?

Start at 10 and skip count by tens. Color each number you count green. What is the last number you landed on?

Hundreds Chart

1		3	4	5	6	7	8	9	10
11	12	13	14		16	17	18	19	20
		23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38		40
41	42	43	44	45	46	47	48	49	
51	52	53	54	55	56		58	59	60
61		63	64	65	66	67	68	69	70
71	72	73	74		76	77	78	79	
	82	83	84	85	86	87	88	89	90
	92	93	94	95	96	97	98	99	
	102	103	104	105	106	107	108	109	110
111	112	113	114	115	116	117		119	120

Start at 63. Count forward 20 spaces. What number did you land on?

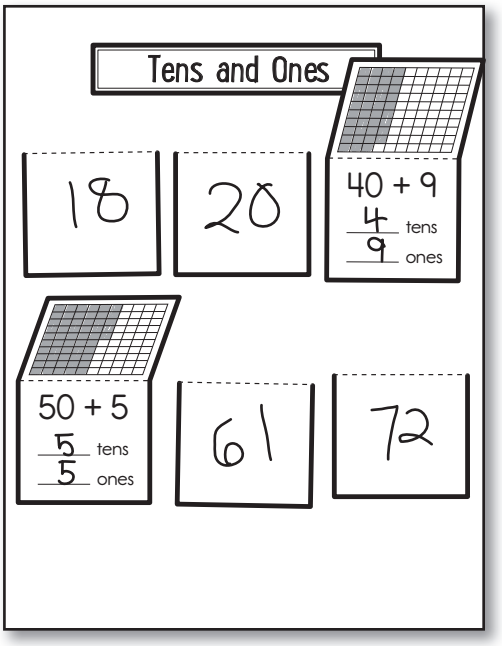
Start at 50. Count back 10 spaces. What number did you land on?

Close your eyes. Place your finger on the hundreds chart. Open your eyes. Write the number and the number word.

Tens and Ones

Each student will need between 11 and 19 straws and a rubber band to complete the introduction activity.

Introduction



Ask students to share what they know about tens and ones. Explain that there are 10 ones in a ten. Ask students to think of things that come in tens such as fingers and toes. Demonstrate grouping by tens and adding on ones by bundling straws. Distribute between 11 and 19 straws to each student and have them count the number of straws. Have students count 10 straws and bind them with a rubber band. Now, have them count the straws again. Ask students if they counted differently with and without the straws bundled and which way was easier. Explain how tens and ones are added together to make two-digit numbers.

Creating the Notebook Page

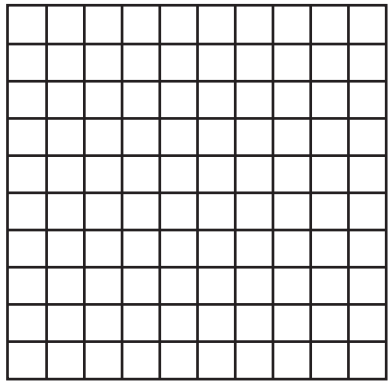
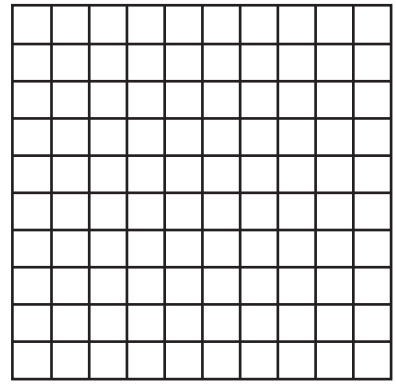
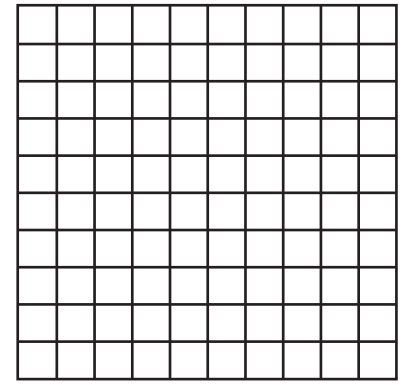
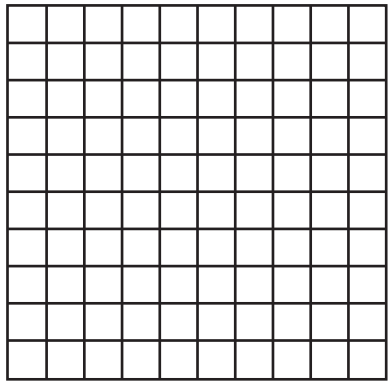
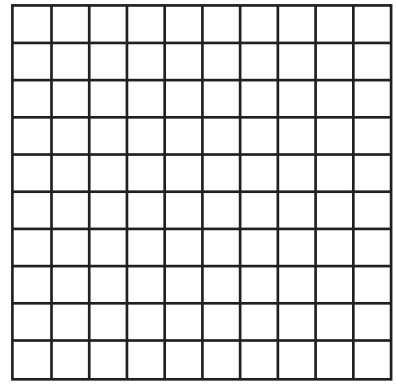
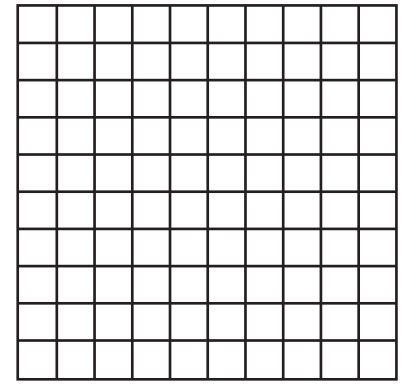
Guide students through the following steps to complete the right-hand page in their notebooks.

1. Add a Table of Contents entry for the Tens and Ones pages.
2. Cut out the title and glue it to the top of the page.
3. Cut out the flaps. Fold them on the dashed lines. Apply glue to the back of the bottom section of each piece and attach it to the page.
4. On each flap, color the hundredss block with the correct tens and ones. Next, count the tens and ones to complete the bottom section of the flap. Finally, write the correct number on the top of each flap (49, 20, 55, 72, 18, 61).

Reflect on Learning

To complete the left-hand page, have each student write a reflection to answer the following prompt: *How does counting and grouping by tens make counting easier?* Students should draw pictures or use words to explain their reasoning.

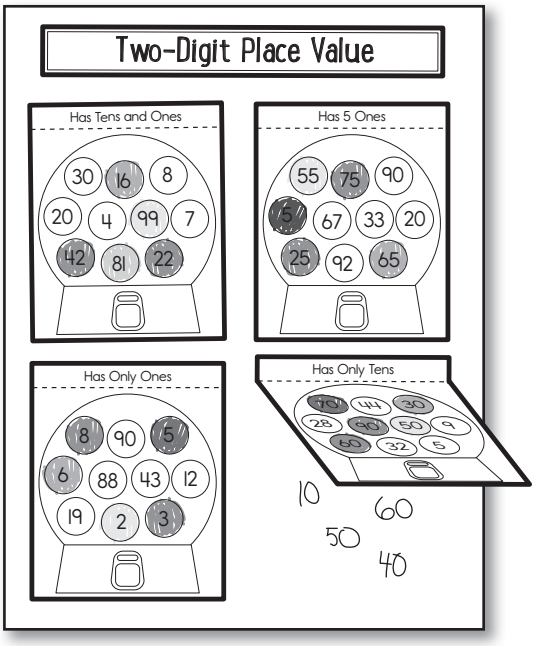
Tens and Ones

		
40 + 9 _____ tens _____ ones	20 + 0 _____ tens _____ ones	50 + 5 _____ tens _____ ones
		
70 + 2 _____ tens _____ ones	10 + 8 _____ tens _____ ones	60 + 1 _____ tens _____ ones

Two-Digit Place Value

Introduction

Draw a T-chart on the board. Label the left side *Tens* and the right side *Ones*. Write the number 14 in the chart, placing the 1 in the *Tens* columns and the 4 in the *Ones* column. Explain that the 1 is written in the tens column because there is 1 ten in the number 14. Explain that the 4 is written in the ones column because there are 4 ones in the number 14. Provide examples in the chart of single-digit numbers and two-digit numbers with no ones. Then, say a number and have a volunteer come to the board and write it correctly in the T-chart. Repeat the activity as time allows.



Creating the Notebook Page

Guide students through the following steps to complete the right-hand page in their notebooks.

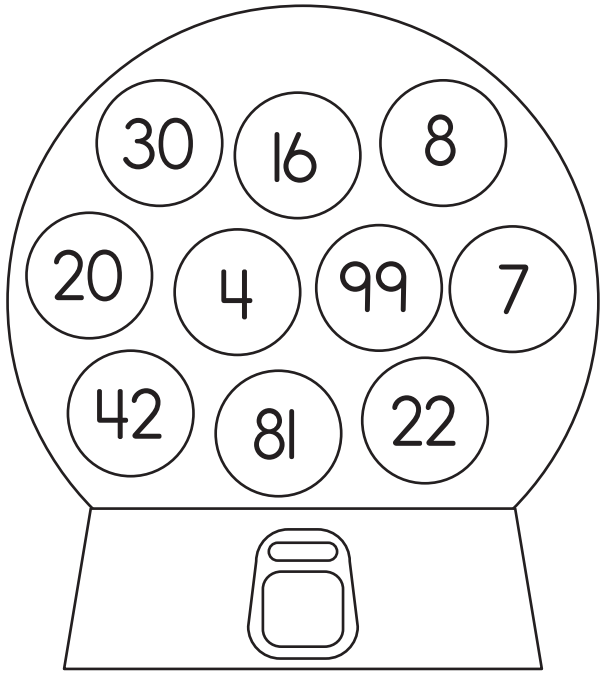
1. Add a Table of Contents entry for the Two-Digit Place Value pages.
2. Cut out the title and glue it to the top of the page.
3. Cut out the gum ball machine flaps. Apply glue to the back of the top section of each flap and attach it to the page.
4. Color the gum balls on each flap according to the title. For example, the *Has Tens and Ones* flap should have the 16, 42, 22, 81, and 99 gum balls colored.
5. Under each flap, write more numbers that follow the rule on the flap.

Reflect on Learning

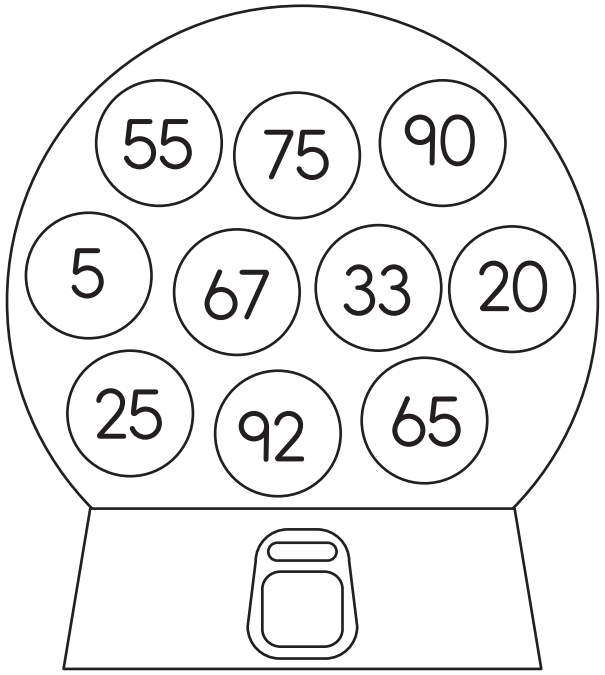
To complete the left-hand page, have each student write a reflection to answer the following prompt: *Why is it important to understand place value when working with numbers?* Students should draw pictures or use words to explain their reasoning.

Two-Digit Place Value

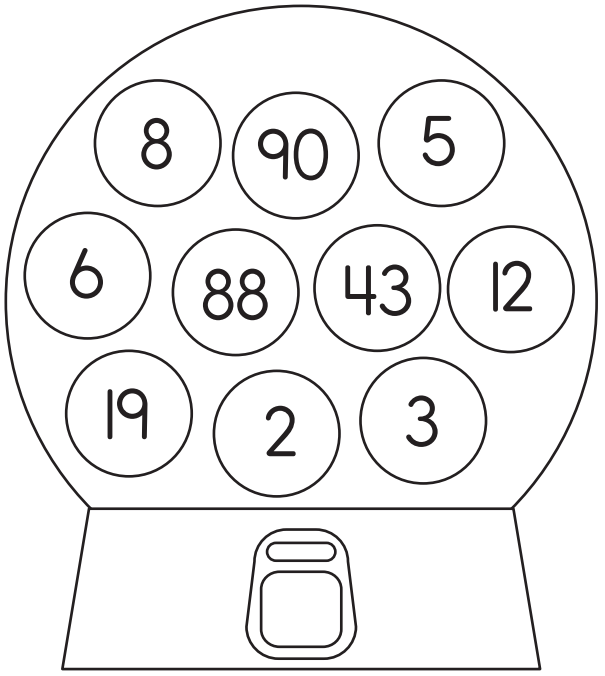
Has Tens and Ones



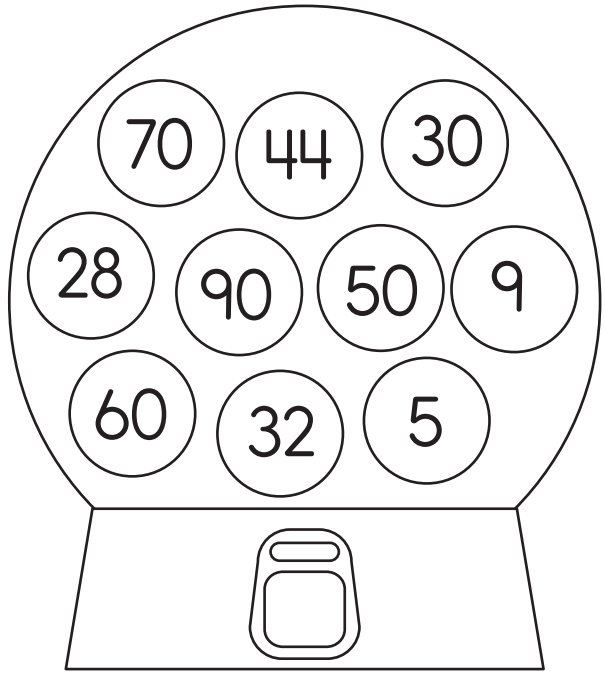
Has 5 Ones



Has Only Ones



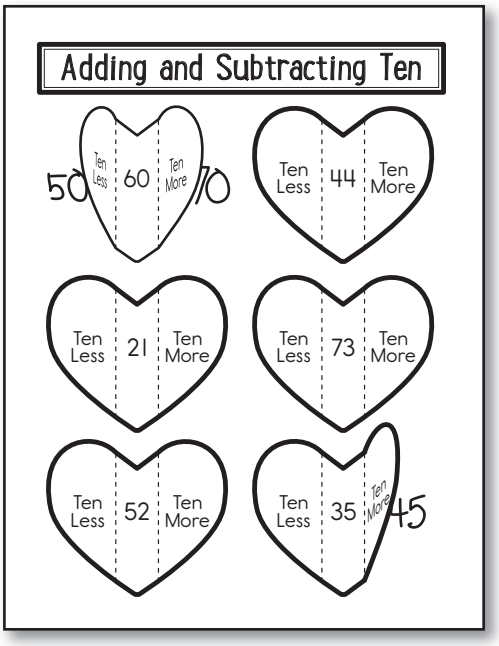
Has Only Tens



Adding and Subtracting Ten

Introduction

Display a hundreds chart. Point out a number on the chart. Have students observe the numbers directly above and below the number you are pointing to. Explain that if you move 10 spaces backward on the hundreds chart, you will subtract 10 from the number you started with. Explain that if you move 10 spaces forward on the chart, you will add 10 to the number you began with. Discuss how the tens place increases by one when moving ahead 10 spaces or decreases by one when moving back 10 spaces. Provide each student with a hundreds chart. Students should practice adding and subtracting 10 from various numbers on their charts.



Creating the Notebook Page

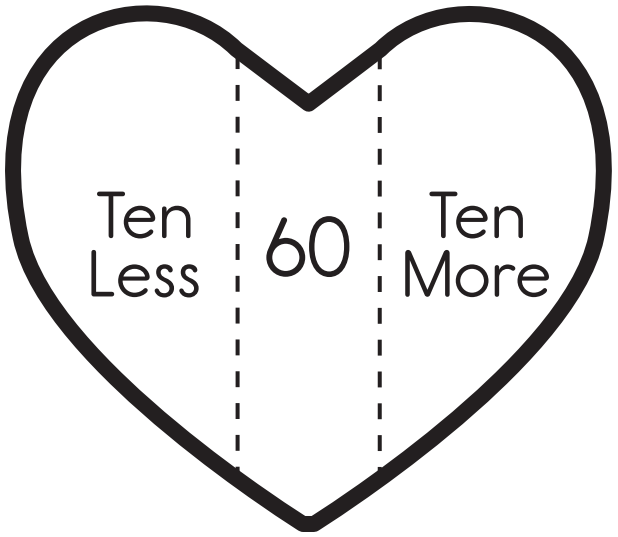
Guide students through the following steps to complete the right-hand page in their notebooks.

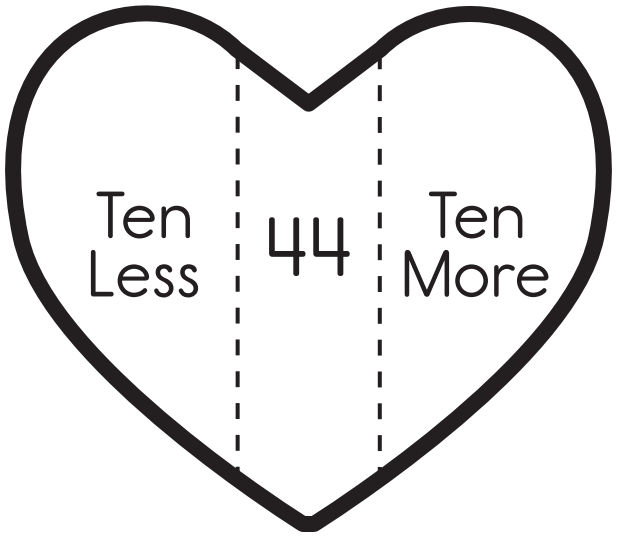
1. Add a Table of Contents entry for the Adding and Subtracting Ten pages.
2. Cut out the title and glue it to the top of the page.
3. Cut out the heart flaps. Apply glue to the back of the center section of each heart and attach it to the page.
4. For each flap, look at the number in the center of the heart. Write the number that is 10 more under the flap on the right. Then, write the number that is 10 less under the flap on the left.

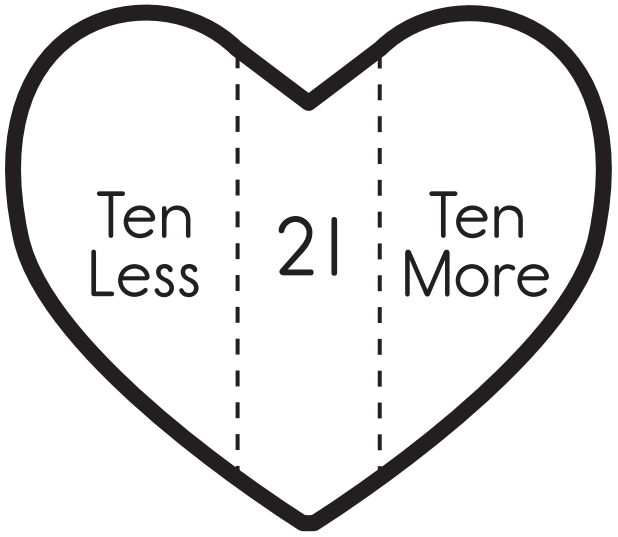
Reflect on Learning

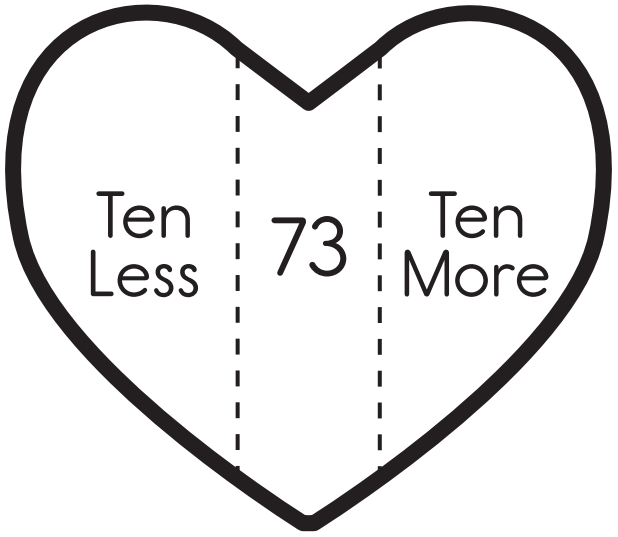
To complete the left-hand page, have students draw four hearts and then write a number in the center of each one. Have students exchange notebooks with partners and add 10 to and subtract 10 from the number in each heart. After returning the notebooks, have students use hundred charts to check their partners' work.

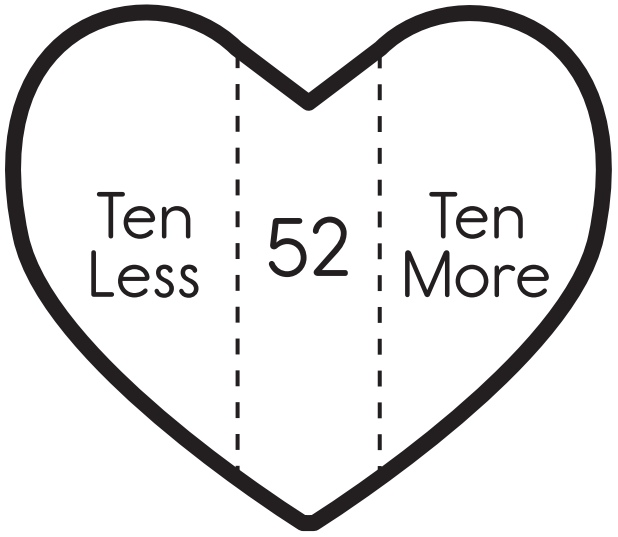
Adding and Subtracting Ten

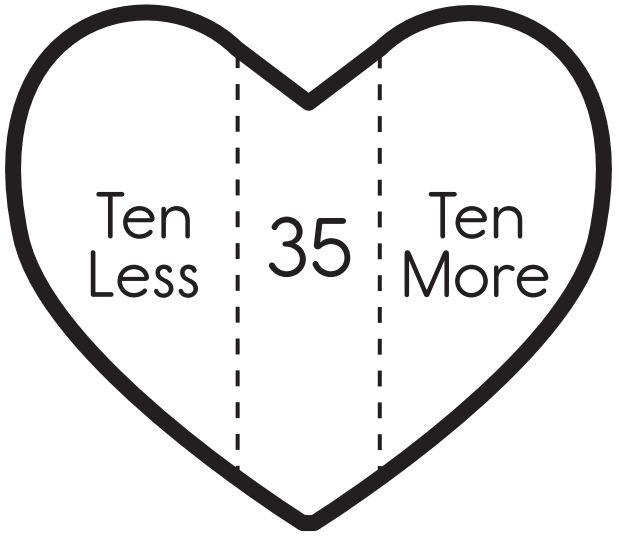








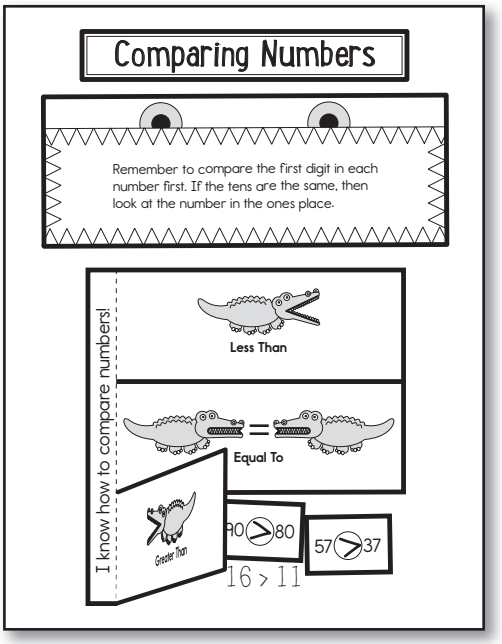




Comparing Numbers

Introduction

Write the numbers 40 and 55 on the board. Ask students to tell you what they know about the two numbers. Ask which is the greater number. Explain that when comparing numbers, they should look at the number in the tens place first. The number with the greater digit in the tens place is the greater number. Then, write 45 and 48 on the board. Explain that if the tens are the same, then they should look at the number in the ones place. Review the *less than*, *greater than*, and *equal to* symbols. Demonstrate how to use them to compare two numbers.



Creating the Notebook Page

Guide students through the following steps to complete the right-hand page in their notebooks.

1. Add a Table of Contents entry for the Comparing Numbers pages.
2. Cut out the title and glue it to the top of the page.
3. Cut out the *Remember to compare* piece and glue it below the title.
4. Cut out the flap book. Cut on the solid lines to create three flaps. Apply glue to the back of the left section and attach it to the page.
5. Complete the number cards by writing >, <, or = to compare the numbers on each card. Cut out the cards. Sort and glue the cards under the correct flaps.
6. Write one more true number comparison under each flap.

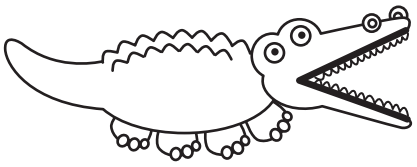
Reflect on Learning

To complete the left-hand page, write two numbers on the board. Have students copy the numbers and compare them using the correct symbol. Then, have students use pictures and words to expain why the comparison is true.

Comparing Numbers

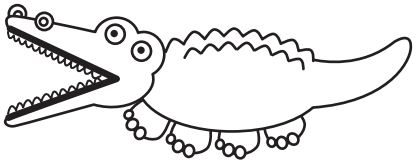
Remember to compare the first digit in each number first. If the tens are the same, then look at the number in the ones place.

I know how to compare numbers!



Less Than

Equal To



Greater Than

45 ◯ 45

67 ◯ 76

22 ◯ 29

90 ◯ 80

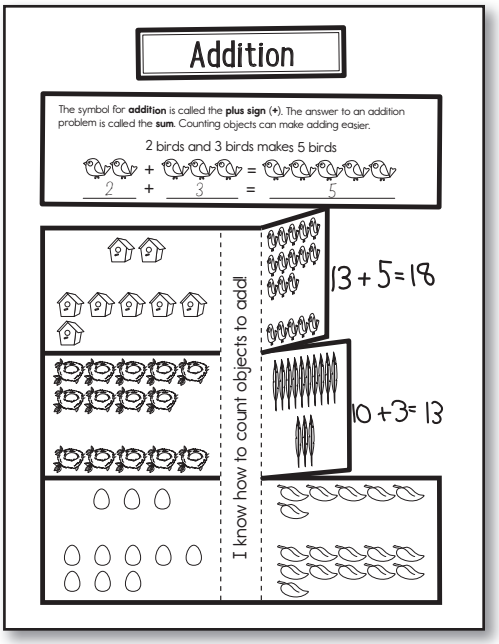
57 ◯ 37

11 ◯ 11

Addition

Introduction

Ask students what they know about addition. Explain that addition is the joining of two or more different groups of numbers or sets of objects. Have 10 volunteers stand at the front of the room. Ask students to count the number of volunteers at the front of the room. Then, have three more volunteers join them. Ask how many students there are now. Write the number sentence 10 + 3 = 13 on the board. Point to each part of the number sentence and explain how it represents the students at the front of the room. For example, say, "There were 10 students. Then, three more joined them. Now, there are 13 in all." Circle the 13 and discuss how the answer to an addition problem is called the *sum*.



Creating the Notebook Page

Guide students through the following steps to complete the right-hand page in their notebooks.

1. Add a Table of Contents entry for the Addition pages.
2. Cut out the title and glue it to the top of the page.
3. Cut out the *symbol for addition* piece and glue it below the title.
4. Read the explanation and write numbers to complete the number sentence.
5. Cut out the flap book. Cut on the solid lines to create three flaps on each side. Apply glue to the back of the center section and attach it to the page.
6. For each flap, count the objects on top of the flap. Color each set of objects a different color. Then, under each flap, write a true number sentence for the pictures. For example, 2 (birdhouses) + 6 (birdhouses) = 8 (birdhouses).

Reflect on Learning

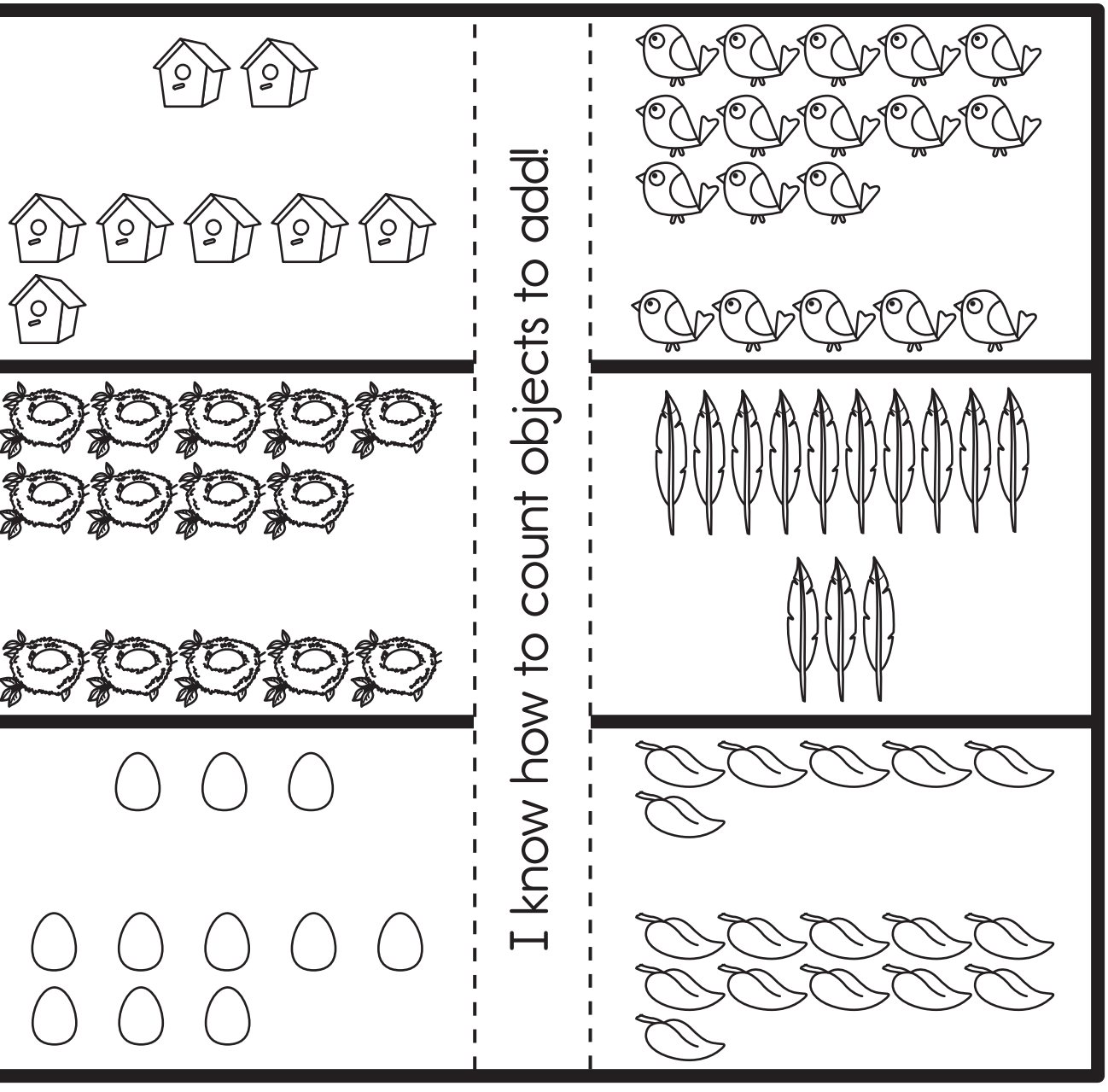
To complete the left-hand page, have each student draw two birdhouses (a square with a triangle on top). Then, have students draw two sets of objects in each birdhouse and then count and add the objects in each one. Each student should write a number sentence below the birdhouses to represent the problem. Allow time for students to share and explain their work.

Addition

The symbol for **addition** is called the **plus sign** (**+**). The answer to an addition problem is called the **sum**. Counting objects can make adding easier.

2 birds and 3 birds makes 5 birds

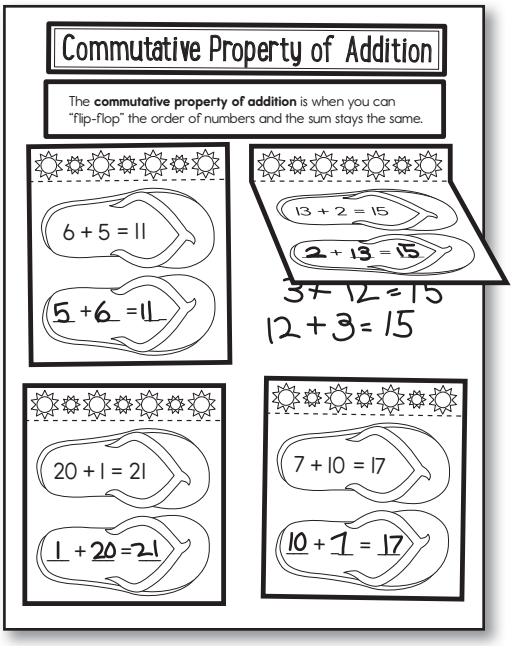
_____ + _____ = _____



Commutative Property of Addition

Each student will need linking cubes or two-color counters to complete the reflection activity.

Introduction



Provide each student with a linking cube train with three blue cubes on one side and two red cubes on the other side. Have students count the total cubes. Ask what math fact could be written for the linking cube train. A possible answer may be 3 + 2 = 5. Then, ask students to "flip-flop" the linking cube trains. Ask what math fact could now be written for the model. A possible answer may be 2 + 3 = 5. Explain that it does not matter which number is written first. The total is the same. This is called the *commutative property of addition*.

Creating the Notebook Page

Guide students through the following steps to complete the right-hand page in their notebooks.

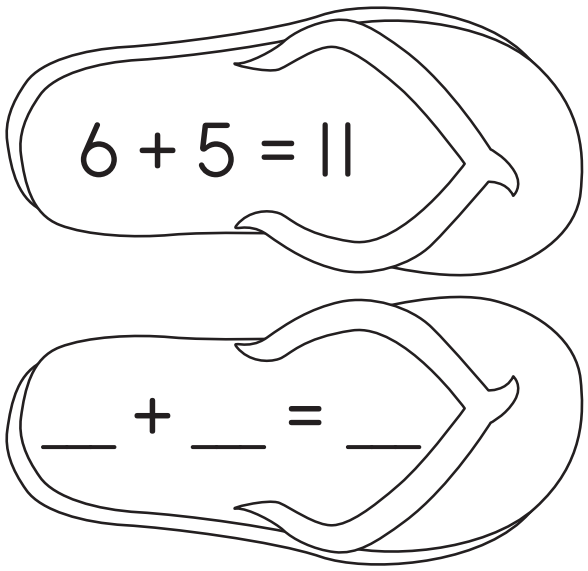
1. Add a Table of Contents entry for the Commutative Property of Addition pages.
2. Cut out the title and glue it to the top of the page.
3. Cut out the definition piece and glue it below the title. Discuss how you can "flip-flop" the numbers to add them and the sum stays the same.
4. Cut out the flaps. Apply glue to the back of the top section of each flap and attach it to the page.
5. For each flap, use the commutative property of addition to rewrite the number sentence. Under each flap, write another pair of number sentences that show the commutative property of addition.

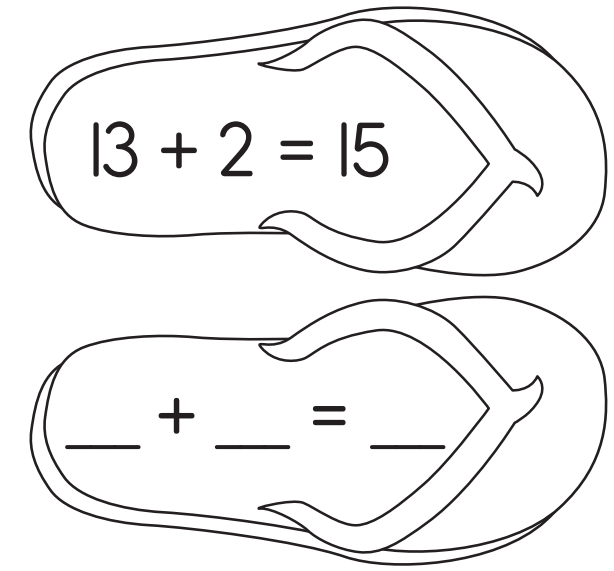
Reflect on Learning

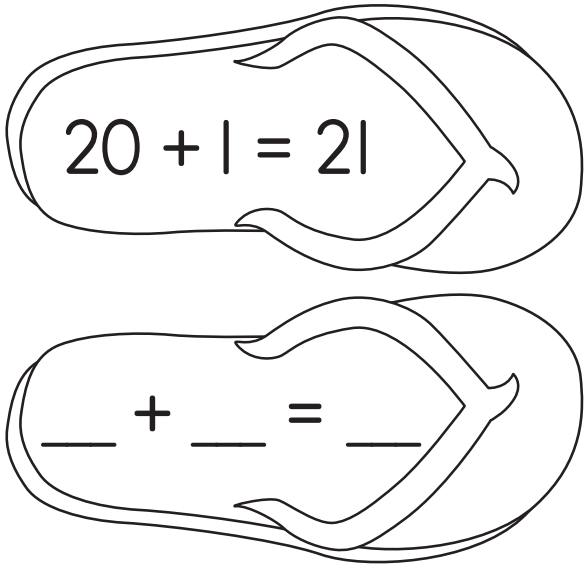
To complete the left-hand page, provide students access to various colorful manipulatives such as linking cubes or two-color counters. Each student should construct a model using two different colors of manipulatives and write a number sentence to represent the model. Have each student draw an illustration of their model below the number sentence. Then, using the commutative property of addition, each student should "flip-flop" the model, write a new number sentence, and draw the new model below it. Repeat the activity with different manipulatives.

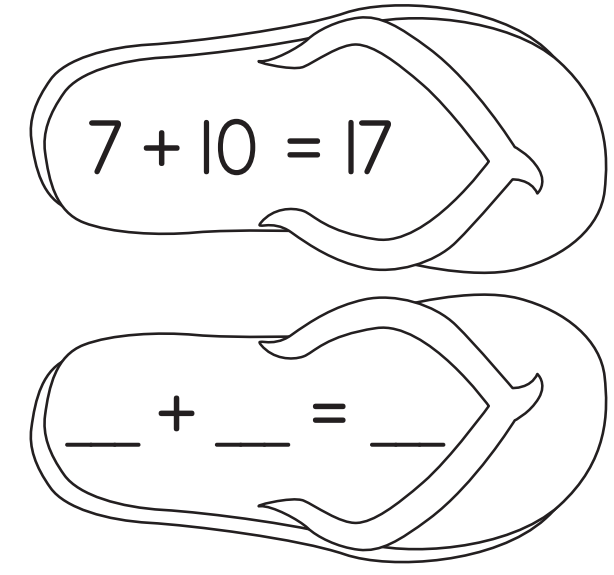
Commutative Property of Addition

The **commutative property of addition** is when you can "flip-flop" the order of numbers and the sum stays the same.





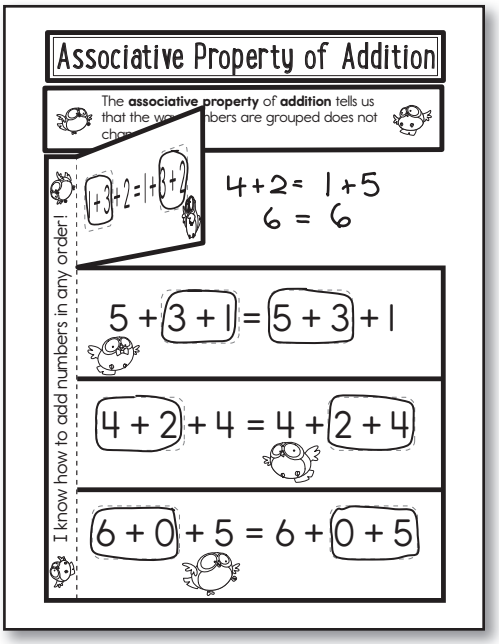




Associative Property of Addition

Introduction

Explain that when three or more numbers are added, the sum is the same, regardless of the order of addition. Write this example on the board: *2 + 3 + 1 = 2 + 3 + 1*. Circle 2 + 3 on the left side of the equation. Circle 3 + 1 on the right side of the equation. Have two volunteers solve each side of the equation, beginning with the circled numbers first. Discuss how the sum is the same for both sides even though the numbers are grouped differently. This is called the *associative property of addition*.



Creating the Notebook Page

Guide students through the following steps to complete the right-hand page in their notebooks.

1. Add a Table of Contents entry for the Associative Property of Addition pages.
2. Cut out the title and glue it to the top of the page.
3. Cut out the definition piece and glue it below the title. Discuss how numbers can be added in any order and the sum stays the same.
4. Cut out the flap book. Cut on the solid lines to create four flaps. Apply glue to the back of the left section and attach it to the page.
5. For each flap, trace the circles on the flap. Then, solve both sides of the equation, adding the circled numbers first, and show your work under the flap. For example, trace the circle around 1 + 3 and the 3 + 2 on the top flap. Under the flap, write 4 + 2 = 1 + 5. Then, solve to find the answer (6 = 6).

Reflect on Learning

To complete the left-hand page, write the following problems on the board: *7 + 1 + 0 = 7 + 1 + 0*, *2 + 1 + 9 = 2 + 1 + 9*, and *8 + 2 + 4 = 8 + 2 + 4*. Have students copy the problems. Students should show how each problem can be grouped differently and then solve the problems.

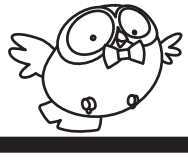
Associative Property of Addition

The **associative property** of **addition** tells us that the way numbers are grouped does not change the sum.

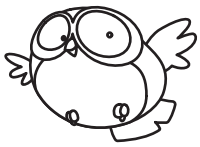
I know how to add numbers in any order!

$1 + 3 + 2 = 1 + 3 + 2$

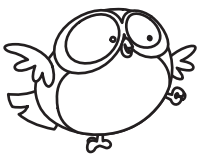
$5 + 3 + 1 = 5 + 3 + 1$



$4 + 2 + 4 = 4 + 2 + 4$



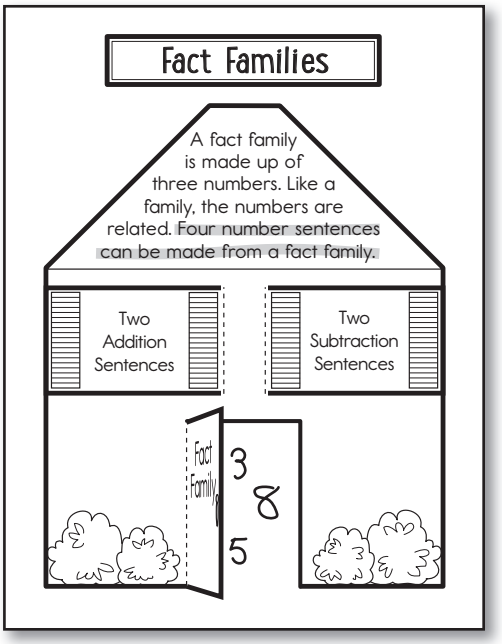
$6 + 0 + 5 = 6 + 0 + 5$



Fact Families

Introduction

Write a fact family on the board. Ask students to think about how the three numbers are related. Explain that these numbers make up a fact family. Demonstrate and discuss how two addition and two subtraction number sentences can be made from each fact family. Discuss how the numbers in a fact family are used to solve all four of the number sentences.



Creating the Notebook Page

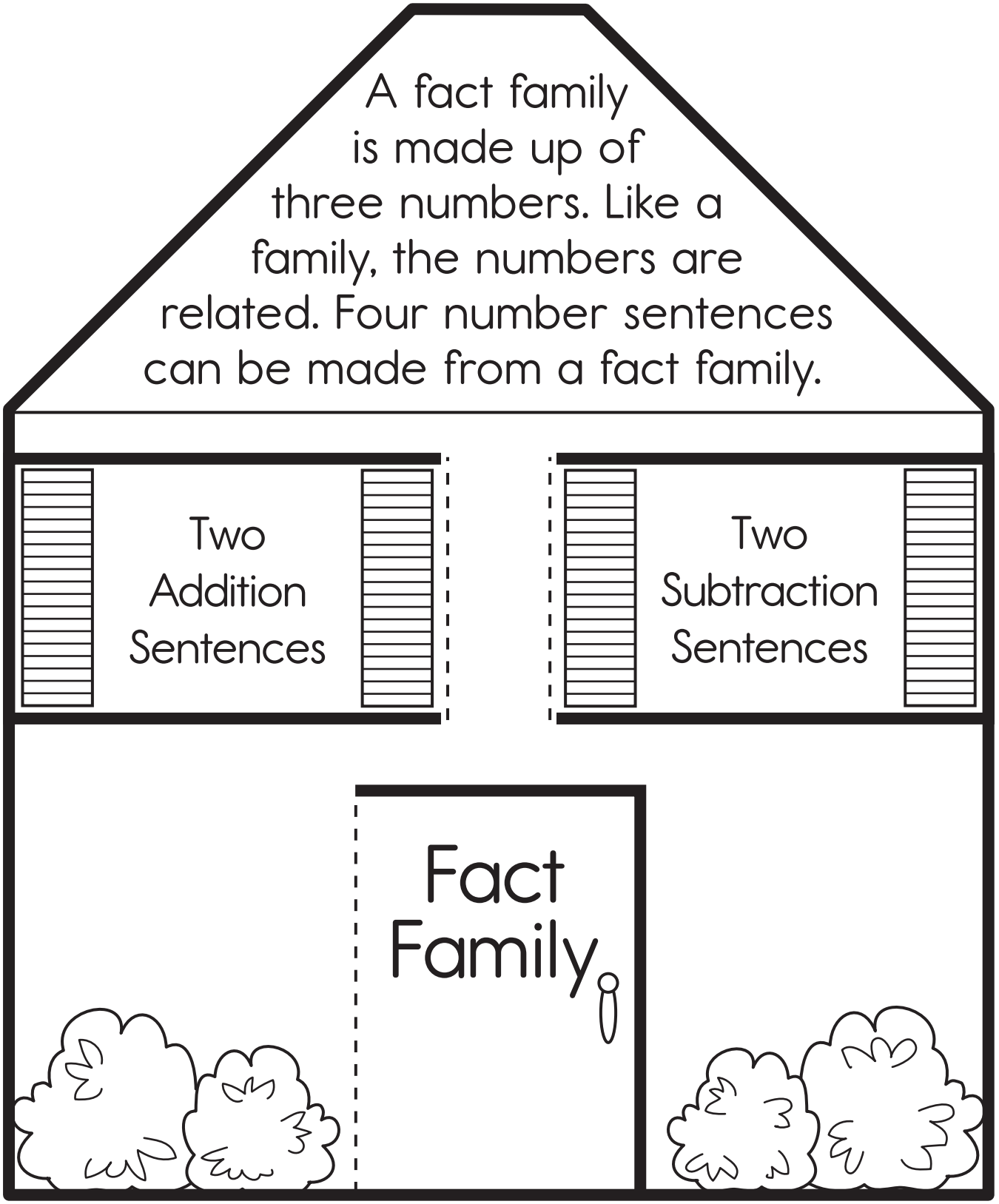
Guide students through the following steps to complete the right-hand page in their notebooks.

1. Add a Table of Contents entry for the Fact Families pages.
2. Cut out the title and glue it to the top of the page.
3. Cut out the fact family house. Cut on the solid lines to create two windows and a door. Apply glue to the back of the top and bottom section (no glue on the back of the door) of the house and attach it to the page.
4. Read the definition of a fact family to a partner. Then, highlight the last sentence.
5. Write three numbers from a fact family, such as 8, 3, and 5, under the door flap. Then, write two addition sentences from the fact family, such as $3 + 5 = 8$ and $5 + 3 = 8$, under the left window flap. Finally, write two subtraction sentences from the fact family, such as $8 - 3 = 5$ and $8 - 5 = 3$, under the right window.

Reflect on Learning

To complete the left-hand page, have students draw their own fact family houses. Have each student write the three numbers of a fact family on the roof and then write the addition and subtraction sentences in the house. Allow time for students to share their work.

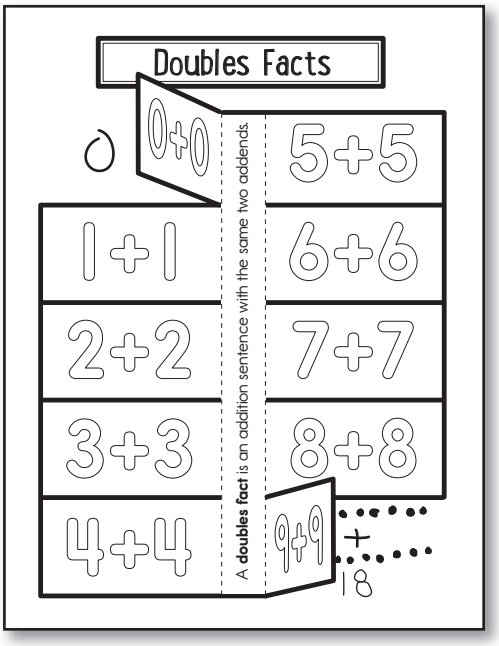
Fact Families



Doubles Facts

Introduction

Ask students what the word *double* means. A possible answer may be that it is two of something. Talk about things that come in doubles such as gloves and socks. Define a doubles fact as an addition sentence with two addends that are the same. Explain to students that knowing doubles facts can help them solve addition and subtraction problems. For example, if you know that 4 + 4 = 8, then you can quickly solve 4 + 5 by using the doubles fact and adding one.



Creating the Notebook Page

Guide students through the following steps to complete the right-hand page in their notebooks.

1. Add a Table of Contents entry for the Doubles Facts pages.
2. Cut out the title and glue it to the top of the page.
3. Cut out the flap book. Cut on the solid lines to create five flaps on each side. Apply glue to the back of the center section and attach it to the page.
4. Under each flap, draw objects to illustrate the addition sentence shown. Then, solve the problem. Write the answer on the back of the flap.

Reflect on Learning

To complete the left-hand page, pair each student with a partner. Have each team divide their pages in half vertically. Have one student draw a number of objects on the left side of the paper. Instruct the partner to draw the same number of objects on the right side. Together, the team should create an addition sentence to illustrate their drawing. Repeat the activity using the partner's notebook page.

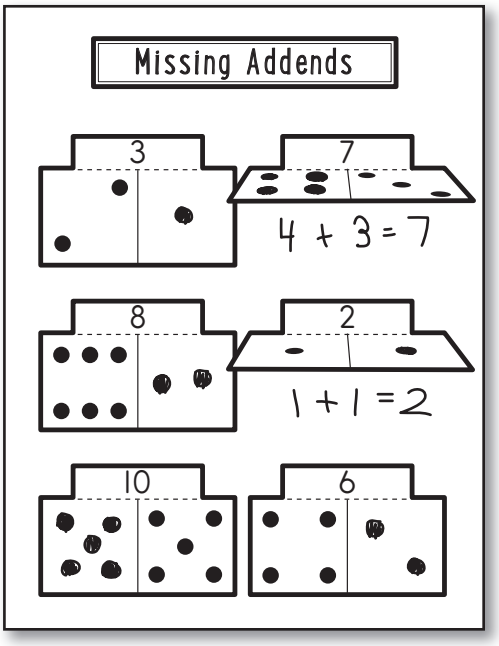
Doubles Facts

0+0	A **doubles fact** is an addition sentence with the same two addends.	5+5
1+1		6+6
2+2		7+7
3+3		8+8
4+4		9+9

Missing Addends

Introduction

Write the number sentence 4 = ☐ + 3 on the board. Explain that the box stands for an unknown number or addend. Next, draw a domino on the board. Write a 4 above the domino. Draw three dots on the right side of the domino. Ask students how they could use the domino to find the unknown addend. A possible answer may include to count the dots and subtract that number from 4. Count the dots on the right side of the domino aloud. Say "four" as you draw a dot on the left side of the domino. Explain how you can draw dots and count on to find a missing addend.



Creating the Notebook Page

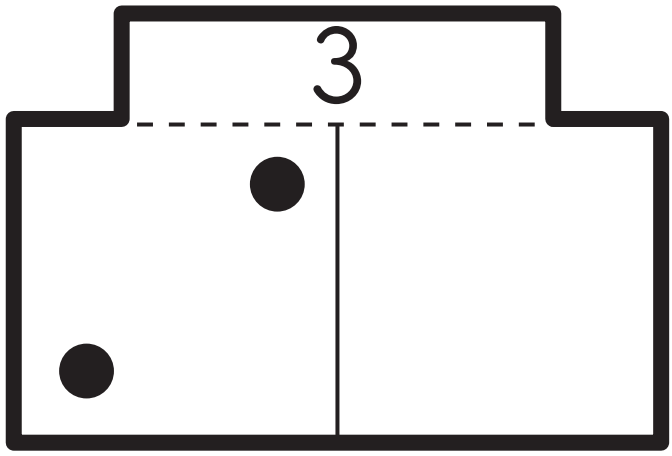
Guide students through the following steps to complete the right-hand page in their notebooks.

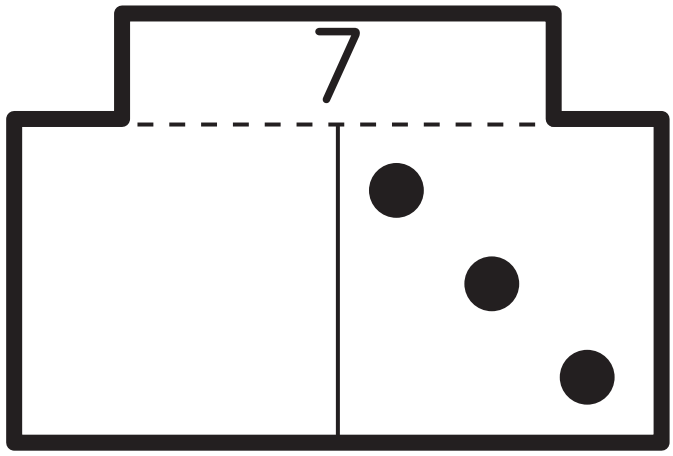
1. Add a Table of Contents entry for the Missing Addends pages.
2. Cut out the title and glue it to the top of the page.
3. Cut out the domino flaps. Apply glue to the back of the top section of each flap and attach it to the page.
4. For each flap, complete the domino by drawing the correct number of dots to the blank side. Write an addition number sentence under the flap that corresponds to the domino on the top of the flap. For example, add one more dot to the right side of the 3 domino. Then, write 2 + 1 = 3 or 1 + 2 = 3 under the flap.

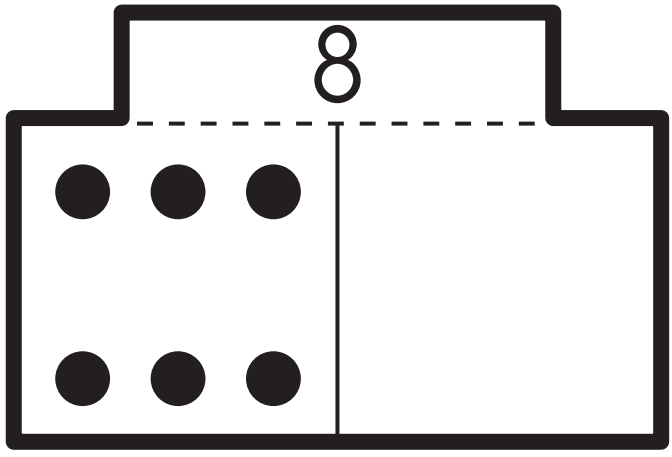
Reflect on Learning

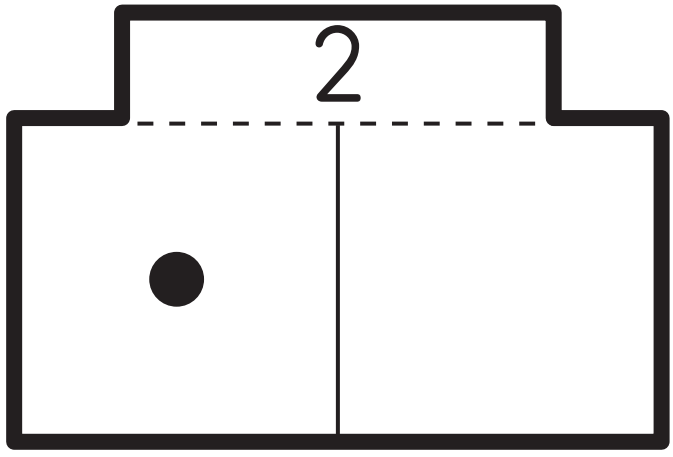
To complete the left-hand page, write several missing addend problems on the board. Have students solve the problems by drawing pictures or explaining with words.

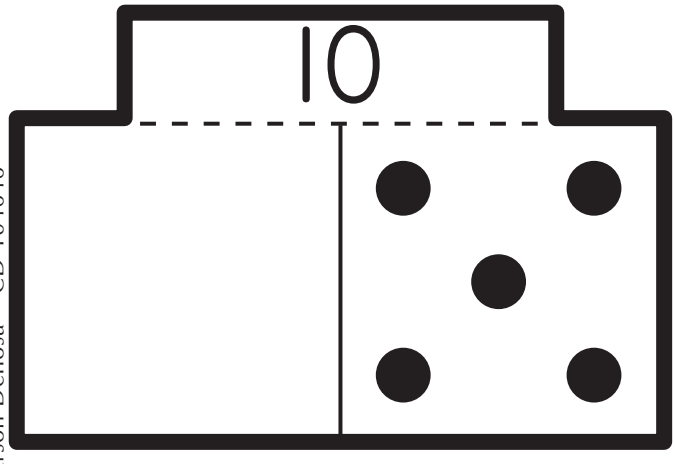
Missing Addends

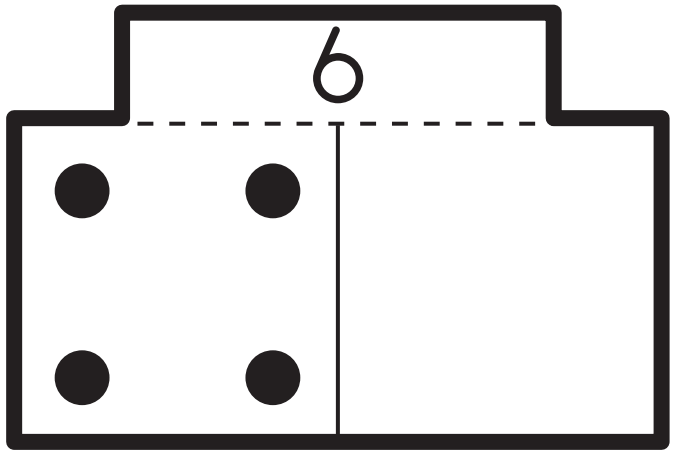










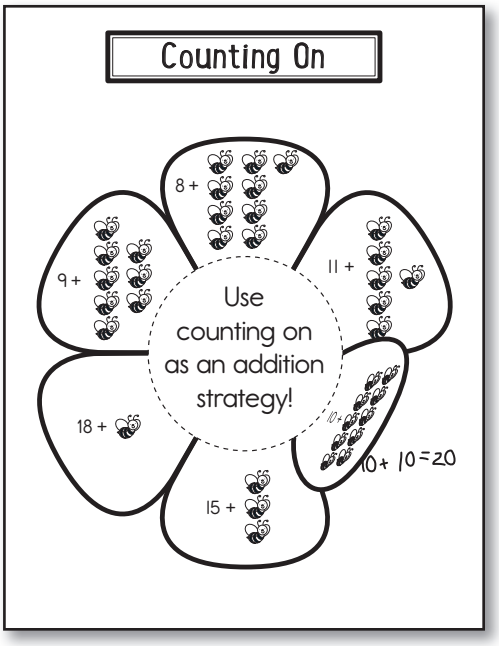


Counting On

Each student will need a six-sided die to complete the reflection activity.

Introduction

Draw six circles on the board. Ask students to count the circles aloud with you. Then, add three more circles to the group. Ask how many circles there are now. Explain that instead of starting over and counting from one, you can start with 6 and count on three more: 7, 8, 9. Write the number sentence 6 + 3 = 9. Then, write the number 15 on the board. Draw four flowers beside the number. Use a number line and begin at 15. Count on four more to demonstrate that it is quicker to count on from the larger number. Write the number sentence 15 + 4 = 19.



Creating the Notebook Page

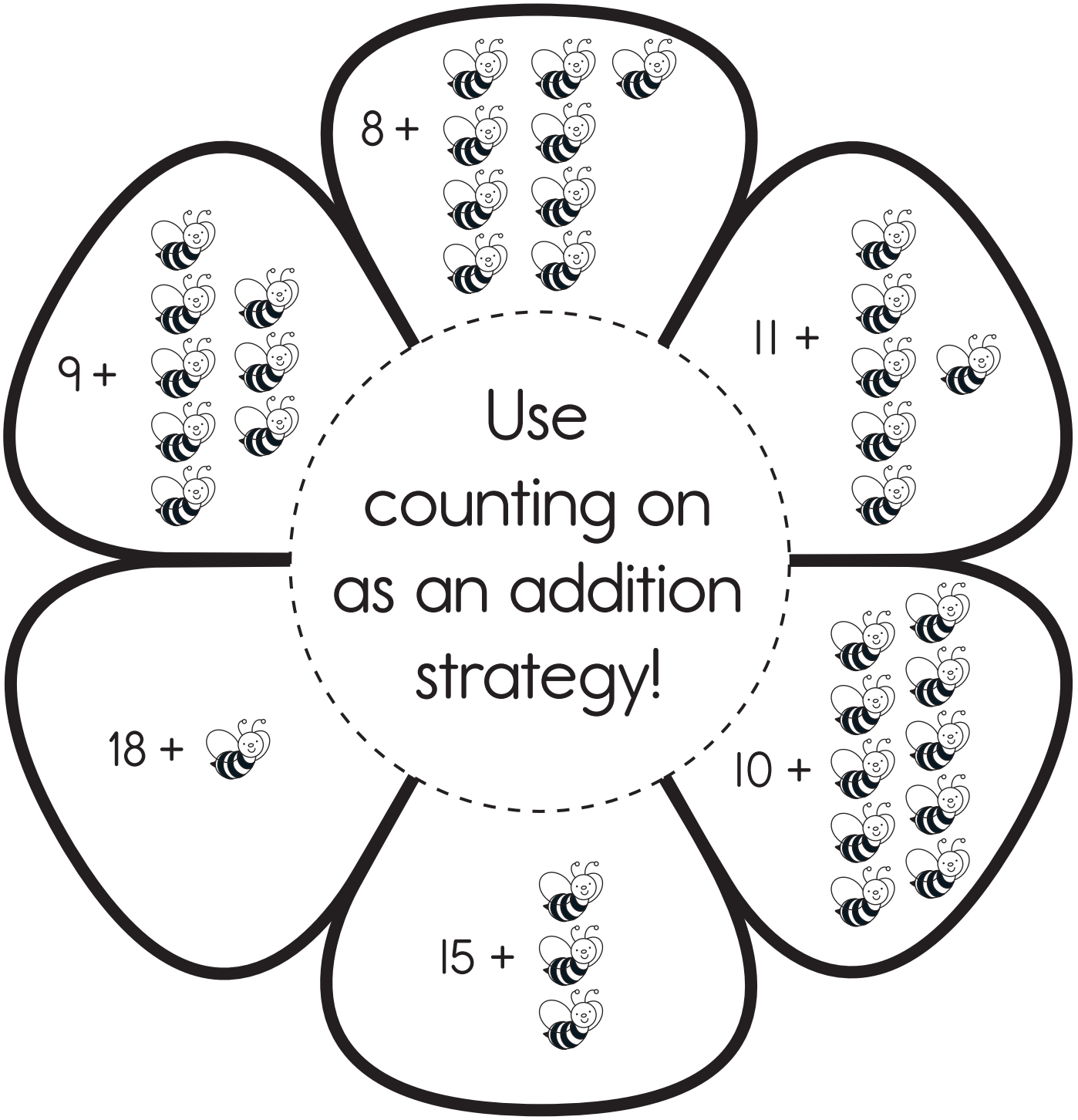
Guide students through the following steps to complete the right-hand page in their notebooks.

1. Add a Table of Contents entry for the Counting On pages.
2. Cut out the title and glue it to the top of the page.
3. Cut out the flower piece. Cut on the solid lines to create six petal-shaped flaps. Apply glue to the back of the center section and attach it to the page.
4. For each flap, start at the written number. Count on to add the bees pictured on the flap. Under the flap, write a number sentence and then solve the problem.

Reflect on Learning

To complete the left-hand page, have each student draw a number line to 15. Then, have each student roll a six-sided die and mark the number on his number line. Direct each student to roll the die again and count on to add that many more to the marked number on his number line. Finally, each student should write a number sentence to show how he counted on from the orginal number rolled.

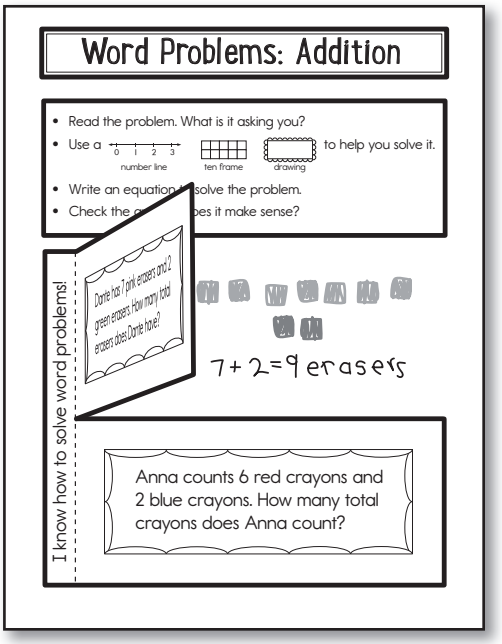
Counting On



Word Problems: Addition

Introduction

Explain the steps in solving a word problem such as reading the problem, underlining the question, and determining what the problem is asking. Model how using a number line, a ten frame, or a drawing are helpful strategies in solving word problems. Review what a number sentence is. Explain why it is important to check your work after solving a problem. Then, write a simple addition word problem on the board. Model several strategies to solve the problem.



Creating the Notebook Page

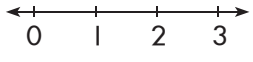
Guide students through the following steps to complete the right-hand page in their notebooks.

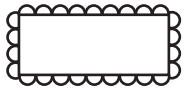
1. Add a Table of Contents entry for the Word Problems: Addition pages.
2. Cut out the title and glue it to the top of the page.
3. Cut out the *Read the problem* piece and glue it below the title. Review each step.
4. Cut out the flap book. Cut on the solid line to create two flaps. Apply glue to the back of the left section and attach it to the page.
5. For each flap, read and solve the problem. Refer to the strategies at the top of the page for help. Show your work under each flap.

Reflect on Learning

To complete the left-hand page, have students draw lines to divide their pages into four sections and label the sections *problem*, *number line*, *ten frame*, and *drawing*. Write an addition problem on the board. Have students copy the problem in the first section. Then, students should solve the problem using the strategy listed in each box. Allow time for students to share their work with partners and explain their reasoning.

Word Problems: Addition

- Read the problem. What is it asking you?
- Use a 

number line  ten frame  drawing to help you solve it.
- Write an equation to solve the problem.
- Check the answer. Does it make sense?

I know how to solve word problems!

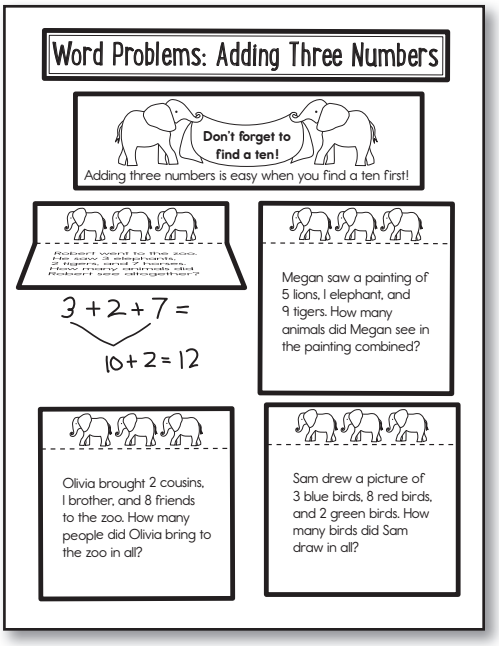
Dante has 7 pink erasers and 2 green erasers. How many total erasers does Dante have?

Anna counts 6 red crayons and 2 blue crayons. How many total crayons does Anna count?

Word Problems: Adding Three Numbers

Each student will need a six-sided die to complete the reflection activity.

Introduction



Write the following word problem on the board: *The bus driver started on his route with no students on the bus. At the first stop, he picked up 4 students. At the second stop, he picked up 6 students. On his last stop, he picked up 8 students. How many students did the bus driver pick up in all?* Configure chairs as seats in a school bus with your chair in the driver's position. Have volunteers act out the word problem to find the answer. Then, have students return to their desks. Each student should write a number sentence for the word problem. Explain why it is easier to find a pair of addends that equal 10 first when adding three numbers.

Creating the Notebook Page

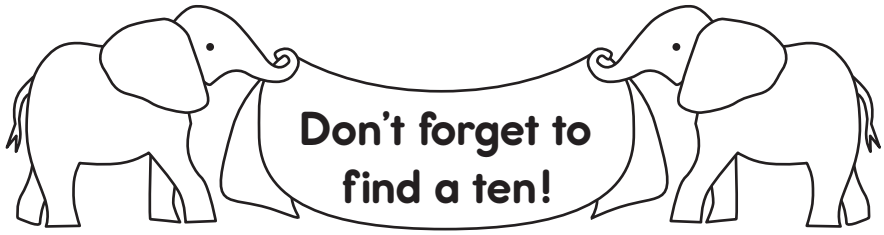
Guide students through the following steps to complete the right-hand page in their notebooks.

1. Add a Table of Contents entry for the Word Problems: Adding Three Numbers pages.
2. Cut out the title and glue it to the top of the page.
3. Cut out the *Don't forget* piece and glue it below the title.
4. Cut out the word problem flaps. Apply glue to the back of the top section of each flap and attach it to the page.
5. For each flap, read the problem. Then, solve the problem and show your work under the flap.

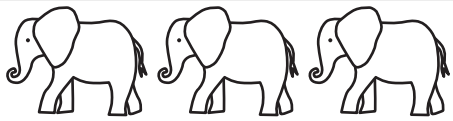
Reflect on Learning

To complete the left-hand page, have each student roll a six-sided die three times. Each time the die is rolled, the student should record the number the die lands on to create a three-digit addition number sentence and solve the problem. Repeat the activity several times.

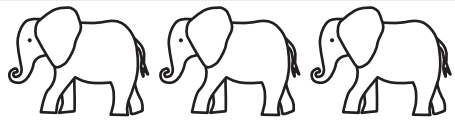
Word Problems: Adding Three Numbers



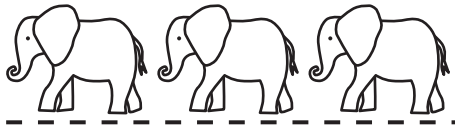
Adding three numbers is easy when you find a ten first!



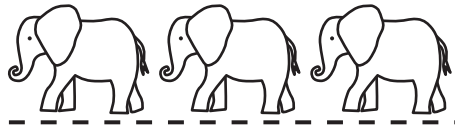
Robert went to the zoo. He saw 3 elephants, 2 tigers, and 7 horses. How many animals did Robert see altogether?



Megan saw a painting of 5 lions, 1 elephant, and 9 tigers. How many animals did Megan see in the painting combined?



Olivia brought 2 cousins, 1 brother, and 8 friends to the zoo. How many people did Olivia bring to the zoo in all?

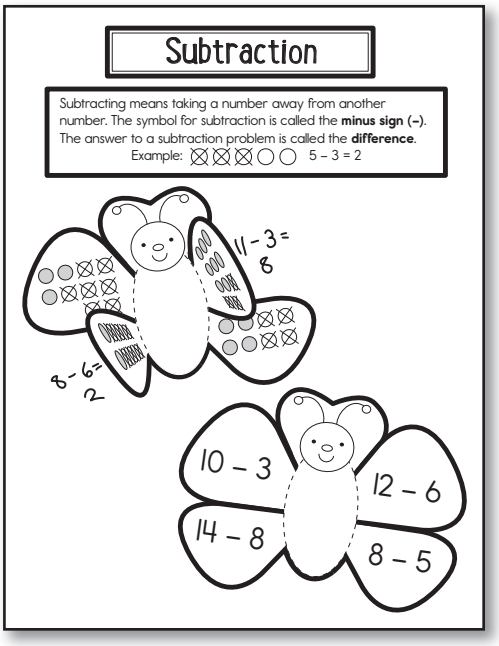


Sam drew a picture of 3 blue birds, 8 red birds, and 2 green birds. How many birds did Sam draw in all?

Subtraction

Each student will need two dominoes to complete the reflection activity.

Introduction



Ask students what they know about subtraction. Explain that subtraction means taking a number away from another number. Have 13 volunteers stand at the front of the room. Ask students to count the volunteers at the front of the room. Then, have three of the volunteers return to their desks. Ask how many students are still standing. Write the number sentence 13 - 3 = 10 on the board. Point to each part of the number sentence and explain how it represents the students at the front of the room. For example, say, "There were thirteen students, and then three students sat down. Now, there are ten students at the front of the room." Point to the minus sign and discuss what it means.

Creating the Notebook Page

Guide students through the following steps to complete the right-hand page in their notebooks.

1. Add a Table of Contents entry for the Subtraction pages.
2. Cut out the title and glue it to the top of the page.
3. Cut out the *Subtracting means* piece and glue it below the title. Read the explanation together and point out the parts of the problem in the example.
4. Cut out the butterfly pieces. Cut on the solid lines to create four flaps on each one. Apply glue to the back of the center section of each one and attach it to the page.
5. For the butterfly with pictures, write a number sentence under each flap to represent the pictures shown. For the number sentence butterfly, draw a picture under each flap to represent the number sentence shown.

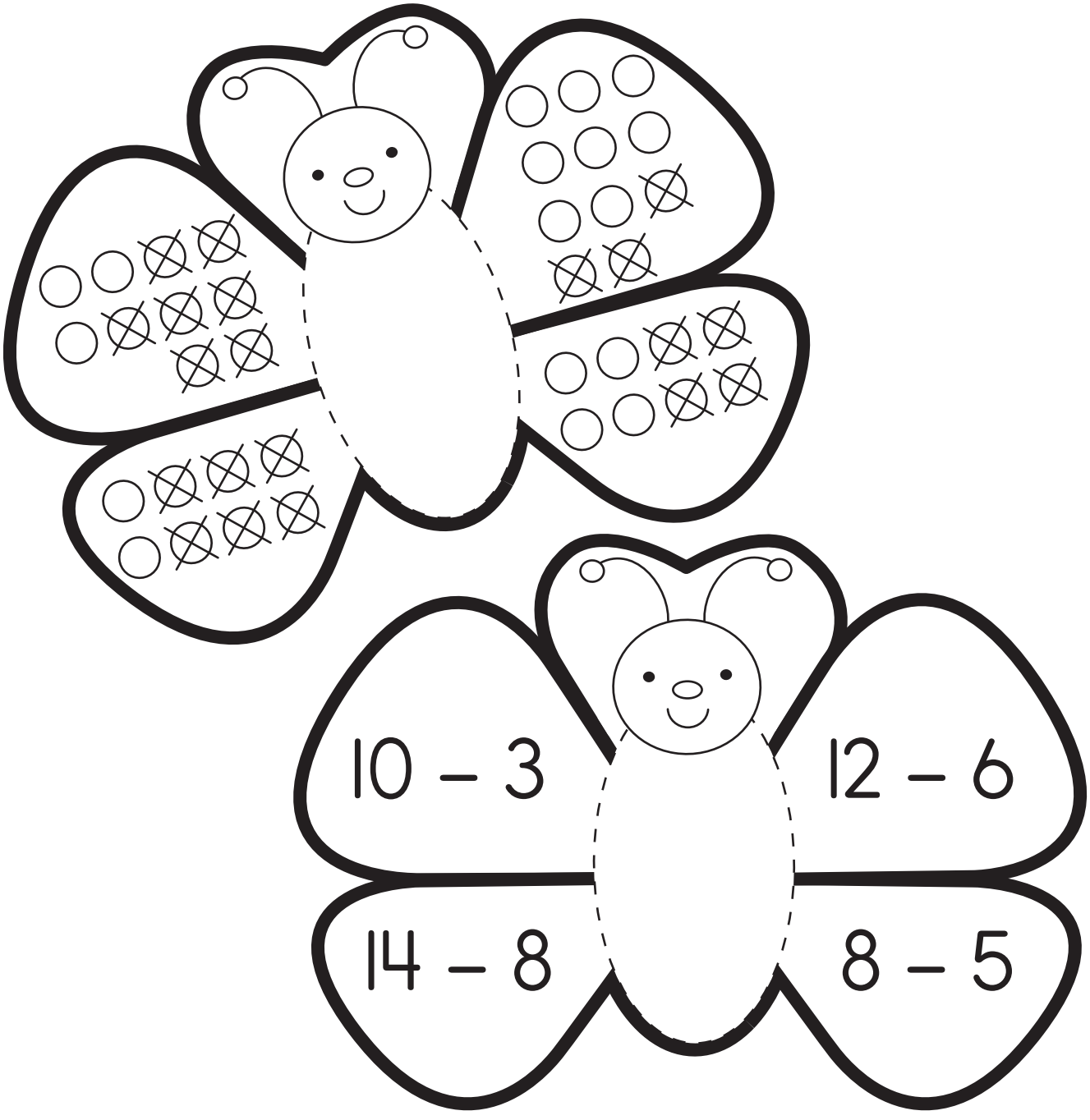
Reflect on Learning

To complete the left-hand page, have students choose two dominoes and turn them so that the greater number of dots is on the left-hand side. Students should write and illustrate subtraction number sentences to represent the dots on their dominoes. For example, if a student has a domino with six dots on one side and five dots on the other side, the student should draw six dots and cross out five of the dots. Then, she should write the number sentence 6 – 5 = 1. Repeat the activity with the remaining domino.

Subtraction

Subtracting means taking a number away from another number. The symbol for subtraction is called the **minus sign (–)**. The answer to a subtraction problem is called the **difference**.

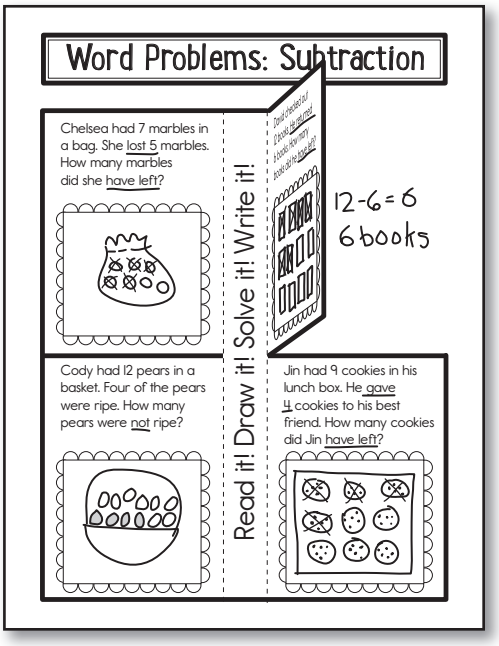
Example: ⊗⊗⊗○○ 5 – 3 = 2



Word Problems: Subtraction

Introduction

Have two volunteers come to the front of the room. Give one student nine books. Tell a story as the volunteers act it out. Say, "Julio has nine books. Tasha has no books. Julio is such a great friend that he is going to give away five of his books to Tasha. How many books will Julio have left?" As you tell the story, emphasize the phrases *give away* and *have left*. Then, model the story by drawing a picture and writing a number sentence on the board.



Creating the Notebook Page

Guide students through the following steps to complete the right-hand page in their notebooks.

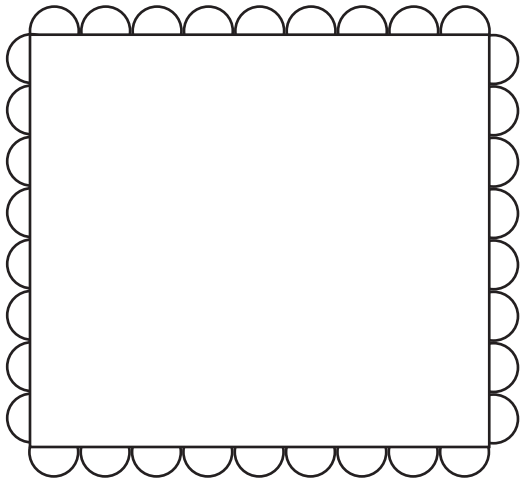
1. Add a Table of Contents entry for the Word Problems: Subtraction pages.
2. Cut out the title and glue it to the top of the page.
3. Cut out the flap book. Cut on the solid lines to create two flaps on each side. Apply glue to the back of the center section and attach it to the page.
4. For each flap, read the word problem and underline the words and phrases that will help you solve it. Draw a picture to represent the problem. Then, write a number sentence under the flap and solve the problem.

Reflect on Learning

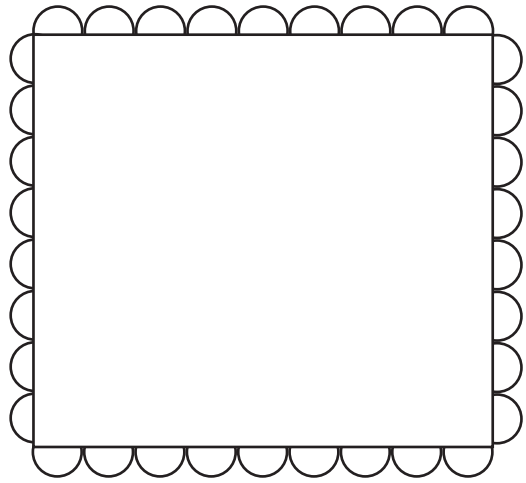
To complete the left-hand page, have each student write a simple subtraction word problem. Then, have students exchange notebooks with partners and solve the problems. Allow time for students to explain their reasoning in solving the problems with their partners.

Word Problems: Subtraction

Chelsea had 7 marbles in a bag. She lost 5 marbles. How many marbles did she have left?

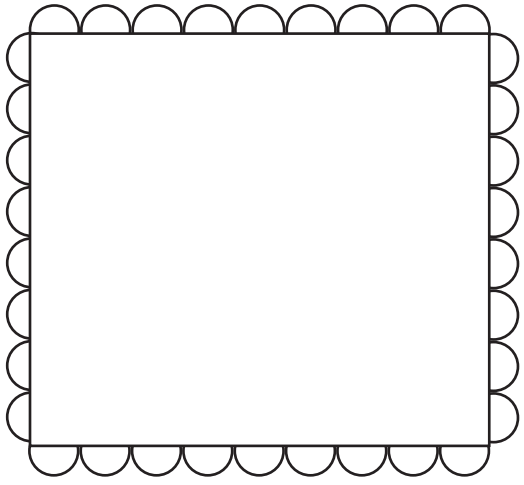


David checked out 12 books. He returned 6 books. How many books did he have left?

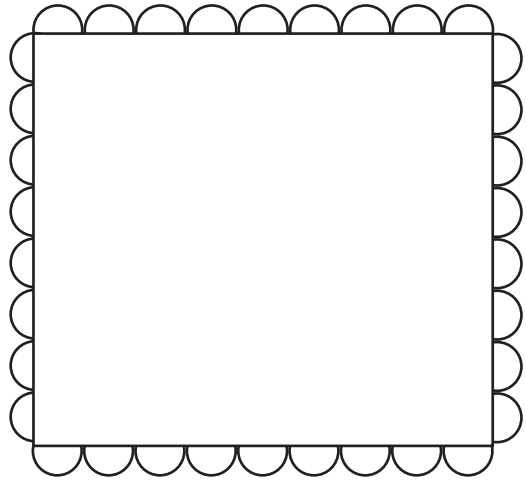


Read it! Draw it! Solve it! Write it!

Cody had 12 pears in a basket. Four of the pears were ripe. How many pears were not ripe?



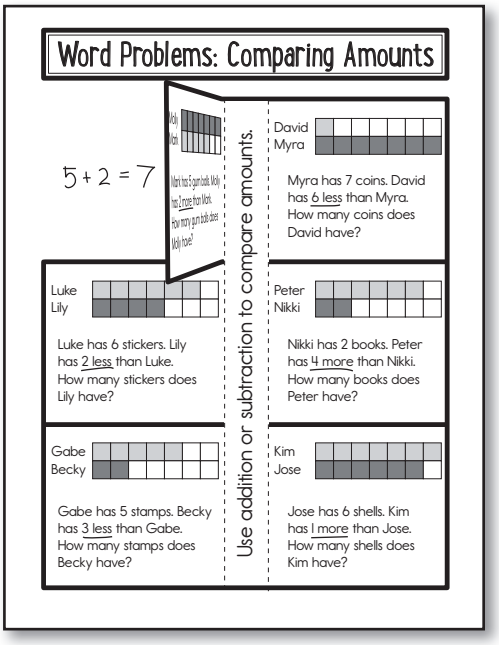
Jin had 9 cookies in his lunch box. He gave 4 cookies to his best friend. How many cookies did Jin have left?



Word Problems: Comparing Amounts

Each student will need 14 linking cubes (seven of one color and seven of another color) for the introduction and reflection activities.

Introduction



Distribute 14 linking cubes to each student. Say, "Dave has six markers, and Jill has two more markers than Dave. How many markers does Jill have?" Model how to use linking cubes to illustrate the problem by linking six cubes of one color (Dave's markers) and eight cubes of the other color (Jill's markers) in two separate rows. Have students connect their cubes in the same way. Then, students should compare the two rows of linking cubes. Ask students what they notice. A possible answer may be that two more linking cubes are in the second row. Each student should write a number sentence to solve the problem. Repeat the activity with another comparison word problem.

Creating the Notebook Page

Guide students through the following steps to complete the right-hand page in their notebooks.

1. Add a Table of Contents entry for the Word Problems: Comparing Amounts pages.
2. Cut out the title and glue it to the top of the page.
3. Cut out the flap book. Cut on the solid lines to create three flaps on each side. Apply glue to the back of the center section and attach it to the page.
4. For each flap, read the word problem and underline the words that tell you how many more or how many less. Color the blocks to represent the problem. Write a number sentence under each flap and solve the problem.

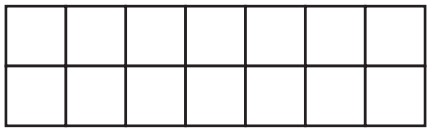
Reflect on Learning

To complete the left-hand page, write a comparison word problem on the board. Have students copy the problem. Then, students should use linking cubes to model the problem. Finally, have each student write a number sentence and solve the problem.

Word Problems: Comparing Amounts

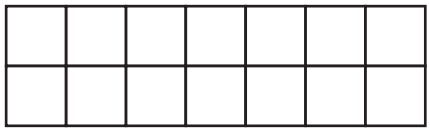
Use addition or subtraction to compare amounts.

Molly
Mark



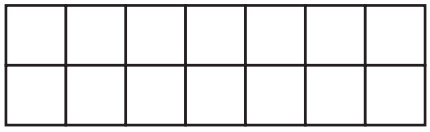
Mark has 5 gum balls. Molly has 2 more than Mark. How many gum balls does Molly have?

David
Myra



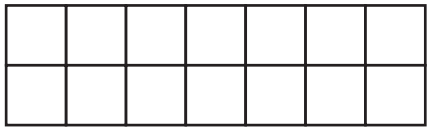
Myra has 7 coins. David has 6 less than Myra. How many coins does David have?

Luke
Lily



Luke has 6 stickers. Lily has 2 less than Luke. How many stickers does Lily have?

Peter
Nikki



Nikki has 2 books. Peter has 4 more than Nikki. How many books does Peter have?

Gabe
Becky

Gabe has 5 stamps. Becky has 3 less than Gabe. How many stamps does Becky have?

Kim
Jose

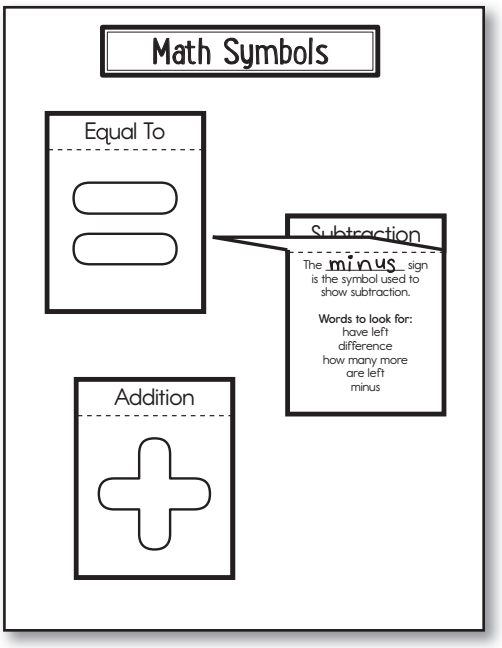
Jose has 6 shells. Kim has 1 more than Jose. How many shells does Kim have?

Math Symbols

The teacher will need a balance scale and objects of equal weight to complete the introduction activity.

Introduction

Discuss the meaning of a math symbol as a character or a sign that represents a mathematical operation. Write an equal sign and the word *equal* on the board. Then, using a balance scale and objects of equal weight, place three objects on each side of the balance. Discuss how the scale is balanced or equal on both sides. Write the number sentence 3 + 3 = 6 on the board. Circle the equal sign and say, "Three plus three equals six." Then, have a volunteer hold two books. Give him two more books to hold. Ask students how many books the volunteer has altogether. Write the number sentence 2 + 2 = 4. Circle the plus sign and say, "Two plus two equals four." Have a volunteer hold five crayons in her hand. Take away three of the crayons. Ask students how many crayons are left in the volunteer's hand. Write the number sentence 5 - 3 = 2. Circle the minus sign and say, "Five minus three equals two."



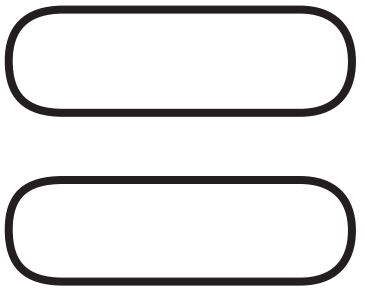
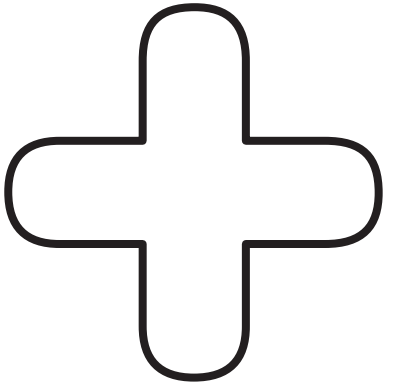
Creating the Notebook Page

Guide students through the following steps to complete the right-hand page in their notebooks.

1. Add a Table of Contents entry for the Math Symbols pages.
2. Cut out the title and glue it to the top of the page.
3. Cut out the three definition flaps. For each one, complete the definition. (The **plus** sign is the symbol used to show addition. The **equal** sign is the symbol used to show that both sides of the equation are equal. The **minus** sign is the symbol used to show subtraction.) Cut out the three symbol flaps. Apply glue to the gray glue section of each definition flap and place the matching symbol flap on top of it. Then, apply glue to the back of the top section of each definition flap and attach it to the page.
4. Write a number sentence to represent each symbol under the last flap. Then, circle the symbol.

Reflect on Learning

To complete the left-hand page, have each student write a reflection to answer the following prompts: *What does the minus sign represent? What does the plus sign represent? What does the equal sign represent?* Students should draw pictures or use words to explain their reasoning.

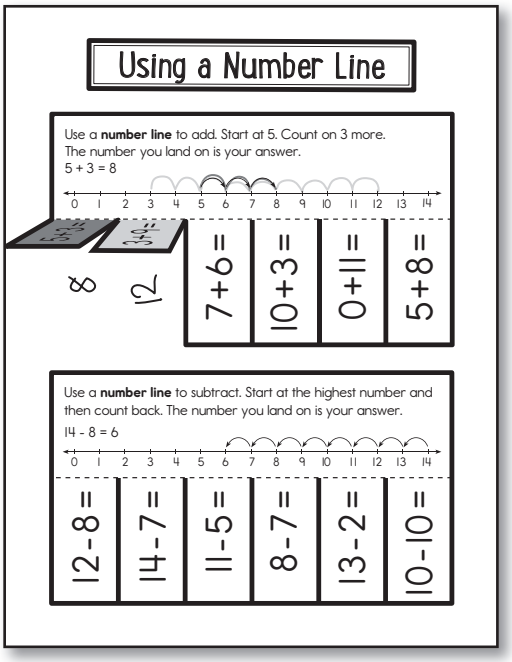
Subtraction	Equal To	Addition
		
glue	glue	glue
The _____ sign is the symbol used to show subtraction. **Words to look for:** have left difference how many more are left minus	The _____ sign is the symbol used to show both sides of the equation are equal. **Words to look for:** same as is equal to equals	The _____ sign is the symbol used to show addition. **Words to look for:** altogether combined plus total in all sum

Math Symbols

Using a Number Line

Introduction

Display a number line. Ask students what they observe about the number line. A possible answer may be that the number line shows numbers in order. Using removable tape, create a number line 0 to 10 on the classroom floor. Put several addition and subtraction number sentences to 10 in a container. Have volunteers pull number sentences from the container and act them out by hopping on the number line. For example, if a student selects 5 + 5 = 10, she should stand on the number 5 and hop forward 5 spaces to the number 10. Repeat the activity as time permits.



Creating the Notebook Page

Guide students through the following steps to complete the right-hand page in their notebooks.

1. Add a Table of Contents entry for the Using a Number Line pages.
2. Cut out the title and glue it to the top of the page.
3. Cut out the addition and subtraction flap books. Cut on the solid lines to create six flaps on each one. Apply glue to the back of the top section of each one and attach it to the page.
4. For each flap, solve the number sentence using the number line at the top of the flap. Write the answer under each flap.

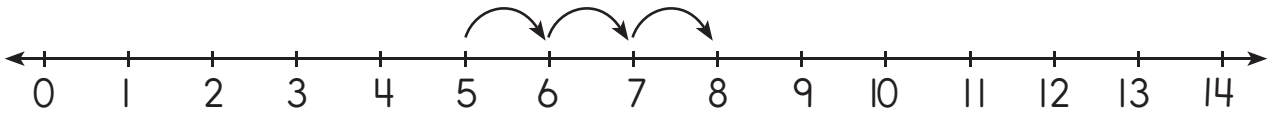
Reflect on Learning

To complete the left-hand page, have each student write a reflection to answer the following prompts: *How can a number line help me count forward and backward? How can a number line help me skip count? How can I use a number line to help count on from any number?* Students should draw pictures or use words to explain their reasoning.

Using a Number Line

Use a **number line** to add. Start at 5. Count on 3 more.
The number you land on is your answer.

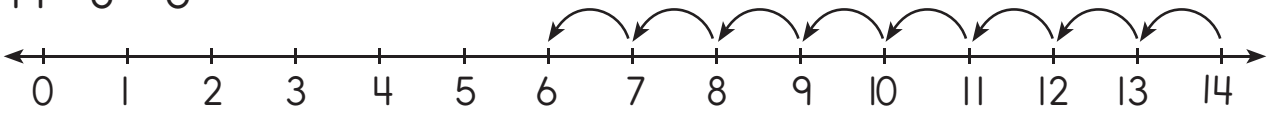
5 + 3 = 8



5+3 =	3+9 =	7+6 =	10+3 =	0+11 =	5+8 =

Use a **number line** to subtract. Start at the highest number and then count back. The number you land on is your answer.

14 - 8 = 6

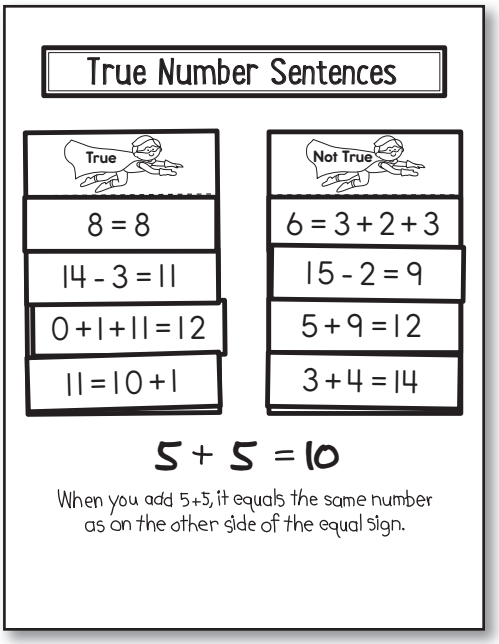


12-8 =	14-7 =	11-5 =	8-7 =	13-2 =	10-10 =

True Number Sentences

Introduction

Write the equal sign on the board. Review the meaning of the sign as a symbol for having the same amount on both sides. Have a volunteer come to the board and write a true addition number sentence. Ask the volunteer to explain how he knows the number sentence is true. Then, ask another volunteer to come to the board and write a number sentence that is not true. Ask her to explain her reasoning. Discuss how more than one number can be on each side of the equal sign.



Creating the Notebook Page

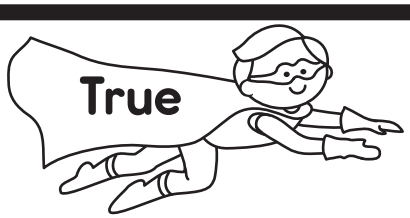
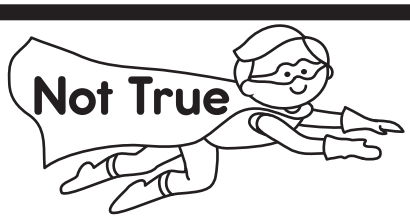
Guide students through the following steps to complete the right-hand page in their notebooks.

1. Add a Table of Contents entry for the True Number Sentences pages.
2. Cut out the title and glue it to the top of the page.
3. Cut out the flaps. Apply glue to the back of the top section of each flap and attach it to the page.
4. Cut out the number sentence cards. Determine if each number sentence is true or not true. Sort and glue the cards onto the correct flaps.
5. Write three more true number sentences and three more number sentences that are not true under the correct flaps.
6. Below the flaps, use words and a number sentence to explain what makes a number sentence true. (For example, write the number sentence 5 + 5 = 10, and then explain that when you add 5 + 5, it equals the same as the number on the other side of the equal sign.)

Reflect on Learning

To complete the left-hand page, write the following number sentences on the board: *3 + 3 + 1 = 7* and *9 = 10 + 2*. Have students copy the true number sentence. Then, students should draw pictures or use words to explain their reasoning.

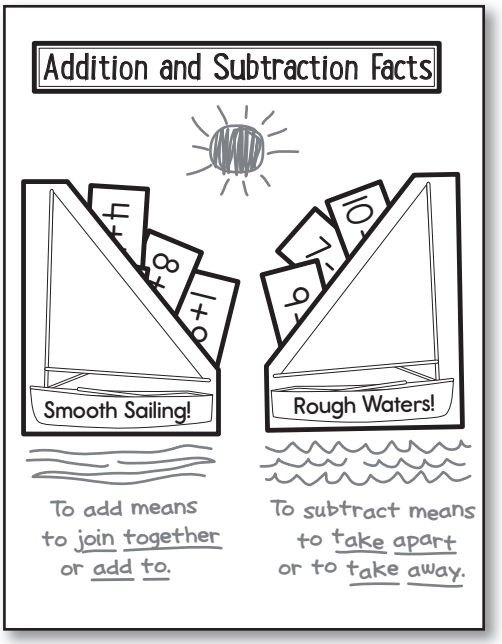
True Number Sentences

	
$3+4=14$	$8=8$
$6=3+2+3$	$14-3=11$
$11=10+1$	$5+9=12$
$15-2=9$	$0+1+11=12$

Addition and Subtraction Facts

Introduction

Write the number sentence 2 + 8 = ? on the board. Have a volunteer come to the board and show one way to solve the problem. Erase the board. Ask students if there is a way to solve the number sentence 2 + 8 = 10 without counting on or drawing objects to solve the problem. Discuss why it is helpful to remember addition and subtraction facts.



Creating the Notebook Page

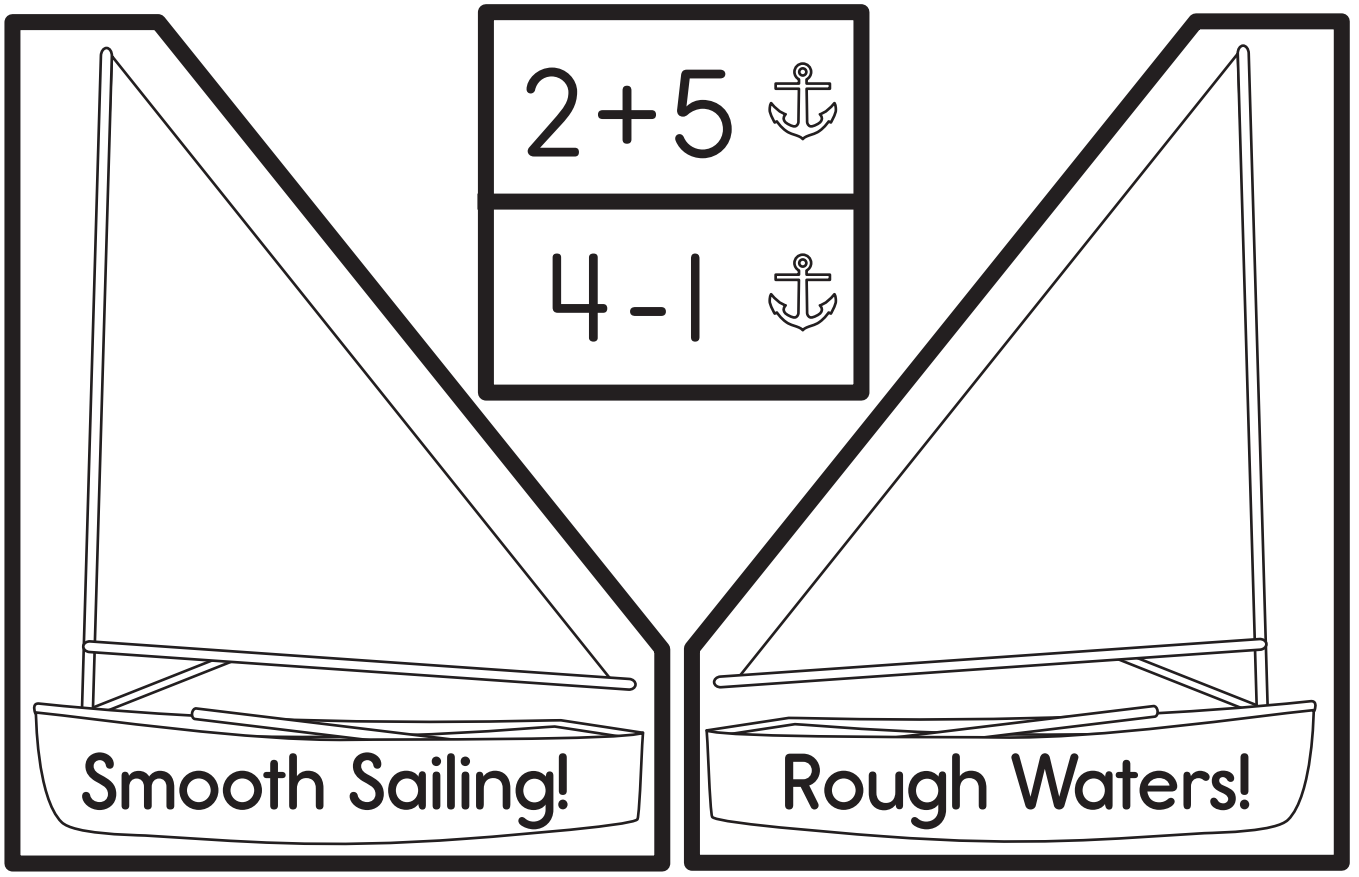
Guide students through the following steps to complete the right-hand page in their notebooks.

1. Add a Table of Contents entry for the Addition and Subtraction Facts pages.
2. Cut out the title and glue it to the top of the page.
3. Cut out the two sailboat pieces. Apply glue to the back of the bottom and taller side of each piece and attach it to the page to create a pocket.
4. Write the definitions for addition (To add means to join together or add to.) and subtraction (To subtract means to take apart or to take away.) below the sailboats.
5. Cut out the number sentence cards. Then, write the answer to each number sentence on the back. Use the cards to play a round of flash cards with a partner. If you can say the answer quickly, place the card in the *Smooth Sailing* boat. If you cannot, place the card in the *Rough Waters* boat.

Reflect on Learning

To complete the left-hand page, have each student write a reflection to answer the following prompts: *Why is it helpful to memorize addition and subtraction facts? What are some ways to practice memorizing addition and subtraction facts?* Students should draw pictures or use words to explain their reasoning.

Addition and Subtraction Facts

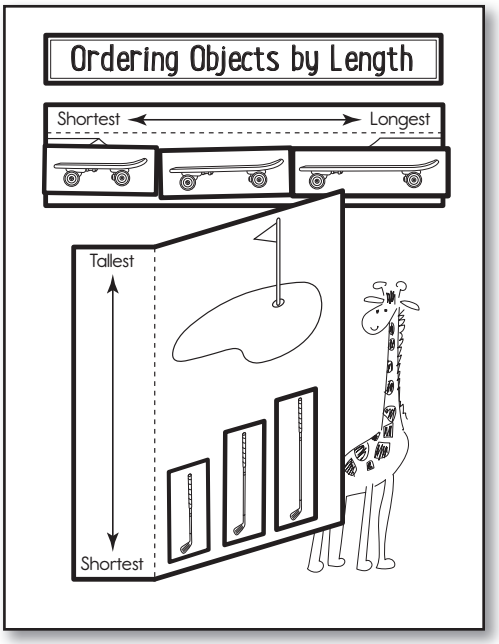


10-3	5+3	8-4	1+9	7-2	9+8	6+4
10-9	8+2	7-7	4+4	9-6	2+6	10+0

Ordering Objects by Length

Introduction

Have students select one object each from the classroom and bring the objects to their desks. Write the words *length*, *shorter*, and *longer* on the board. Have a volunteer stand and show her object. Say, "Who has something shorter than this (object)?" Compare the objects and have the newest volunteer explain why his object is shorter. Instruct the first student to sit and the second to remain standing. Say, "Who has something longer than this (object)?" Compare the objects and have the newest volunteer explain why her object is longer. Repeat this process several times to reinforce the concepts of shorter and longer. Repeat the activity to introduce the concepts of shortest and tallest.



Creating the Notebook Page

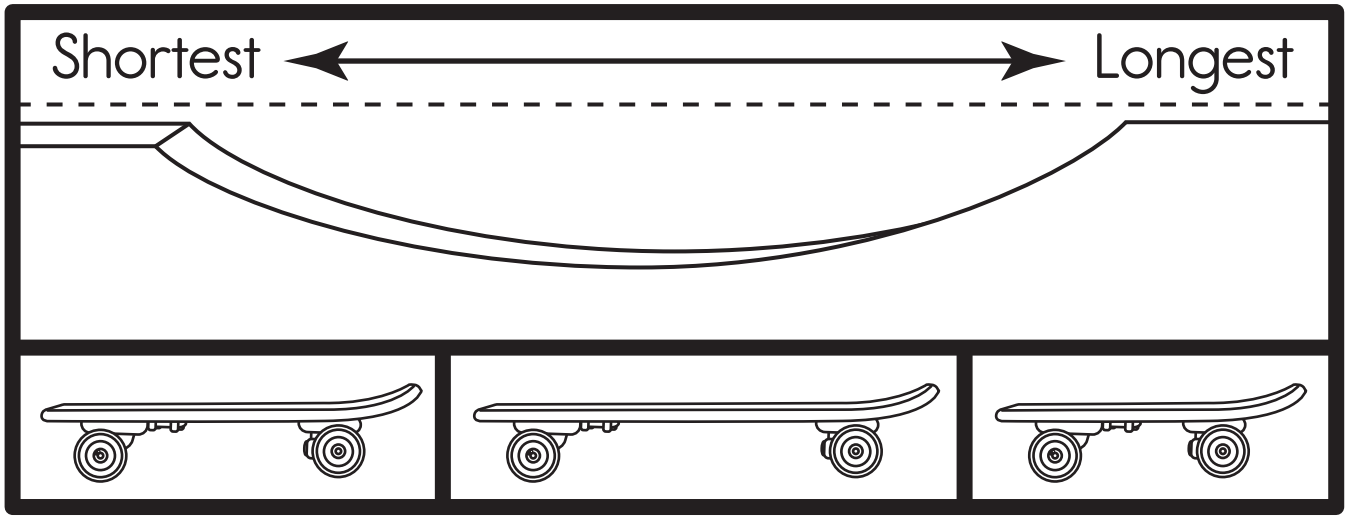
Guide students through the following steps to complete the right-hand page in their notebooks.

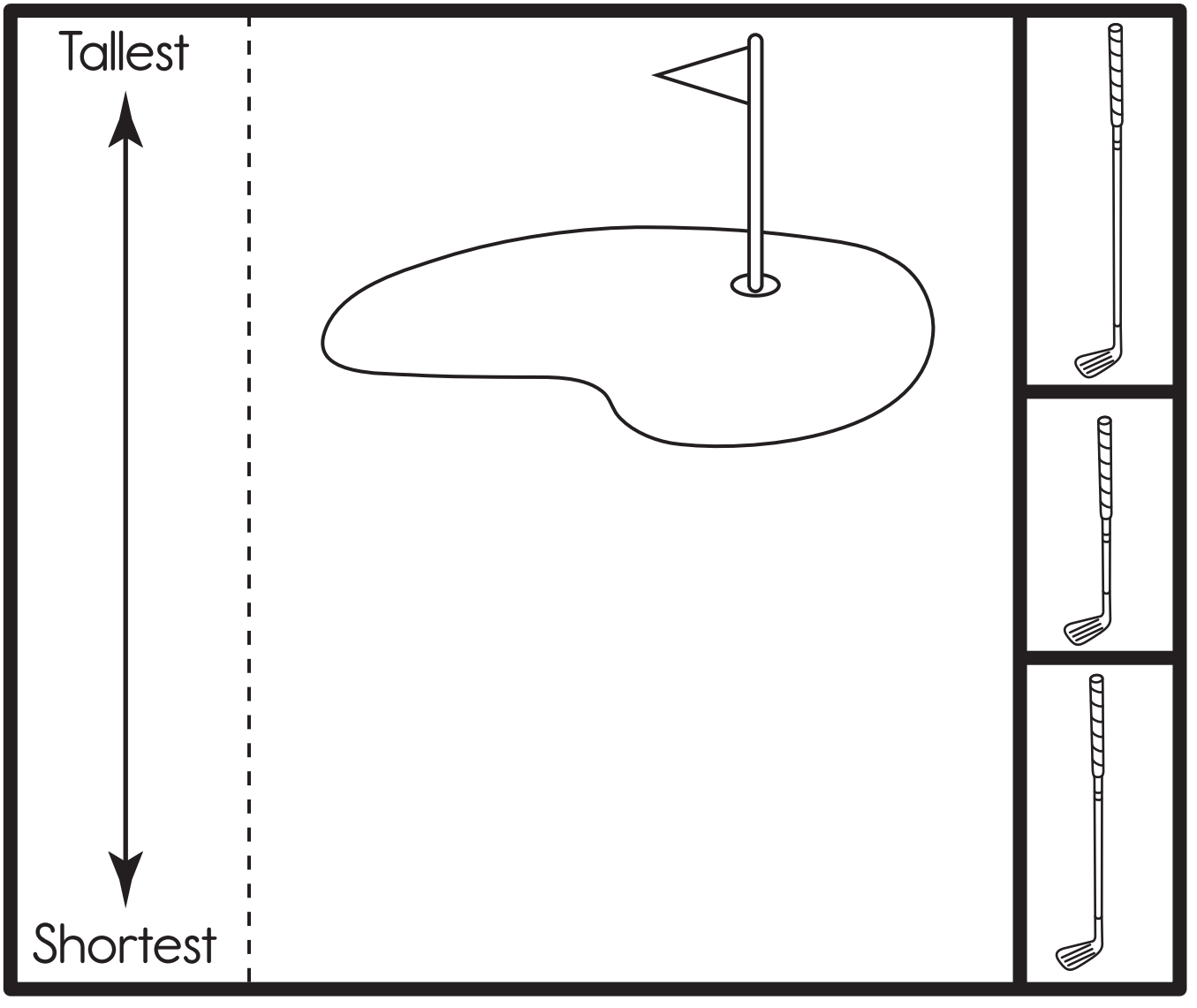
1. Add a Table of Contents entry for the Ordering Objects by Length pages.
2. Cut out the title and glue it to the top of the page.
3. Cut out the skateboard flap. Apply glue to the back of the top section and attach it below the title.
4. Cut out the skateboard pieces. Compare the lengths of the skateboards. Glue them onto the flap in order from shortest to longest. Draw three objects in order from shortest to longest under the flap.
5. Cut out the golf club flap. Apply glue to the back of the left section and attach it to the page. Cut out the golf club pieces. Compare the heights of the golf clubs. Glue them onto the flap in order from shortest to tallest. Draw three objects in order from shortest to tallest under the flap.

Reflect on Learning

To complete the left-hand page, have students draw the shortest animal they can think of. Then, have the students draw the longest animal they can think of next to it. Have each student write a sentence about his animals. Repeat the activity with students drawing the tallest and shortest animals they can think of. Allow time for students to share their work.

Ordering Objects by Length

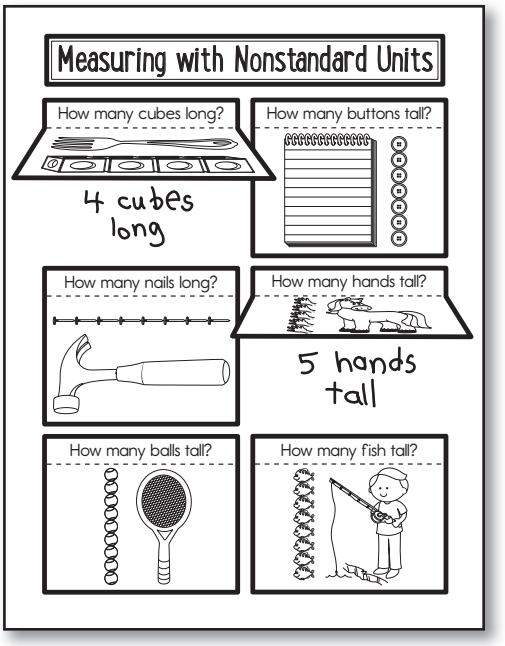




Measuring with Nonstandard Units

Each student will need a wooden craft stick to complete the reflection activity.

Introduction



Ask students to share what they know about measuring. Discuss how parts of the body, such as a foot or a hand, can be used to measure objects. Explain how other objects can also be used as measurement tools. Then, display several different lengths of string. Say, "If 10 of these strings were laid along the whiteboard edge, could you say that the whiteboard is 10 strings long?" Students should be able to explain why or why not. Discuss how in nonstandard measurement, the unit length cannot change while measuring.

Creating the Notebook Page

Guide students through the following steps to complete the right-hand page in their notebooks.

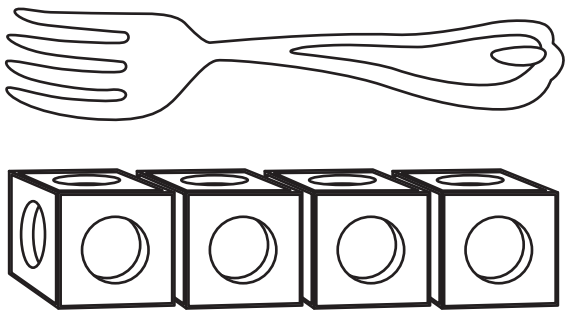
1. Add a Table of Contents entry for the Measuring with Nonstandard Units pages.
2. Cut out the title and glue it to the top of the page.
3. Cut out each flap. Apply glue to the back of the top section of each flap and attach it to the page.
4. Read and follow the directions on each flap to find out how many units long each object is. Write the answer under the flap.

Reflect on Learning

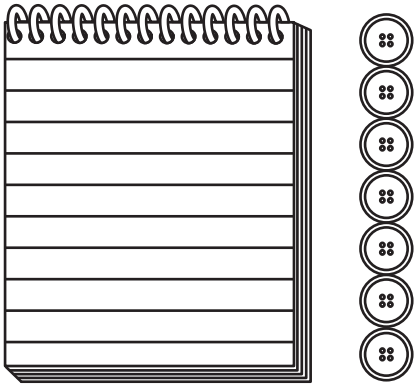
To complete the left-hand page, give each student a wooden craft stick to measure with. Model how to align the end of a stick with the end of an object to measure. For example, say, "My desk is 7 sticks tall." Have students choose three objects from the classroom to measure and then record the results. Then, students should find partners to measure their objects to see if they get the same results.

Measuring with Nonstandard Units

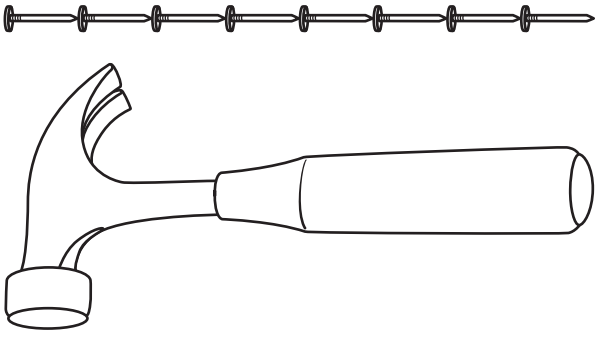
How many cubes long?



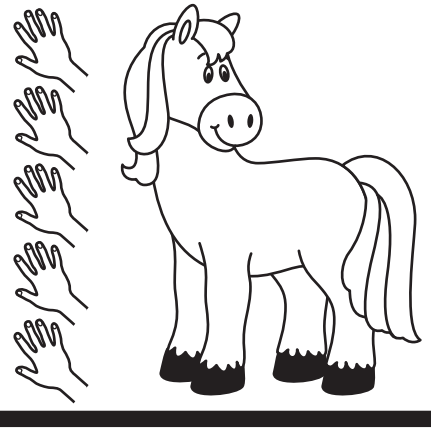
How many buttons tall?



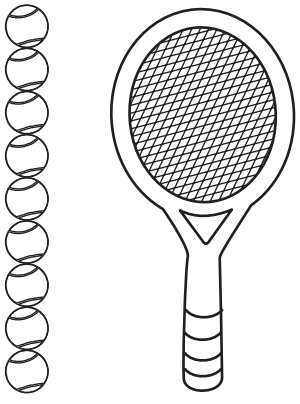
How many nails long?



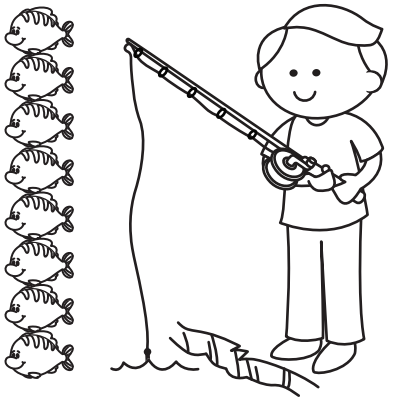
How many hands tall?



How many balls tall?



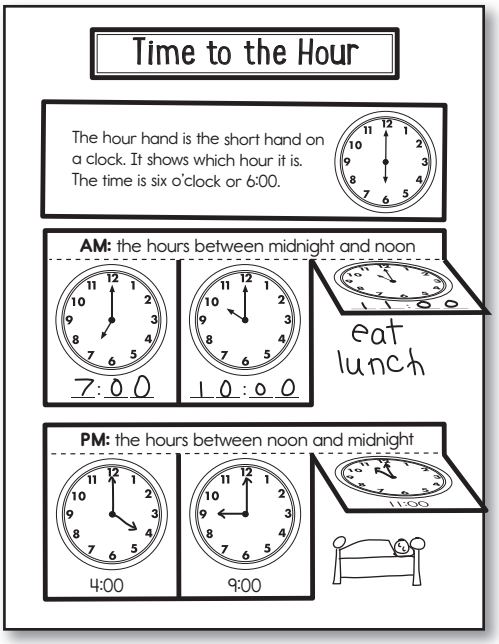
How many fish tall?



Time to the Hour

Each student will need a paper plate, construction paper minute and hour hands, and a brass paper fastener to complete the introduction activity.

Introduction



Display a clock. Explain that the long hand is the minute hand and the short hand is the hour hand and that there are 60 minutes in an hour. The short hand tells the hour, and the long hand tells what minute of the hour it is. Distribute paper plates. Help each student create a clock by attaching construction paper hands with a brass paper fastener. Have students identify the hour and minute hands on their clocks. Discuss the difference between AM and PM. Say times to the hour for students to show on their clocks.

Creating the Notebook Page

Guide students through the following steps to complete the right-hand page in their notebooks.

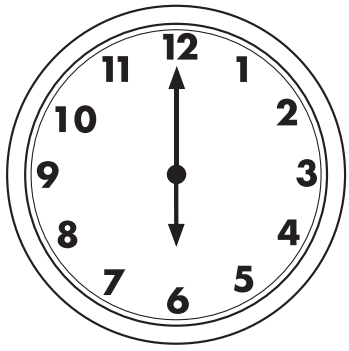
1. Add a Table of Contents entry for the Time to the Hour pages.
2. Cut out the title and glue it to the top of the page.
3. Cut out the *hour hand is* piece and glue it below the title.
4. Cut out the *AM* and *PM* flap books. For each book, cut on the solid lines to create three flaps. Apply glue to the back of each top section and attach it to the page.
5. For the *AM* flap book, write the time shown on each clock. Under each flap, draw or write an activity you would do at that time of day.
6. For the *PM* flap book, draw the hands on each clock to show the correct time. Under each flap, draw or write an activity you would do at that time of day.

Reflect on Learning

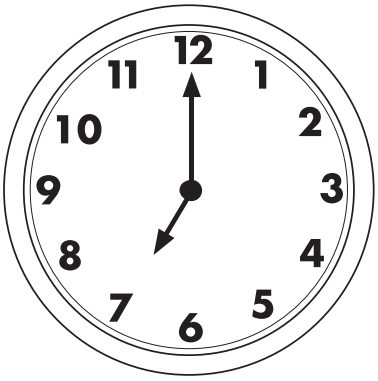
To complete the left-hand page, have each student create a class schedule for one full school day. Students should list each activity (reading, math, lunch, etc.) on the left side of the page. Beside each activity, have students write the time using *am* and *pm*. For example, Math: 8:00 am, Snack: 9:00 am, Reading: 10:00 am, Lunch: 12:00 pm, Science: 1:00 pm, Recess: 2:00 pm. Then, have each student draw a clock to show her favorite time of the school day.

Time to the Hour

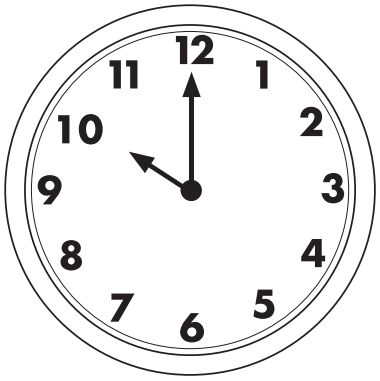
The hour hand is the short hand on a clock. It shows which hour it is. The time is six o'clock or 6:00.



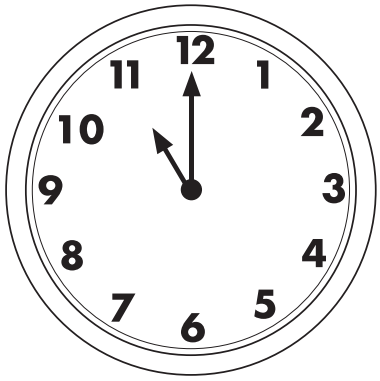
AM: the hours between midnight and noon



___ : ___ ___

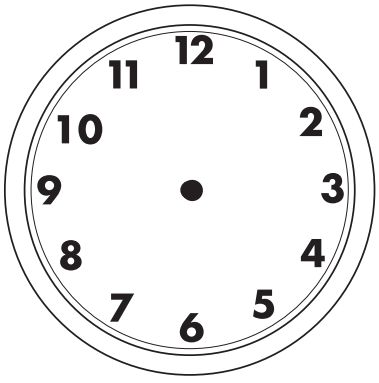


___ ___ : ___ ___

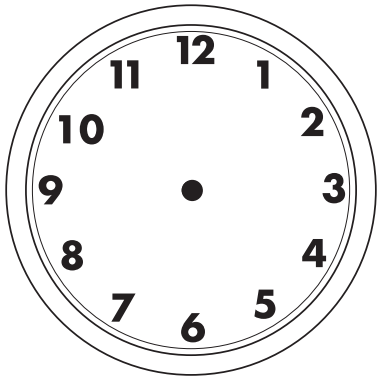


___ ___ : ___ ___

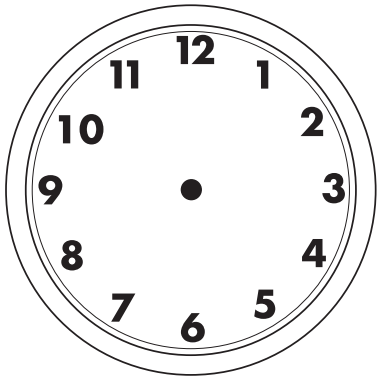
PM: the hours between noon and midnight



4:00



8:00



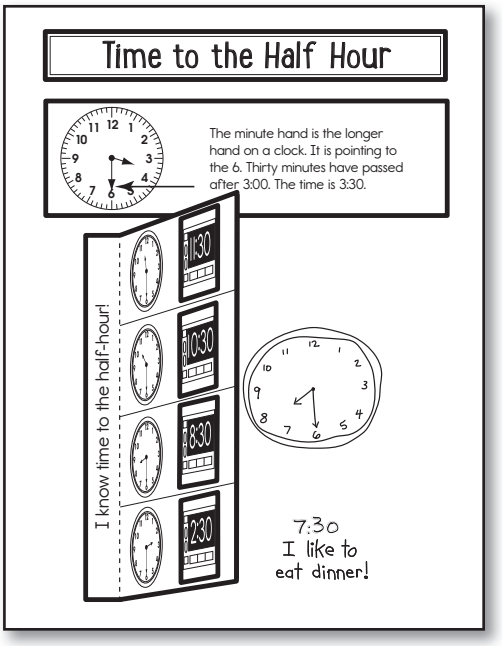
11:00

Time to the Half Hour

Each student will need a clock manipulative to complete the introduction activity.

Introduction

Ask students to share what they know about time. Write their responses on the board. Then, give each student a clock manipulative and review the hour and minute hands on the clock. As a class, practice counting by fives to 60. Then, model how to count by fives starting from the 12:00 hour and stopping at the half hour. Discuss how when counting by fives, the number of minutes counted at the 6 is 30. Say several times to the half hour for students to show on their clocks.



Creating the Notebook Page

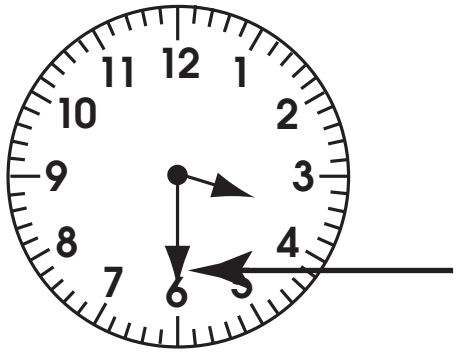
Guide students through the following steps to complete the right-hand page in their notebooks.

1. Add a Table of Contents entry for the Time to the Half Hour pages.
2. Cut out the title and glue it to the top of the page.
3. Cut out the *minute hand is* piece and glue it below the title.
4. Cut out the flap book. Apply glue to the back of the left section and attach it to the page.
5. Cut out the digital clock cards. Match each digital clock to the correct analog clock and glue it to the page.
6. Under the flap, draw a large clock. Label the clock with the correct numbers. Draw hands on the clock to show what time (to the half hour) is your favorite time of day. Write the time below the clock. Then, write a sentence to tell why it is your favorite time of day.

Reflect on Learning

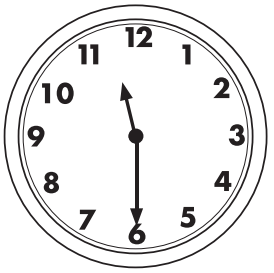
To complete the left-hand page, draw four clocks on the board that show 11:00, 10:00, 8:00, and 2:00. Have students look at the clocks on the board and the clocks on the right-hand page. Then, have students draw pictures or write to explain the similarities and differences between the clocks.

Time to the Half Hour



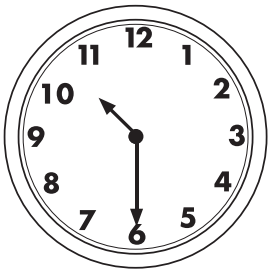
The minute hand is the longer hand on a clock. It is pointing to the 6. Thirty minutes have passed after 3:00. The time is 3:30.

I know time to the half-hour!



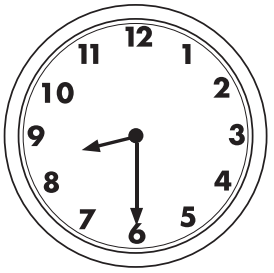
glue

2:30



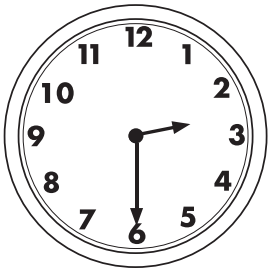
glue

10:30



glue

11:30



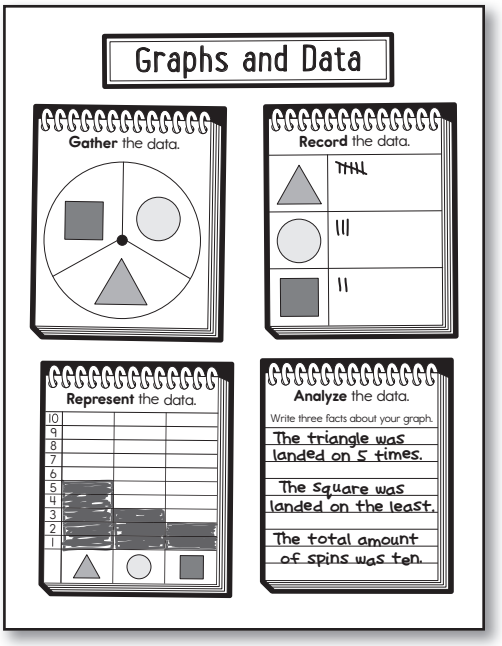
glue

8:30

Graphs and Data

Each student will need a sharpened pencil and a paper clip to complete the spinner activity.

Introduction



Tell students that you are thinking of having an ice cream party for the class. But, you will need to know how much of each flavor to buy. Write *chocolate*, *vanilla*, and *strawberry* on the board. Then, have each student come to the board and write a tally mark beside the flavor of ice cream he prefers. Explain that you have just gathered and recorded data to help you find out how much of each flavor to buy for the party. Model how to draw a bar graph to represent the data you have collected. Ask questions about the graph such as *How many more students want chocolate ice cream than vanilla ice cream?* and *Did more students want strawberry or vanilla ice cream?*

Creating the Notebook Page

Guide students through the following steps to complete the right-hand page in their notebooks.

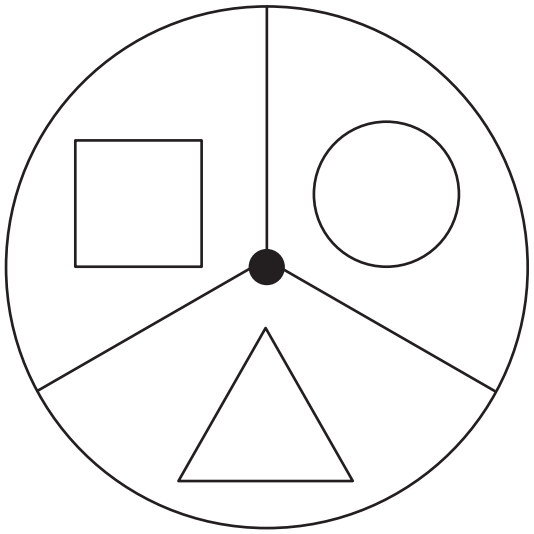
1. Add a Table of Contents entry for the Graphs and Data pages.
2. Cut out the title and glue it to the top of the page.
3. Cut out the *Gather, Record, Represent,* and *Analyze* pieces. Glue each one onto the page.
4. Use a sharpened pencil and a paper clip to spin the spinner on the *Gather* piece. Spin the spinner 10 times. Using tally marks on the *Record* piece, record the shape the spinner lands on each time.
5. Use the data to create a bar graph on the *Represent* piece.
6. On the *Analyze* piece, write three facts about your graph.

Reflect on Learning

To complete the left-hand page, have students survey classmates about their favorite sports such as soccer, football, or baseball. Students should use tally marks to record the data. Then, have students create bar graphs to represent the data collected. Finally, have students write three facts about the information in their bar graphs.

Graphs and Data

Gather the data.



Record the data.

△	
○	
□	

Represent the data.

10			
9			
8			
7			
6			
5			
4			
3			
2			
1			
	△	○	□

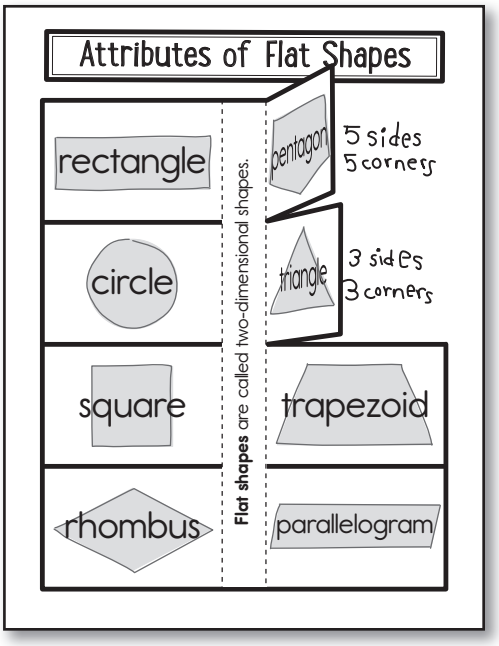
Analyze the data.

Write three facts about your graph.

Attributes of Flat Shapes

Introduction

Before the lesson, cut out several construction paper circles, triangles, squares, rectangles, pentagons, rhombuses, and parallelograms of various colors and place them around the classroom. Be sure the shapes are visible from students' seats. Review the attributes (sides, corners) of each shape. Explain that flat shapes are sometimes called *two-dimensional* or *2-D*. Next, play a game of I Spy by having students look for shapes of specific colors. For example, begin the game by saying, "I spy a blue circle." Have the student who sees the shape first collect the shape and "spy" the next shape. Once all of the shapes have been collected, instruct the students who have circles to stand in one section of the room, the students with triangles in another, and so on. Ask each group to share observations about their shapes.



Creating the Notebook Page

Guide students through the following steps to complete the right-hand page in their notebooks.

1. Add a Table of Contents entry for the Attributes of Flat Shapes pages.
2. Cut out the title and glue it to the top of the page.
3. Cut out the flap book. Cut on the solid lines to create four flaps on each side. Apply glue to the back of the center section and attach it to the page.
4. Under each flap, write two attributes for each flat shape. Then, trace and color the shape on the front of each flap.

Reflect on Learning

To complete the left-hand page, have each student draw a town setting and label the picture *Shape Town*. Then, have them draw six houses in the picture using a different shape for each one. For example, a student may draw a house using only rectangles or a house using only circles. Students should label each house with the correct shape name. Allow time for students to share their work.

Attributes of Flat Shapes

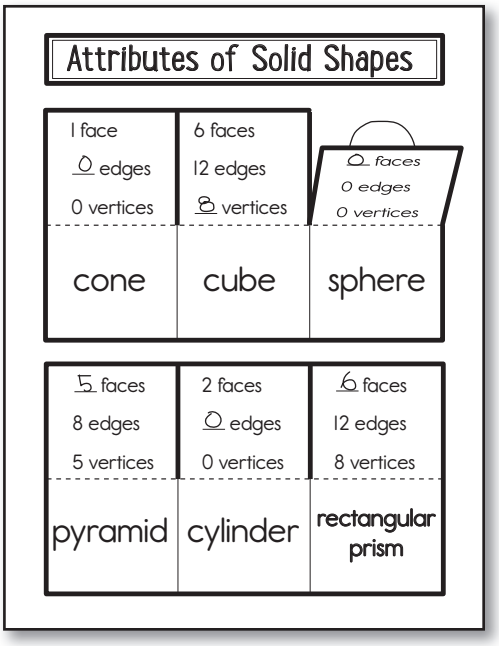
rectangle

Flat shapes are called two-dimensional shapes.

Attributes of Solid Shapes

Introduction

Review the attributes (edges, faces, vertices) of a cube, cone, cylinder, and sphere. Explain that solid shapes are sometimes called *three-dimensional* or *3-D*. Play a guessing game with self-stick notes. Draw a cone, a cylinder, a sphere, a pyramid, a rectangular prism, and a cube on six self-stick notes. Have a volunteer come to the front of the room. Apply one of the self-stick notes on his back. The other students should take turns providing clues about the figure so that the volunteer may guess which shape is on his back. Repeat the game with the remaining shapes.



Creating the Notebook Page

Guide students through the following steps to complete the right-hand page in their notebooks.

1. Add a Table of Contents entry for the Attributes of Solid Shapes pages.
2. Cut out the title and glue it to the top of the page.
3. Cut out the flap books. For each book, cut on the solid lines to create three flaps. Apply glue to the bottom section of each book and attach it to the page.
4. For each book, complete the top flaps by filling in the missing attribute for each shape (cone: 0 edges; cube: 8 vertices; sphere: 0 faces; pyramid: 5 faces; cylinder: 0 edges; rectangular prism: 6 faces).
5. Fold each flap down and draw a picture of the shape.

Reflect on Learning

To complete the left-hand page, read a riddle that describes each of the six shapes. For example, for a cube say, "I have four vertices. A present may be shaped like me. What shape am I?" Have students solve each riddle by drawing and labeling the shape.

Attributes of Solid Shapes

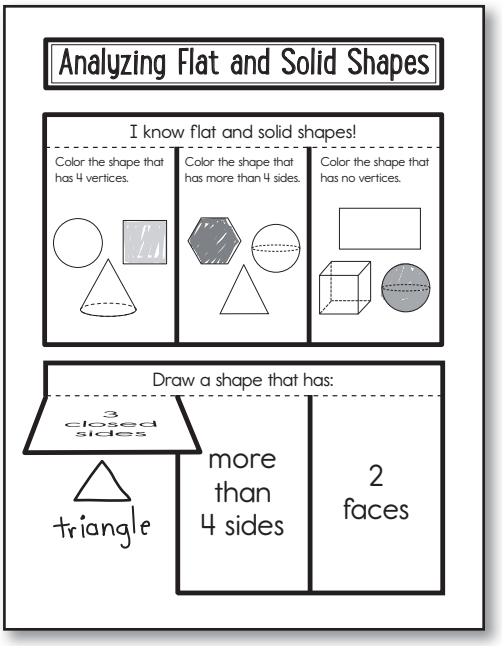
1 face ___ edges 0 vertices	6 faces 12 edges ___ vertices	___ faces 0 edges 0 vertices
cone	cube	sphere

___ faces 8 edges 5 vertices	2 faces ___ edges 0 vertices	___ faces 12 edges 8 vertices
pyramid	cylinder	rectangular prism

Analyzing Flat and Solid Shapes

Introduction

Introduce the difference between 2-D and 3-D figures by looking at a large rubber ball and a flying disk. Ask students to compare and contrast the two objects. Ask students to compare how the figures move. For example, a ball rolls freely, while a disk only rolls on its edge. Look at other 2-D and 3-D figures. Compare a rectangular sheet of paper with a shirt box, an ice-cream cone with a triangular sign, and a square self-stick note with a number cube. Place the objects in a large paper bag. Challenge students to carefully feel the objects inside the bag and identify each figure by touch. Ask them to explain how they determined which type of figure they selected.



Creating the Notebook Page

Guide students through the following steps to complete the right-hand page in their notebooks.

1. Add a Table of Contents entry for the Analyzing Flat and Solid Shapes pages.
2. Cut out the title and glue it to the top of the page.
3. Cut out the two flap books. For each book, cut on the solid lines to create three flaps.
4. Apply glue to the back of the top section of the *I know flat and solid shapes!* flap book and attach it below the title. Read and follow the directions on each flap. Draw another shape like the one described under the flap.
5. Apply glue to the back of the top section of the *Draw a shape* flap book and attach it to the page. Read the description on each flap and draw the shape described under the flap.

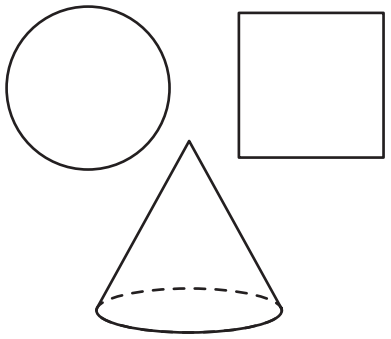
Reflect on Learning

To complete the left-hand page, have each student write a reflection to answer the following prompt: *How can you tell the difference between a flat shape and a solid shape?* Students should draw pictures or use words to explain their reasoning.

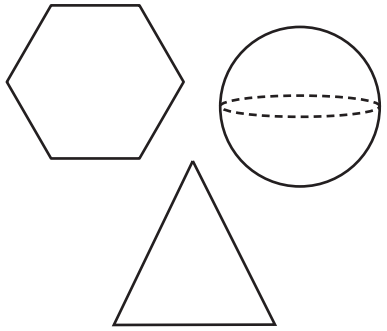
Analyzing Flat and Solid Shapes

I know flat and solid shapes!

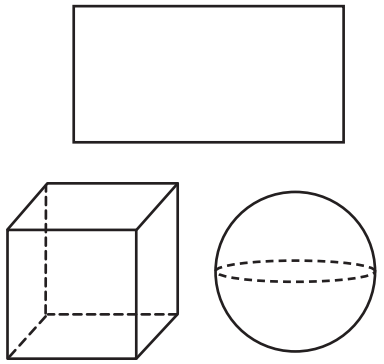
Color the shape that has 4 vertices.



Color the shape that has more than 4 sides.



Color the shape that has no vertices.



Draw a shape that has:

3 closed sides

more than 4 sides

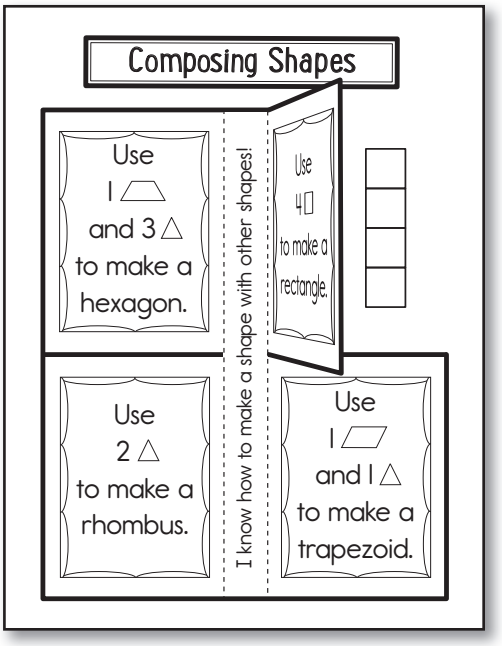
2 faces

Composing Shapes

Each student will need pattern blocks to complete the activities.

Introduction

Draw the following shapes on the board: a square, rectangle, triangle, parallelogram, trapezoid, rhombus, and hexagon. Identify and label each shape. Model how to use pattern blocks to build 2-D shapes. Place two shapes together, such as a square and a triangle, to form a pentagon. Explain how putting two different shapes together can build a new shape. Then, draw a trapezoid on the board. Model how to divide this shape into smaller geometric shapes such as a square and two triangles or a parallelogram and a triangle. Allow students to explore building and dividing other shapes.



Creating the Notebook Page

Guide students through the following steps to complete the right-hand page in their notebooks.

1. Add a Table of Contents entry for the Composing Shapes pages.
2. Cut out the title and glue it to the top of the page.
3. Cut out the flap book. Cut on the solid lines to create two flaps on each side. Apply glue to the center section and attach it to the page.
4. For each flap, read the directions on the flap. Use pattern blocks to make the shape described. Place the pattern blocks under the flap and trace the new shape.

Reflect on Learning

To complete the left-hand page, have students draw two different shapes. Then, have students explain with words or pictures how to divide each one into separate shapes.

Composing Shapes

Use
1 
and 3 △
to make a
hexagon.

Use
4 □
to make a
rectangle.

I know how to make a shape with other shapes!

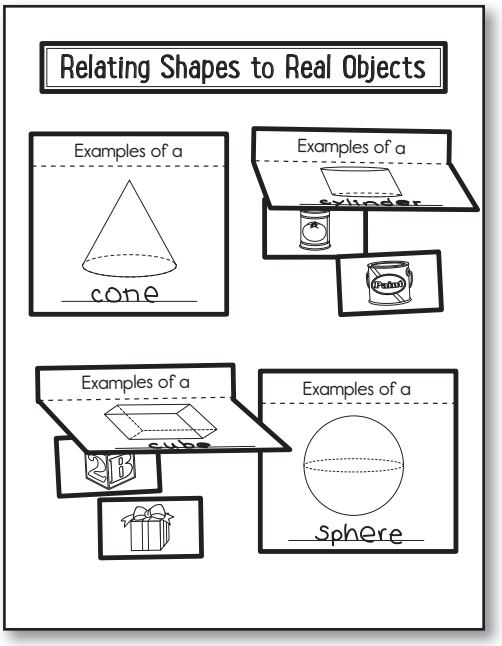
Use
2 △
to make a
rhombus.

Use
1 
and 1 △
to make a
trapezoid.

Relating Shapes to Real Objects

Introduction

Review the attributes (edges, faces, vertices) of a cube, cone, cylinder, and sphere. Discuss how real-world objects resemble 3-D shapes. For example, ask students what shape an orange resembles (a sphere) or what shape a party hat looks like (a cone). Then, divide the class into four teams and assign each team one of the four shapes. Send each team on a shape hunt to find objects in the classroom that are examples of their assigned shapes. The teams should gather as many items as they can in the allotted amount of time. Then, have each team display their objects. As a class, discuss the objects each team gathered to determine if they were classified correctly.



Creating the Notebook Page

Guide students through the following steps to complete the right-hand page in their notebooks.

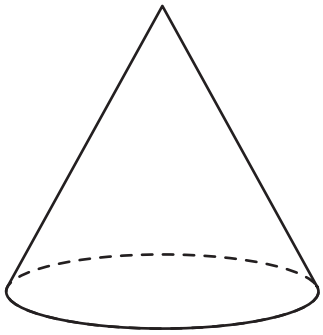
1. Add a Table of Contents entry for the Relating Shapes to Real Objects pages.
2. Cut out the title and glue it to the top of the page.
3. Cut out the flaps. Apply glue to the back of the top section of each flap and attach it to the page.
4. Write the name of each 3-D shape on the line.
5. Cut out the picture cards. Look at each real-world object and decide which shape it represents. Glue the pictures under the correct flaps.

Reflect on Learning

To complete the left-hand page, provide students with magazines and newspapers. Have students draw lines to divide their pages into four sections and label the sections *cone*, *cylinder*, *cube*, and *sphere*. Have students cut out real-world examples of each shape and glue the objects into the correct sections.

Relating Shapes to Real Objects

Examples of a



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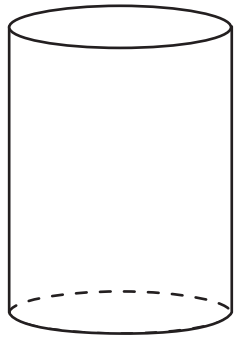
Examples of a



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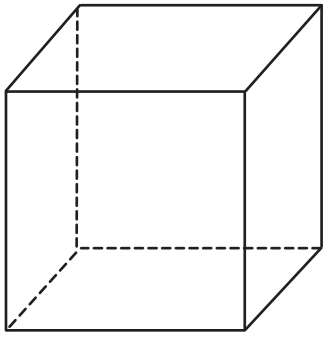
Examples of a



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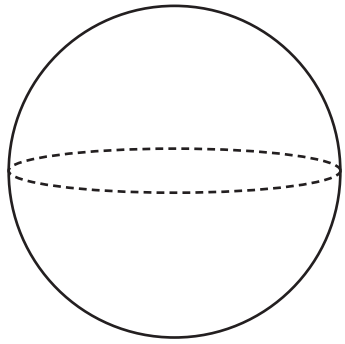
Examples of a



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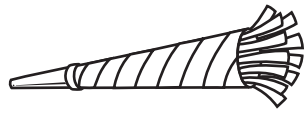
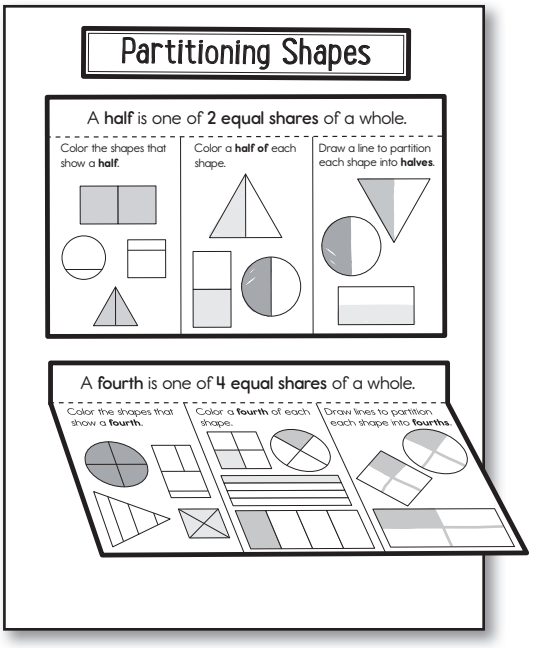


Partitioning Shapes

Introduction

Ask students if they have ever shared a special food with friends. Ask how many people they had to share it with, how they divided it, and if the shares were equal. Then, write the words *half*, *halves*, *half of*, *fourths*, and *a fourth of* on the board. Draw a rectangle and divide it in half. Explain that the two sides are each half of the rectangle. Have a volunteer shade a half of the whole rectangle. Draw another rectangle and divide it into fourths. Explain that each section of the rectangle is now one-fourth of the whole rectangle. Have a volunteer shade a fourth of the rectangle.



Creating the Notebook Page

Guide students through the following steps to complete the right-hand page in their notebooks.

1. Add a Table of Contents entry for the Partitioning Shapes pages.
2. Cut out the title and glue it to the top of the page.
3. Cut out the flaps. For each flap, apply glue to the back of the top section and attach it to the page.
4. For the *half* flap book, read and follow the directions on each section of the flap. Under the flap, draw and explain with words how to divide a pizza in half.
5. For the *fourth* flap book, read and follow the directions on each section of the flap. Under the flap, draw and explain with words how to divide a pizza into fourths.

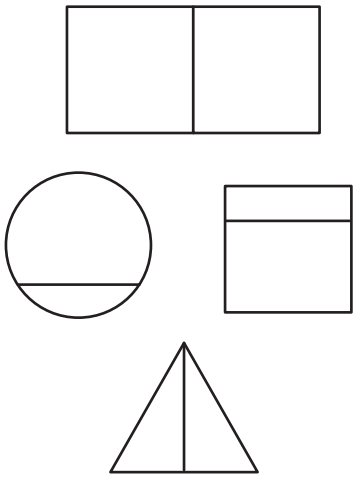
Reflect on Learning

To complete the left-hand page, have each student write a reflection to answer the following prompt: *Would you get a bigger piece of a candy bar if you share your candy with one friend or if you share it with three friends?* Students should draw pictures or use words to explain their reasoning.

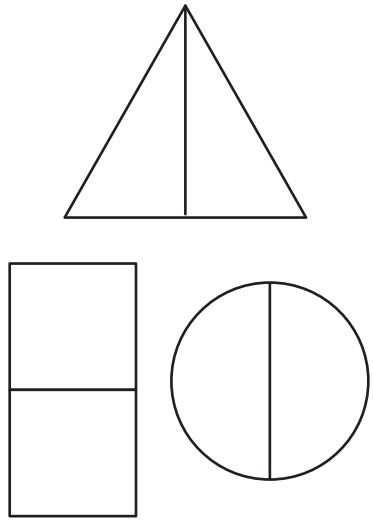
Partitioning Shapes

A **half** is one of **2 equal shares** of a whole.

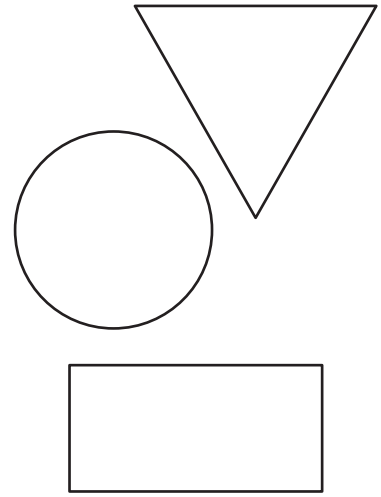
Color the shapes that show a **half**.



Color a **half of** each shape.

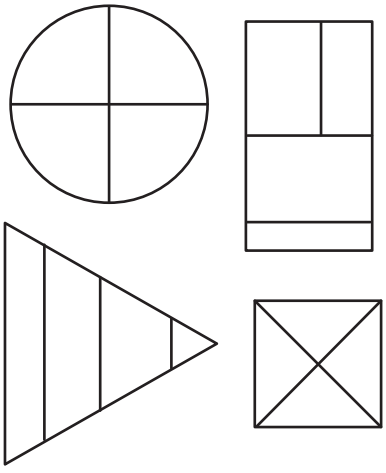


Draw a line to partition each shape into **halves**.

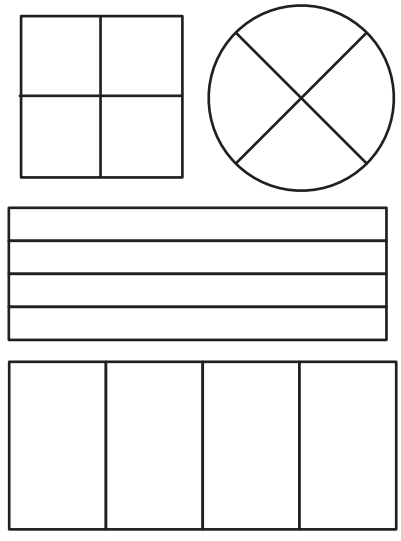


A **fourth** is one of **4 equal shares** of a whole.

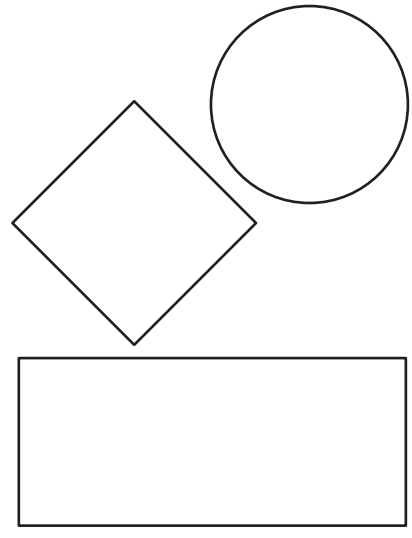
Color the shapes that show a **fourth**.



Color a **fourth** of each shape.

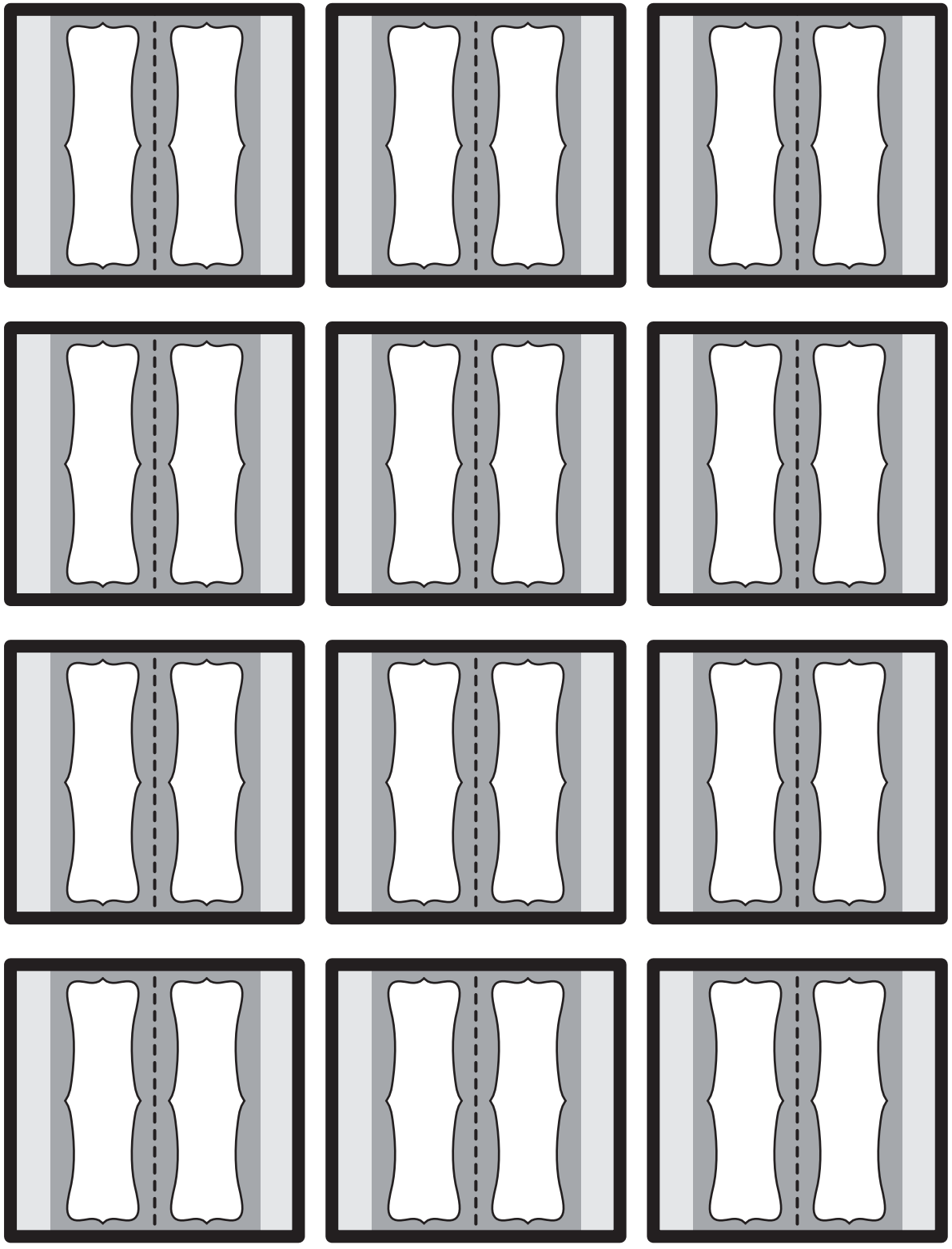


Draw lines to partition each shape into **fourths**.



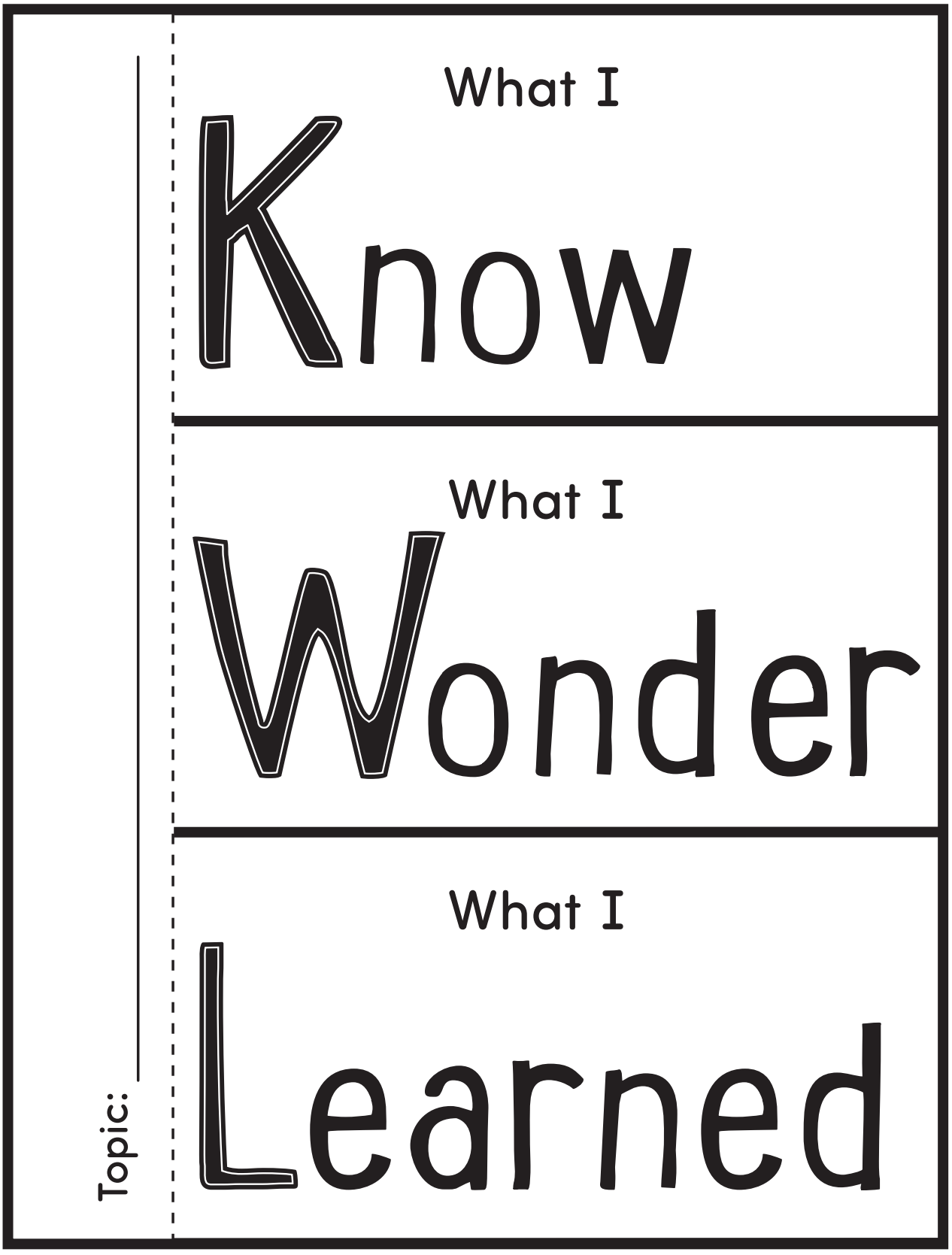
Tabs

Cut out each tab and label it. Apply glue to the back of each tab and align it on the outside edge of the page with only the label section showing beyond the edge. Then, fold each tab to seal the page inside.



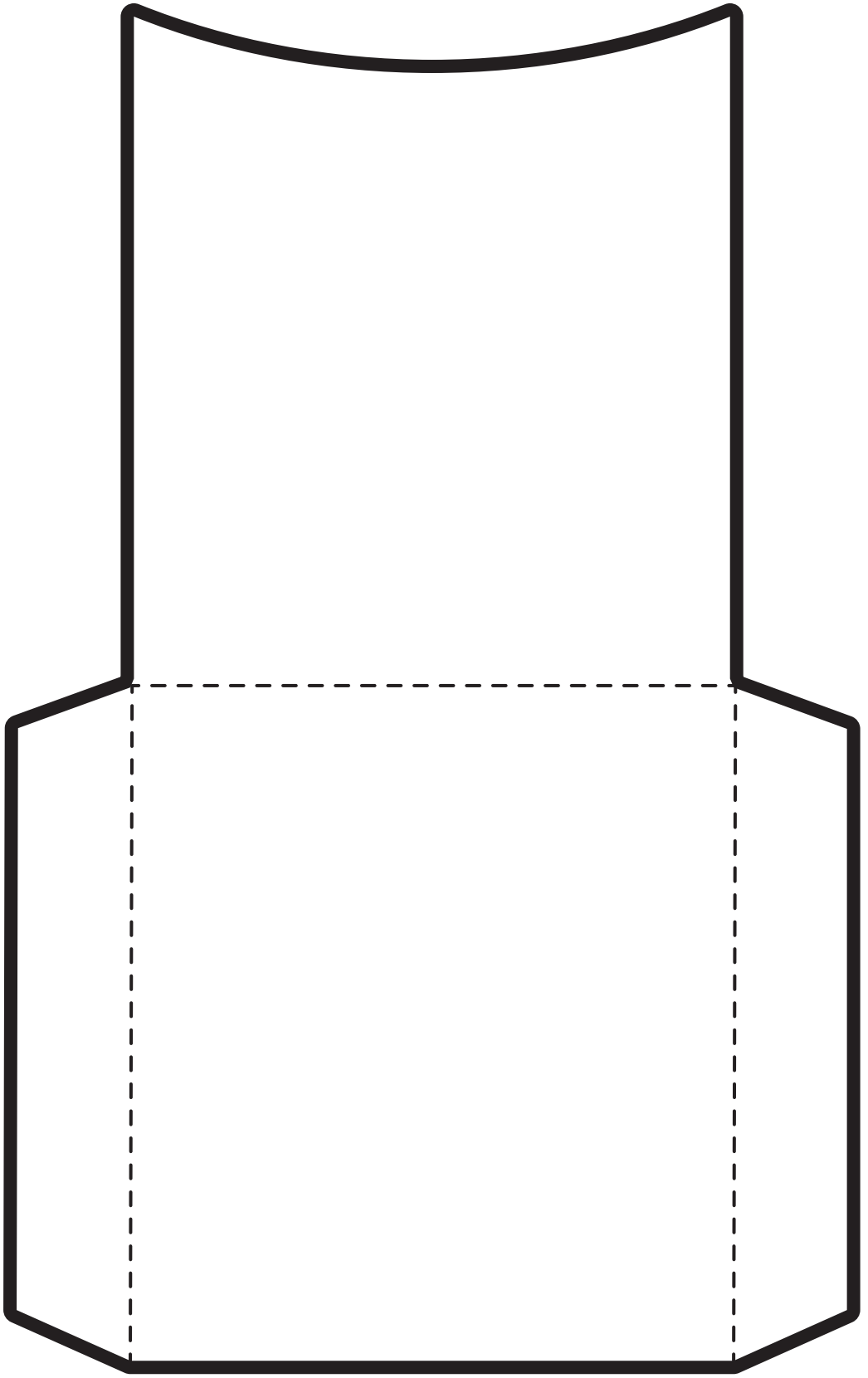
KWL Chart

Cut out the KWL chart and cut on the solid lines to create three separate flaps. Apply glue to the back of the Topic section to attach the chart to a notebook page.



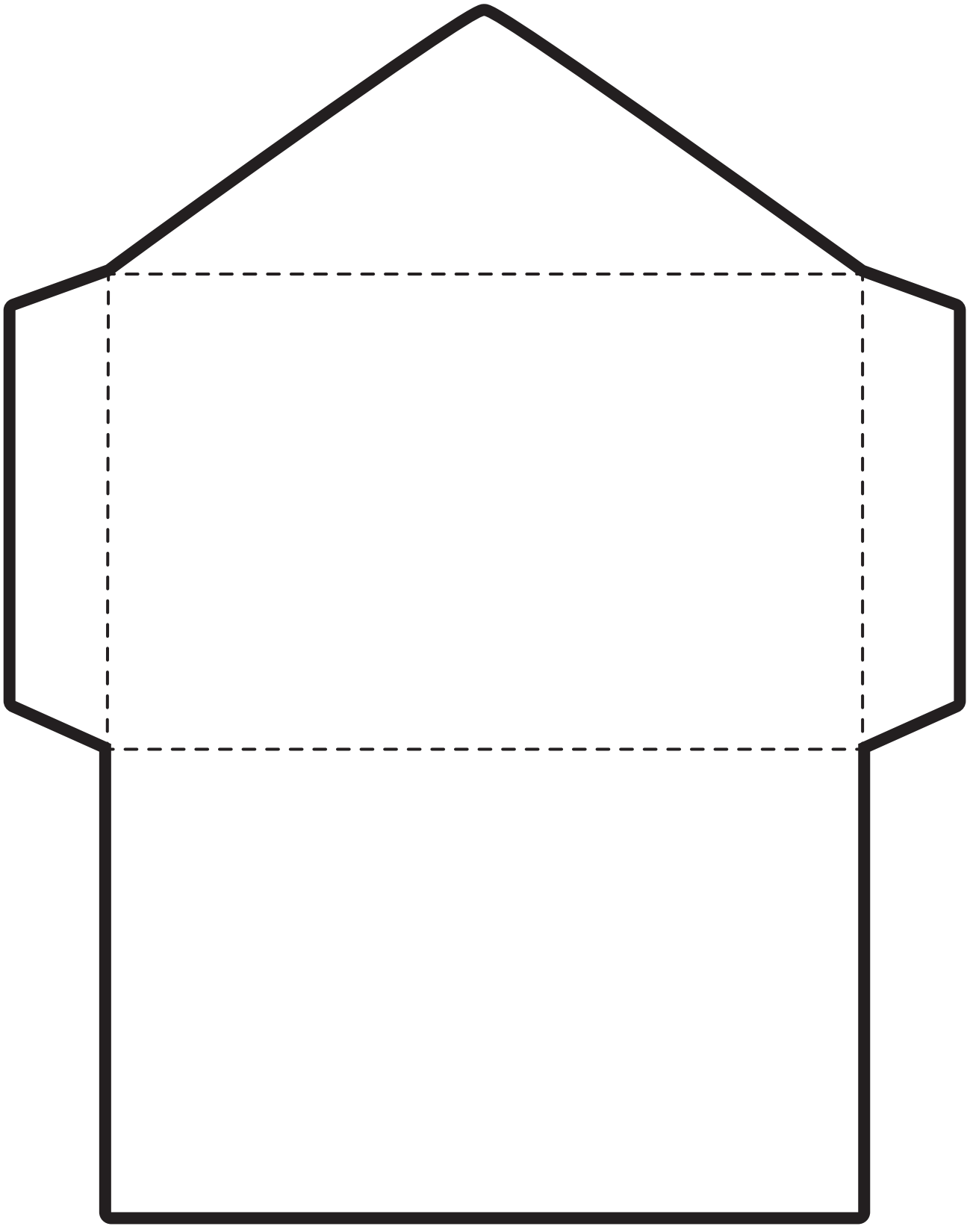
Library Pocket

Cut out the library pocket on the solid lines. Fold in the side tabs and apply glue to them before folding up the front of the pocket. Apply glue to the back of the pocket to attach it to a notebook page.



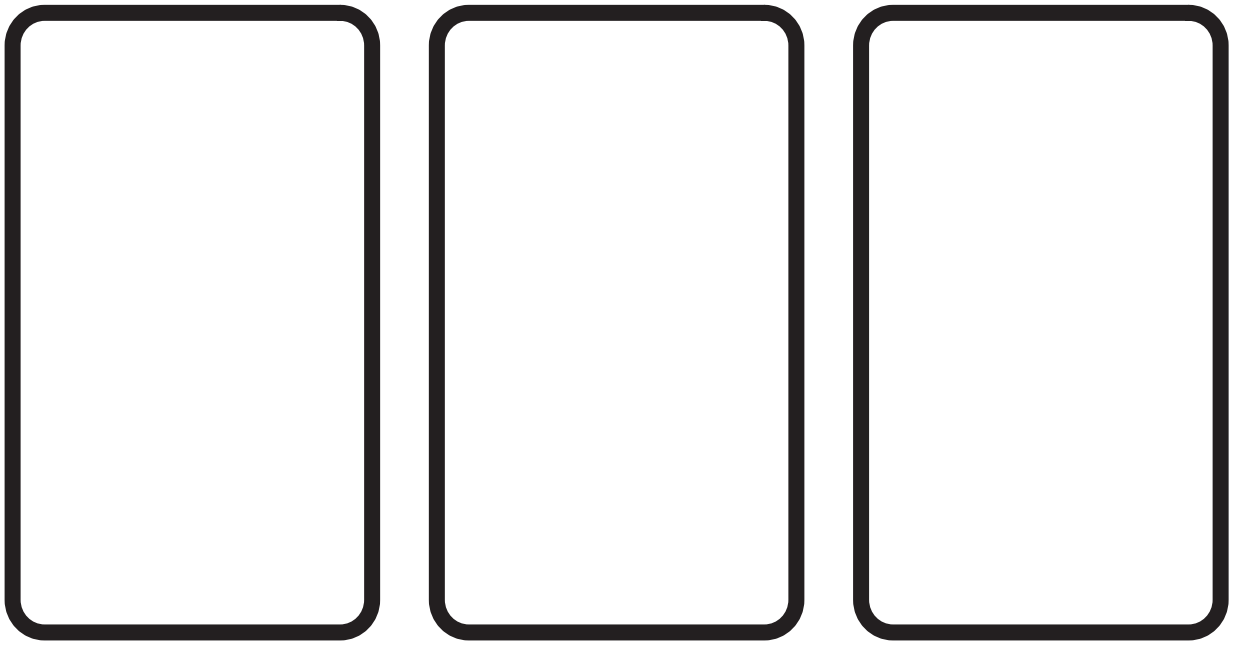
Envelope

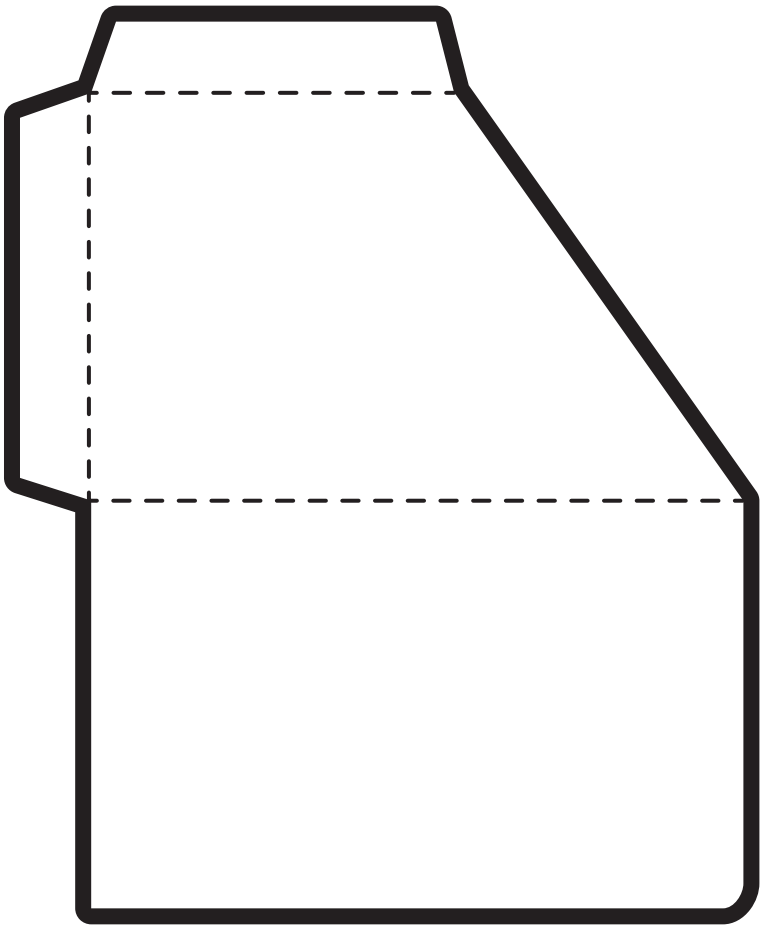
Cut out the envelope on the solid lines. Fold in the side tabs and apply glue to them before folding up the rectangular front of the envelope. Fold down the triangular flap to close the envelope. Apply glue to the back of the envelope to attach it to a notebook page.

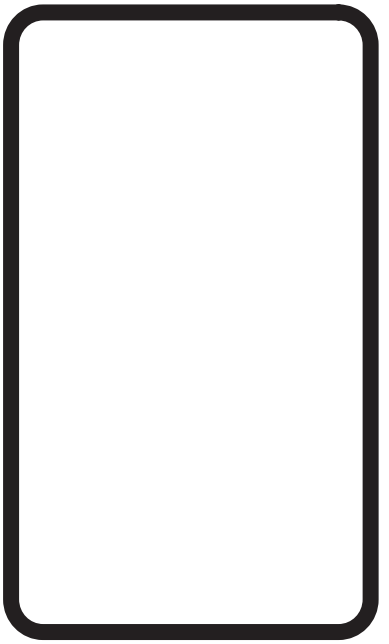


Pocket and Cards

Cut out the pocket on the solid lines. Fold over the front of the pocket. Then, apply glue to the tabs and fold them around the back of the pocket. Apply glue to the back of the pocket to attach it to a notebook page. Cut out the cards and store them in the envelope.



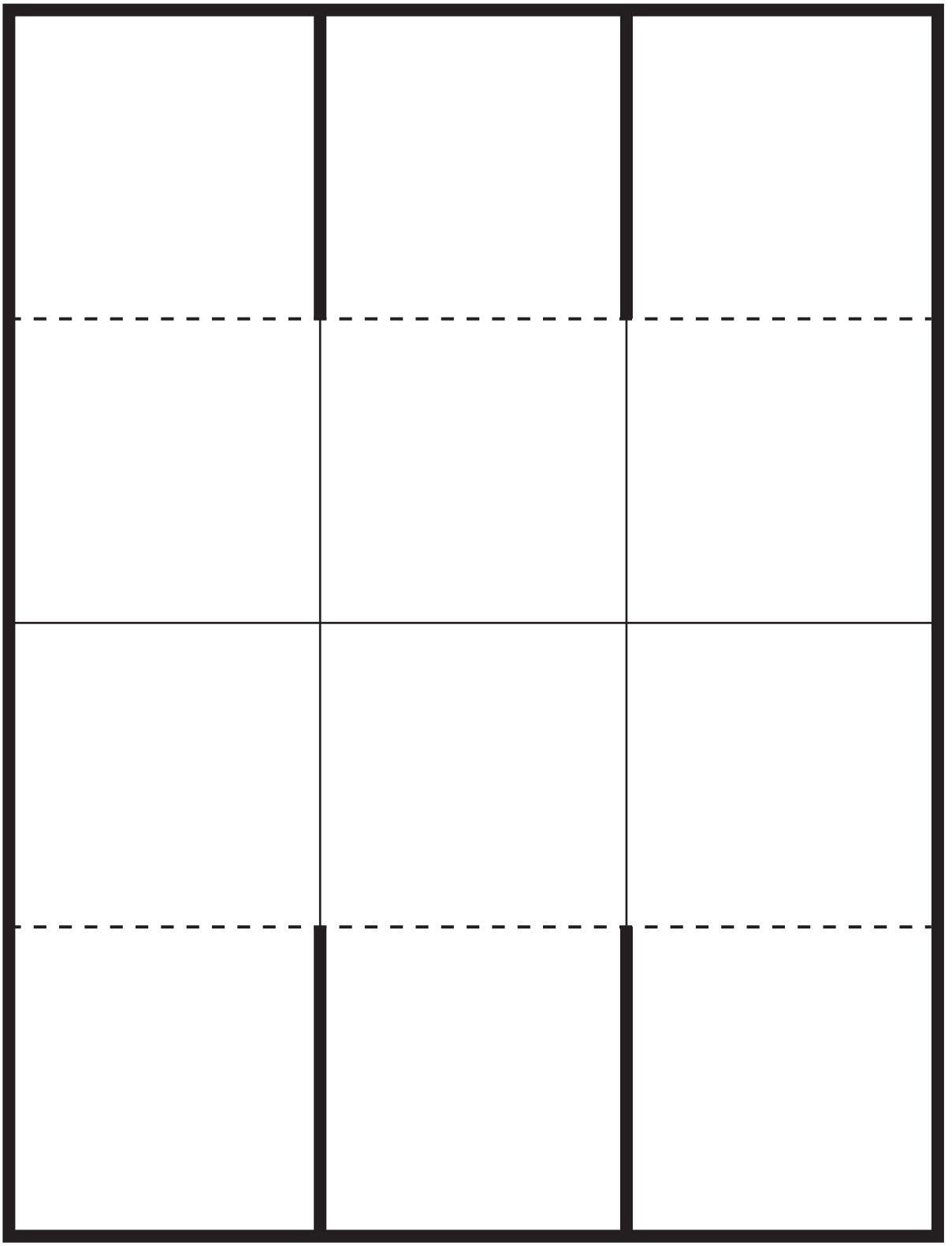




Six-Flap Shutter Fold

Cut out the shutter fold around the outside border. Then, cut on the solid lines to create six flaps. Fold the flaps toward the center. Apply glue to the back of the shutter fold to attach it to a notebook page.

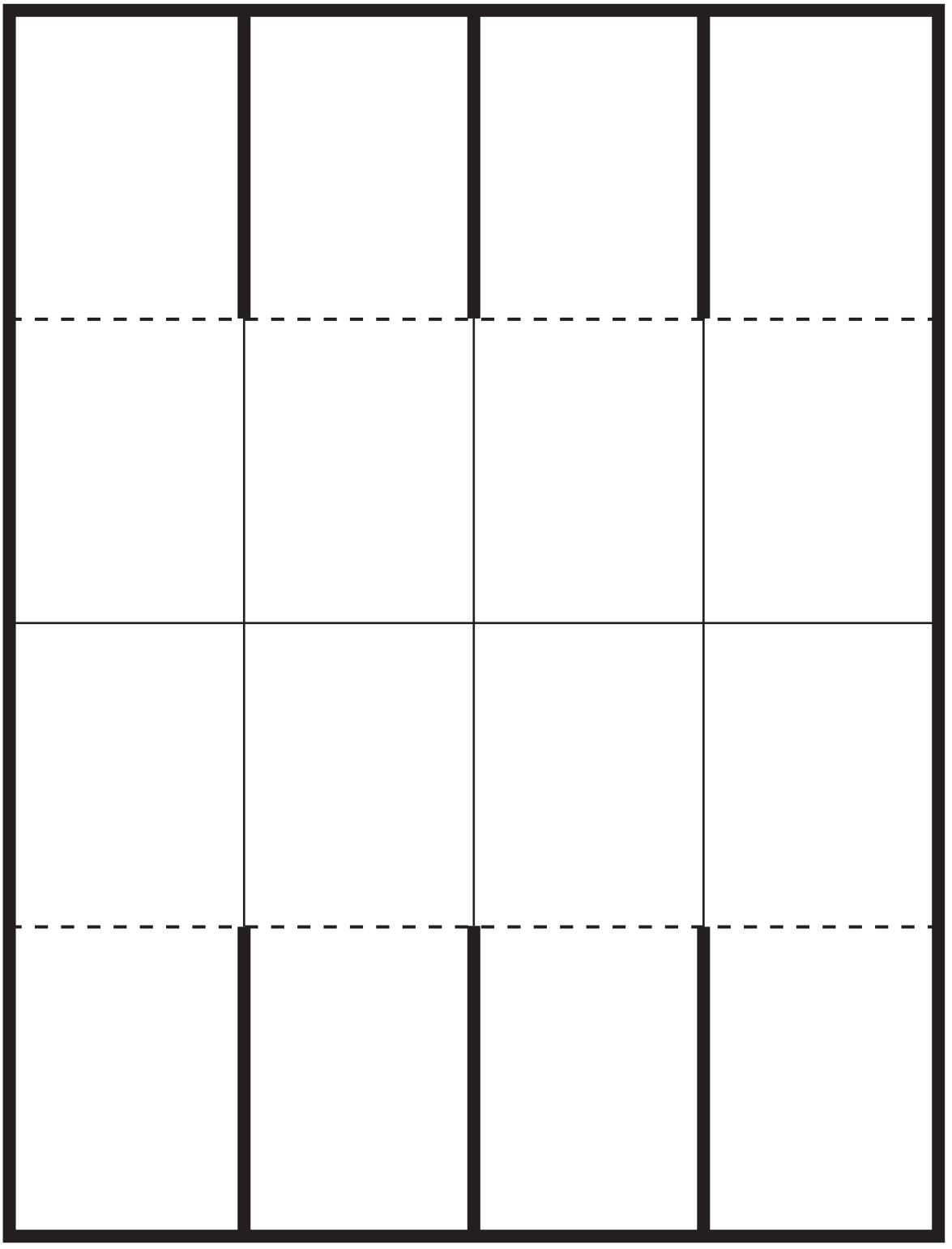
If desired, this template can be modified to create a four-flap shutter fold by cutting off the bottom row. You can also create two three-flap books by cutting it in half down the center line.



Eight-Flap Shutter Fold

Cut out the shutter fold around the outside border. Then, cut on the solid lines to create eight flaps. Fold the flaps toward the center. Apply glue to the back of the shutter fold to attach it to a notebook page.

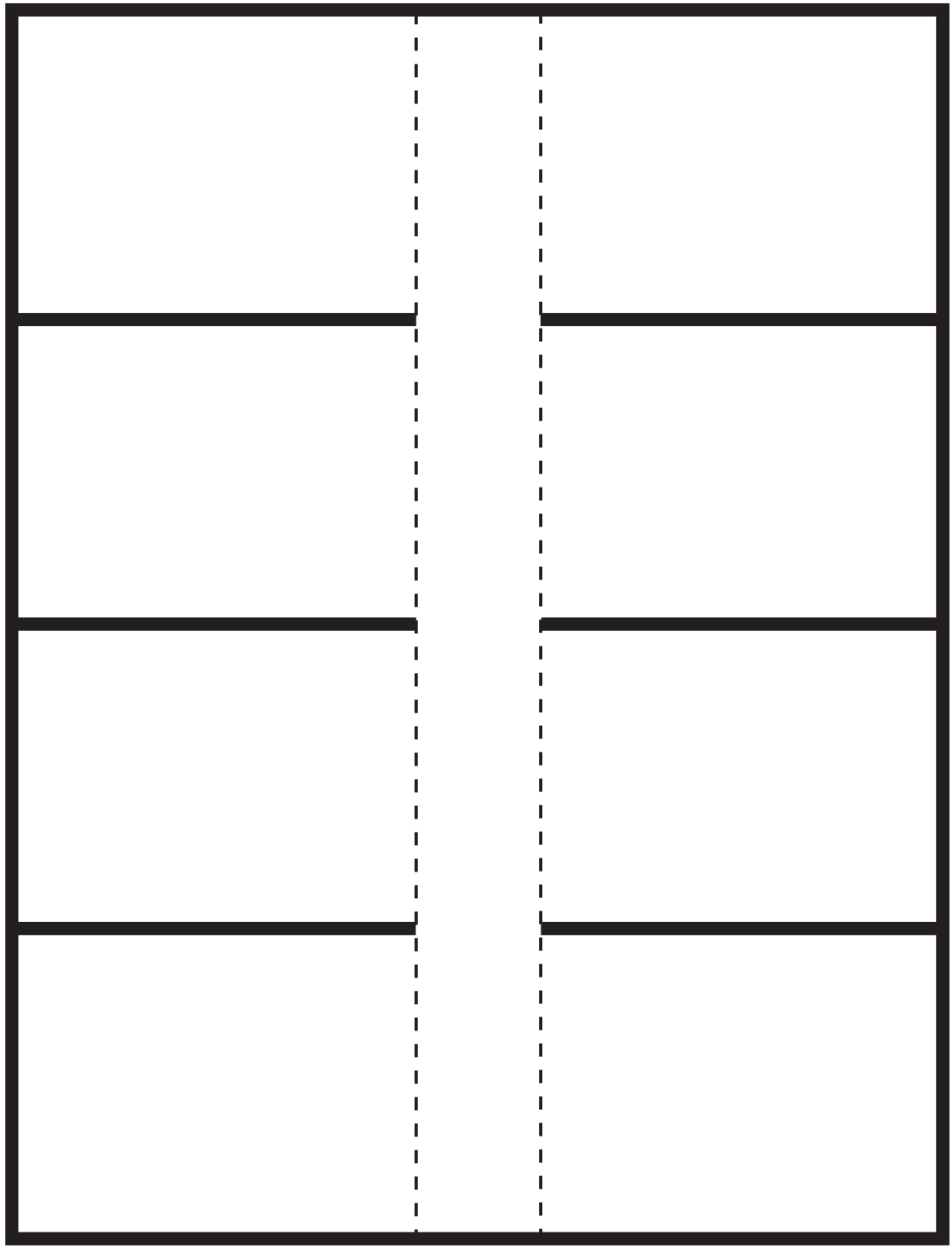
If desired, this template can be modified to create two four-flap shutter folds by cutting off the bottom two rows. You can also create two four-flap books by cutting it in half down the center line.



Flap Book—Eight Flaps

Cut out the flap book around the outside border. Then, cut on the solid lines to create eight flaps. Apply glue to the back of the center section to attach it to a notebook page.

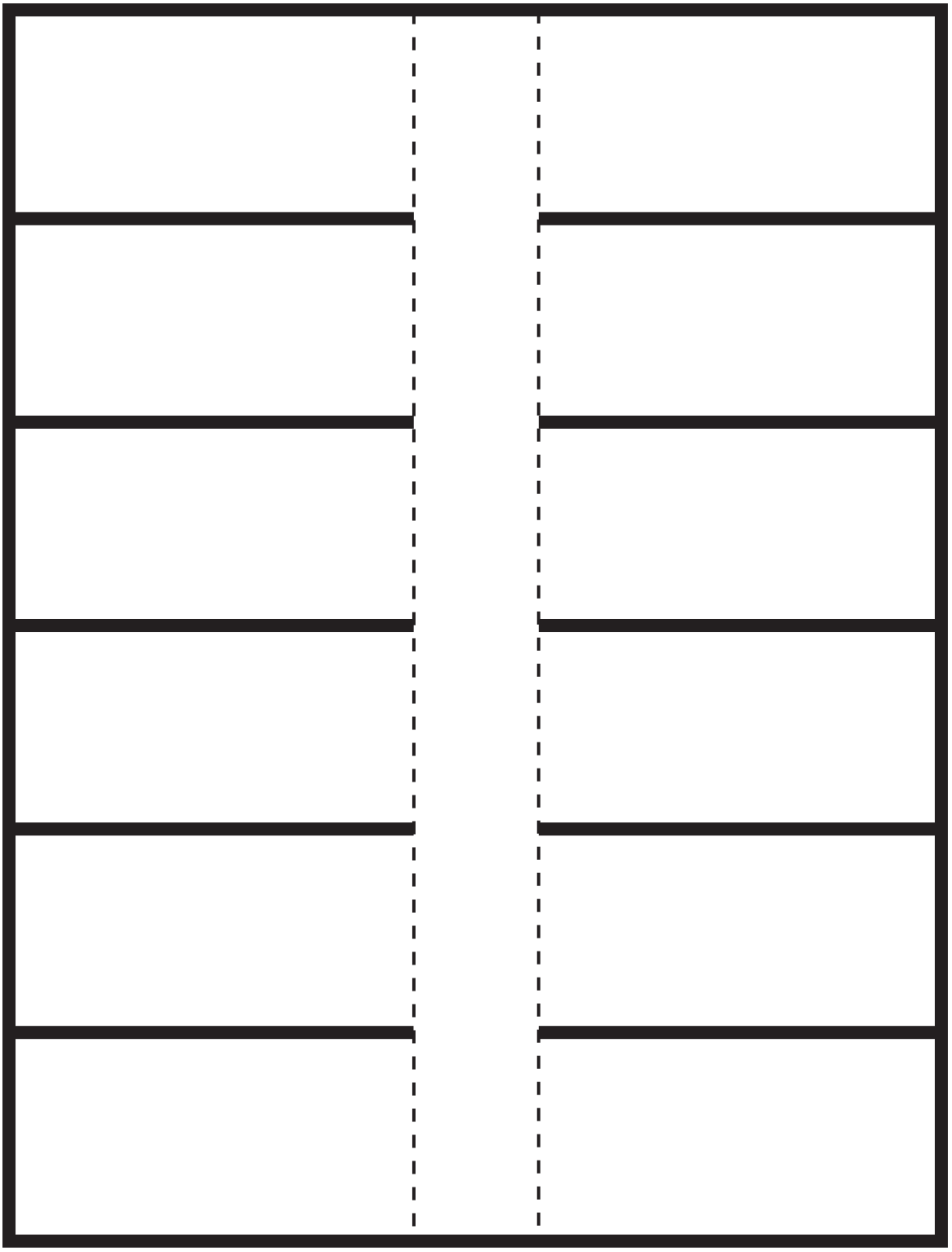
If desired, this template can be modified to create a six-flap or two four-flap books by cutting off the bottom row or two. You can also create a tall four-flap book by cutting off the flaps on the left side.



Flap Book—Twelve Flaps

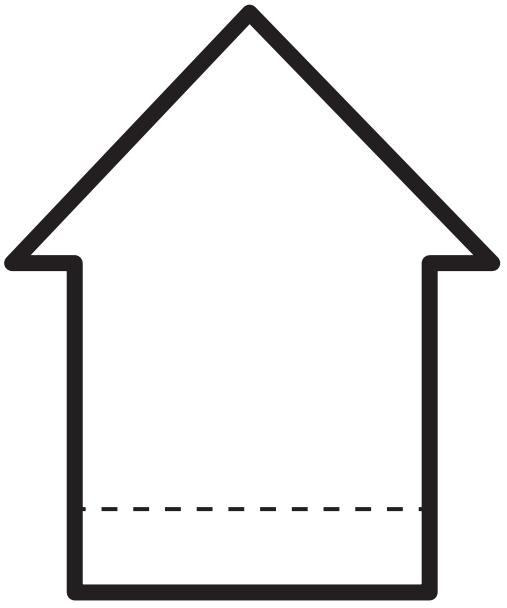
Cut out the flap book around the outside border. Then, cut on the solid lines to create 12 flaps. Apply glue to the back of the center section to attach it to a notebook page.

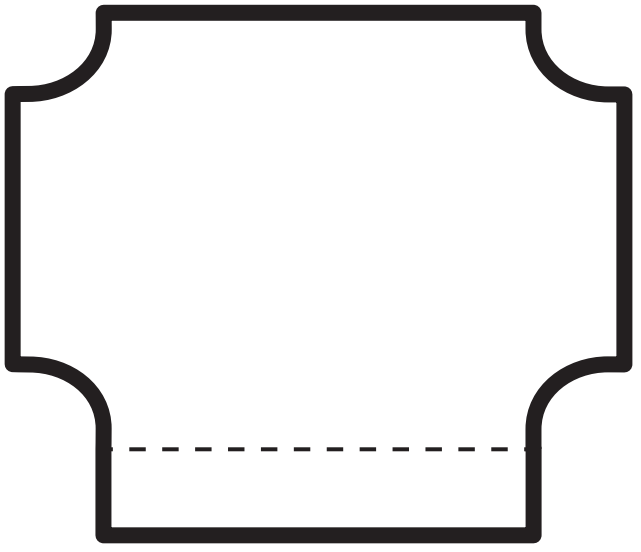
If desired, this template can be modified to create smaller flap books by cutting off any number of rows from the bottom. You can also create a tall flap book by cutting off the flaps on the left side.

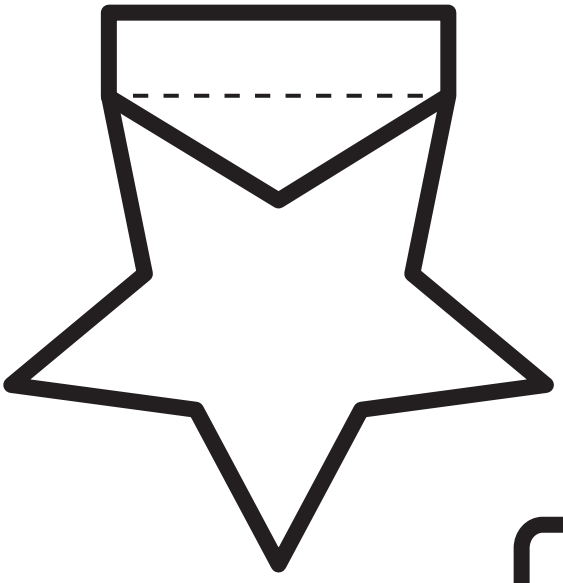


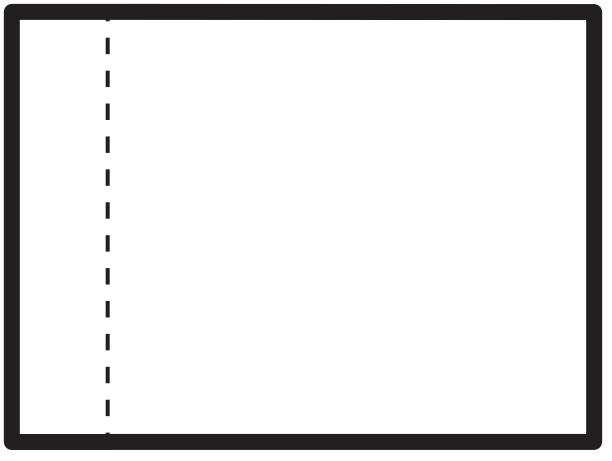
Shaped Flaps

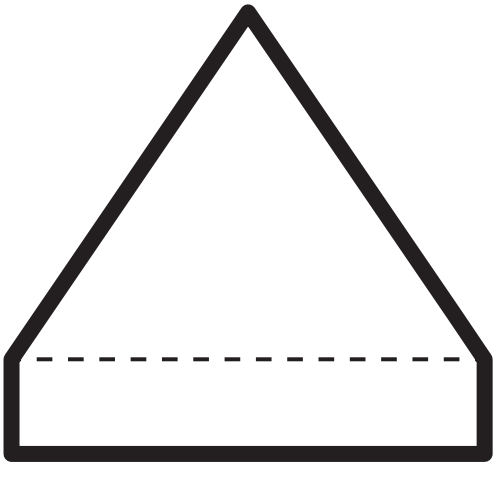
Cut out each shaped flap. Apply glue to the back of the narrow section to attach it to a notebook page.

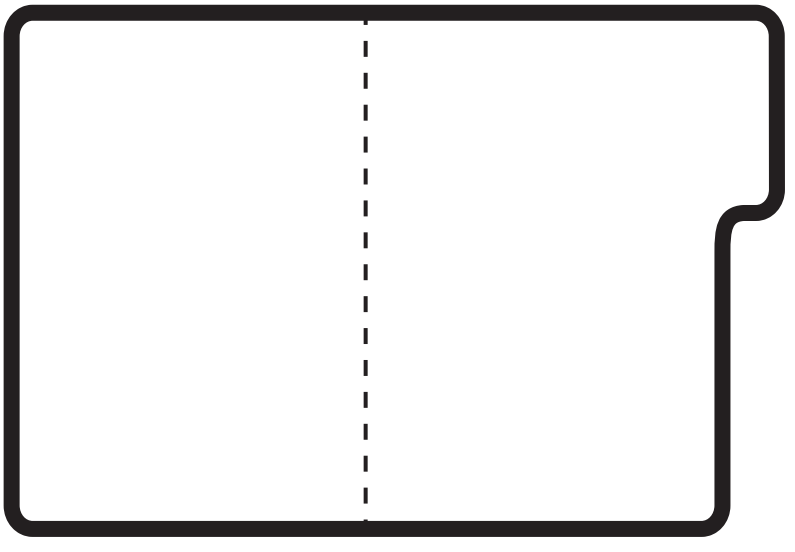




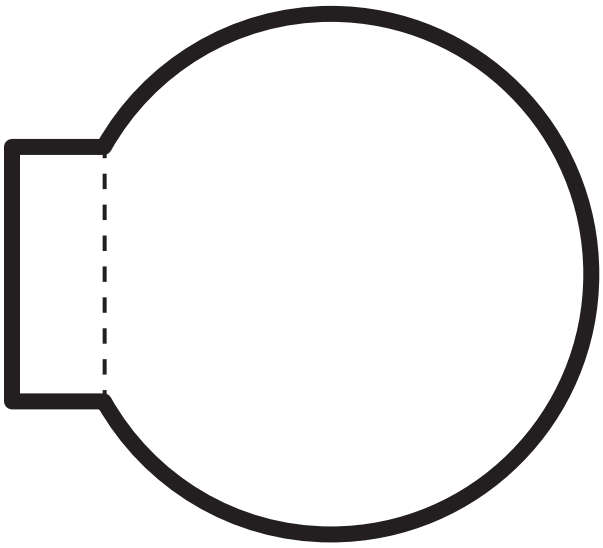


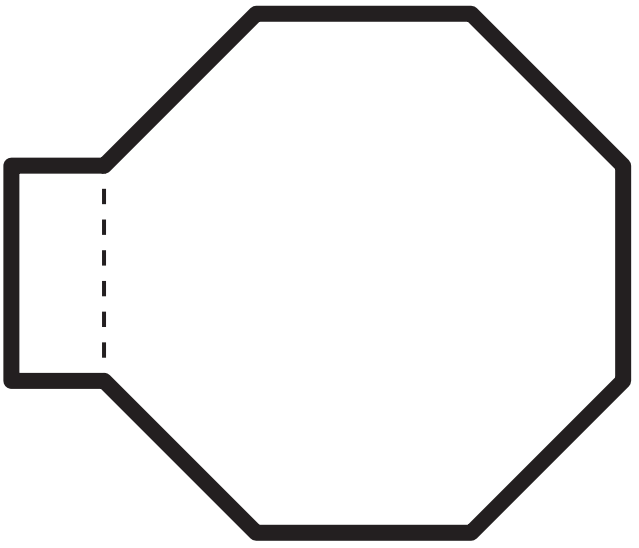


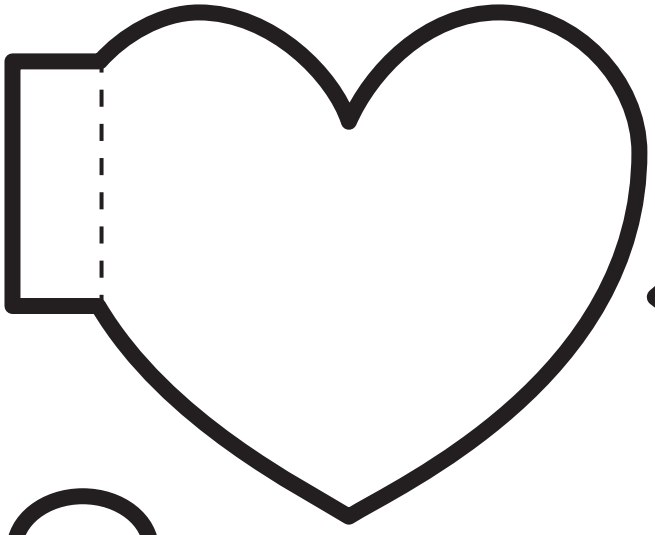


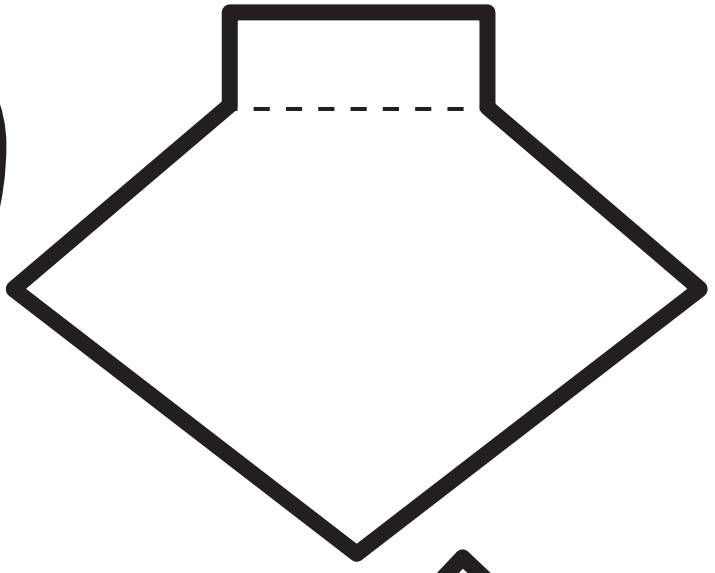


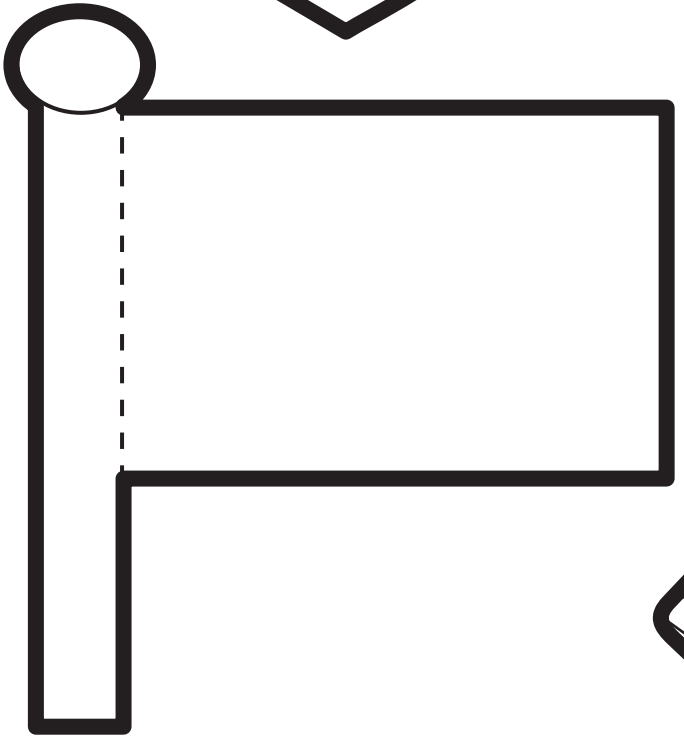
Shaped Flaps

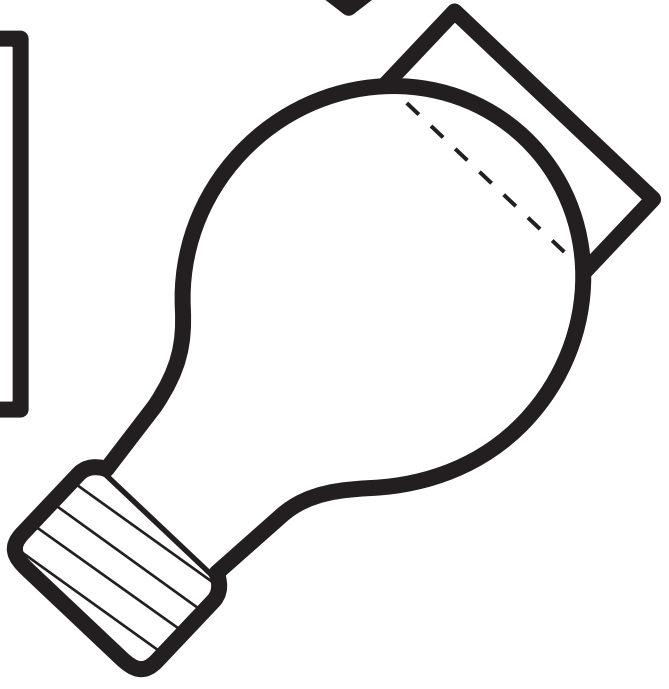






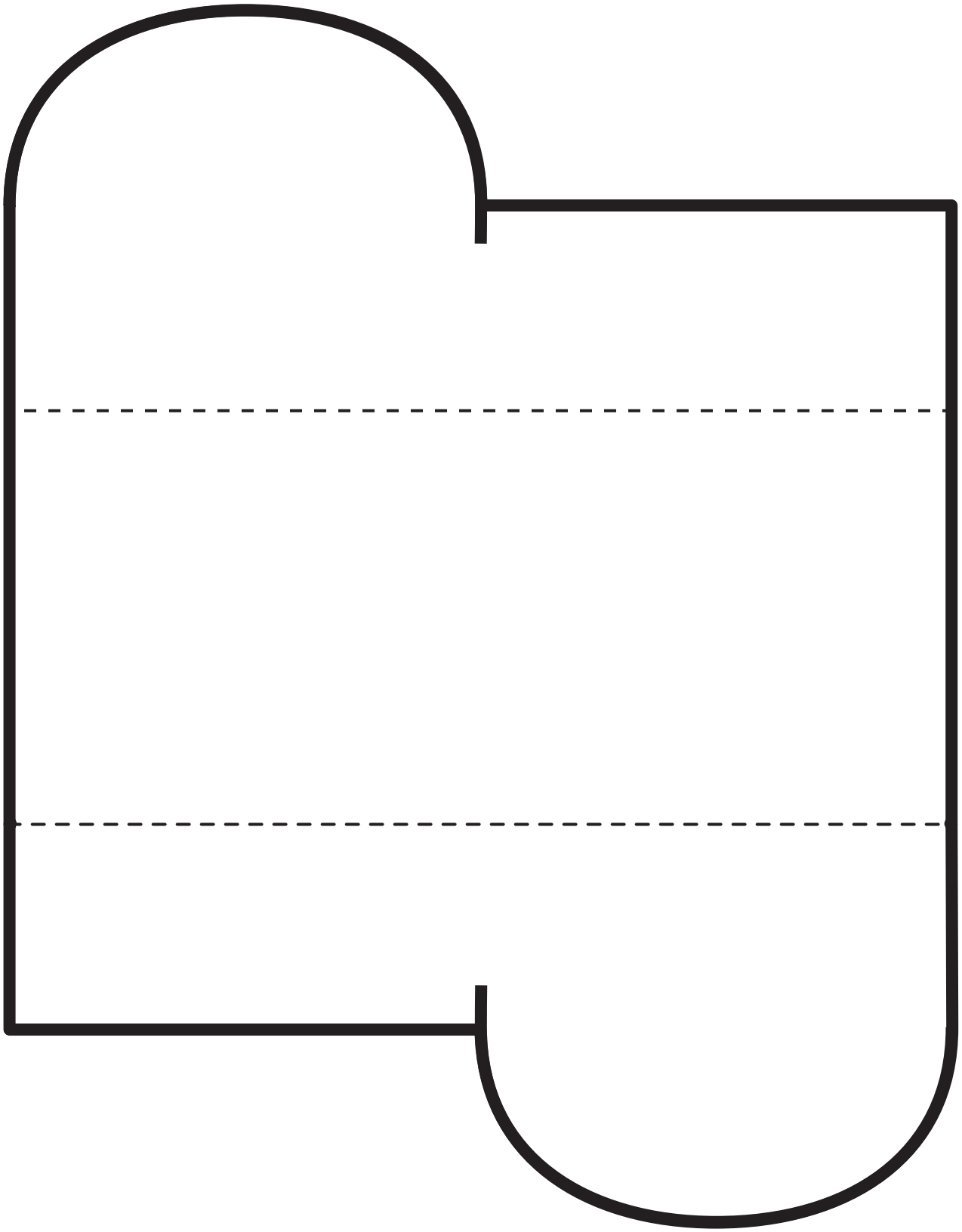






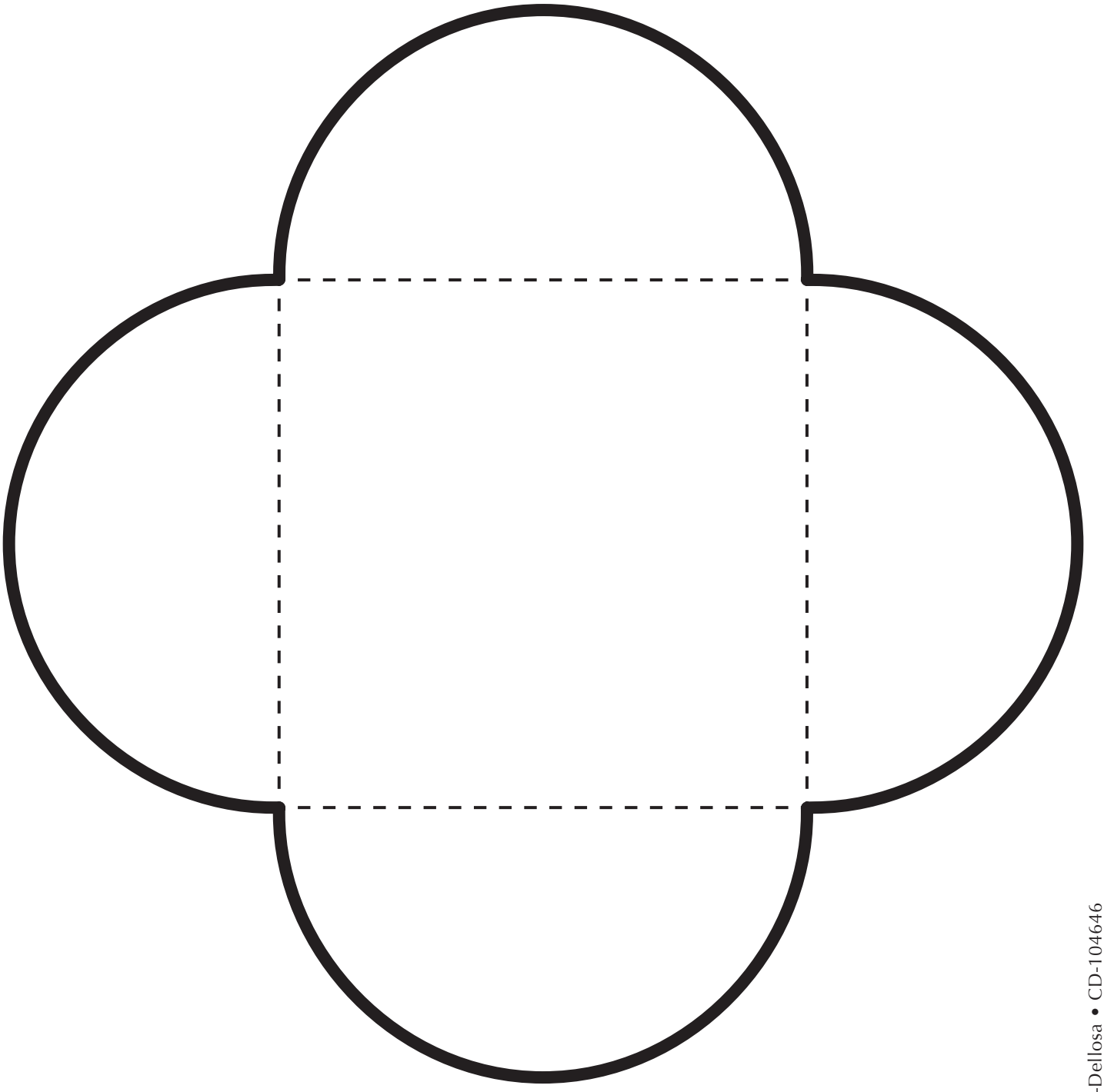
Interlocking Booklet

Cut out the booklet on the solid lines, including the short vertical lines on the top and bottom flaps. Then, fold the top and bottom flaps toward the center, interlocking them using the small vertical cuts. Apply glue to the back of the center panel to attach it to a notebook page.



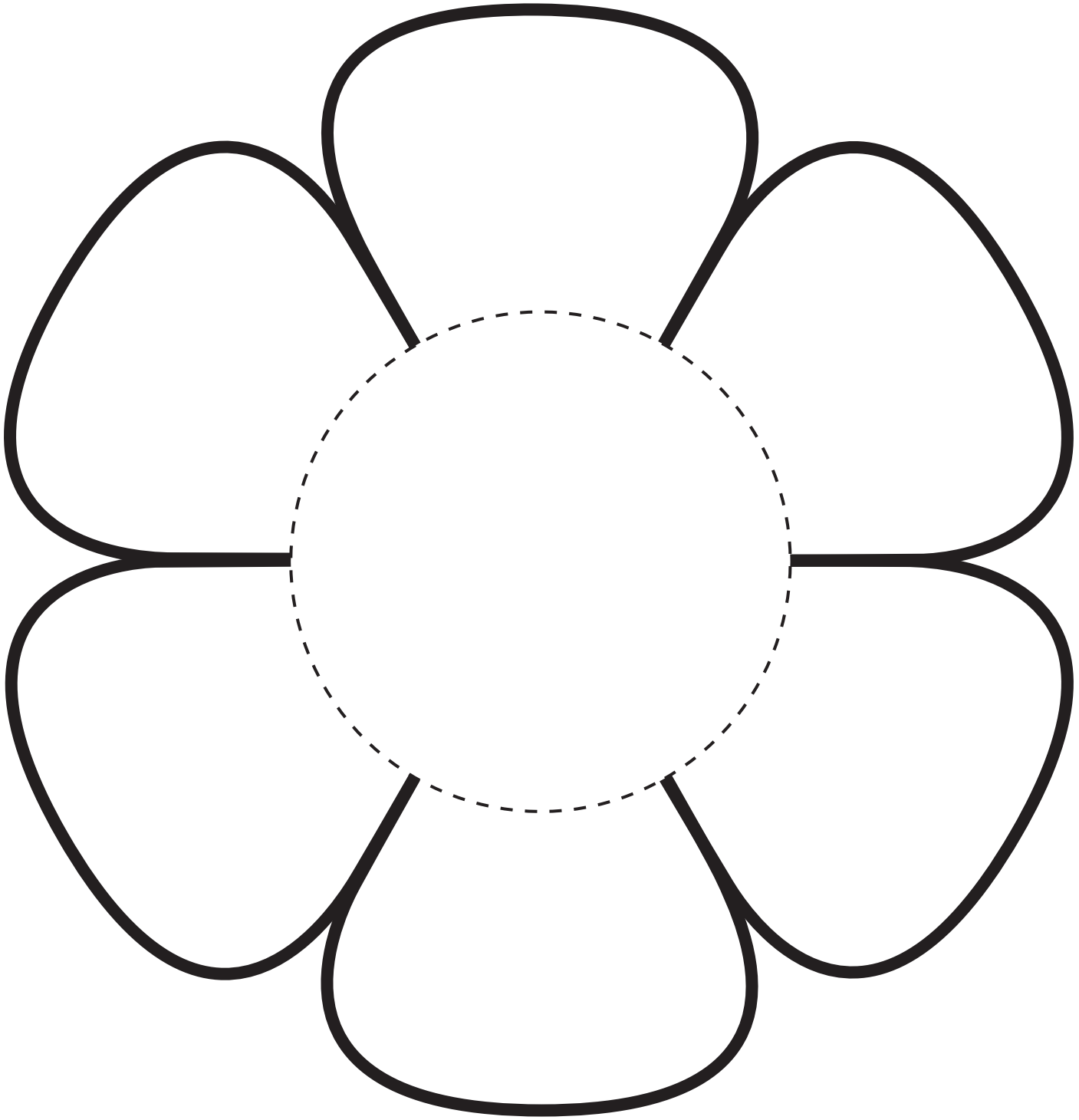
Four-Flap Petal Fold

Cut out the shape on the solid lines. Then, fold the flaps toward the center. Apply glue to the back of the center panel to attach it to a notebook page.



Six-Flap Petal Fold

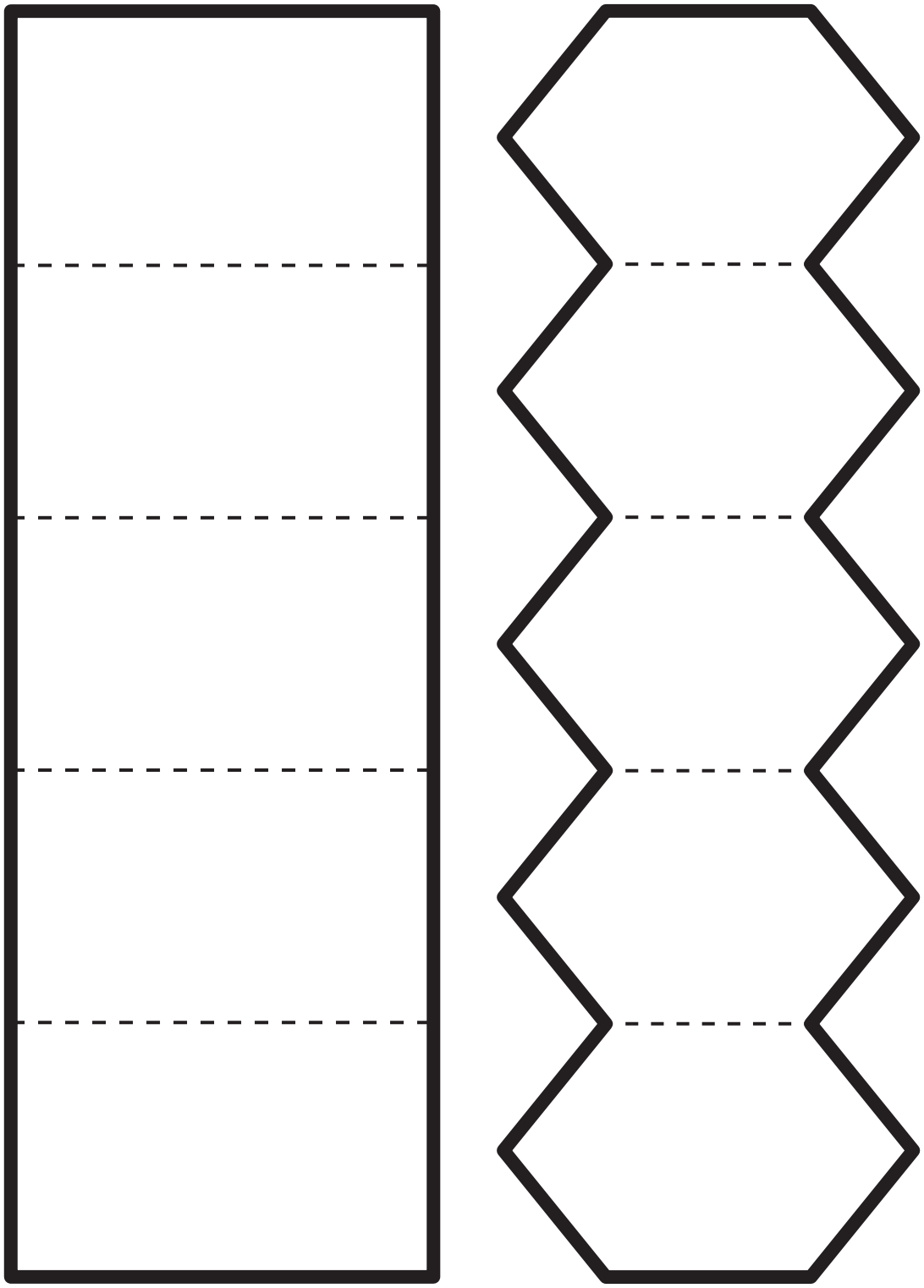
Cut out the shape on the solid lines. Then, fold the flaps toward the center and back out. Apply glue to the back of the center panel to attach it to a notebook page.



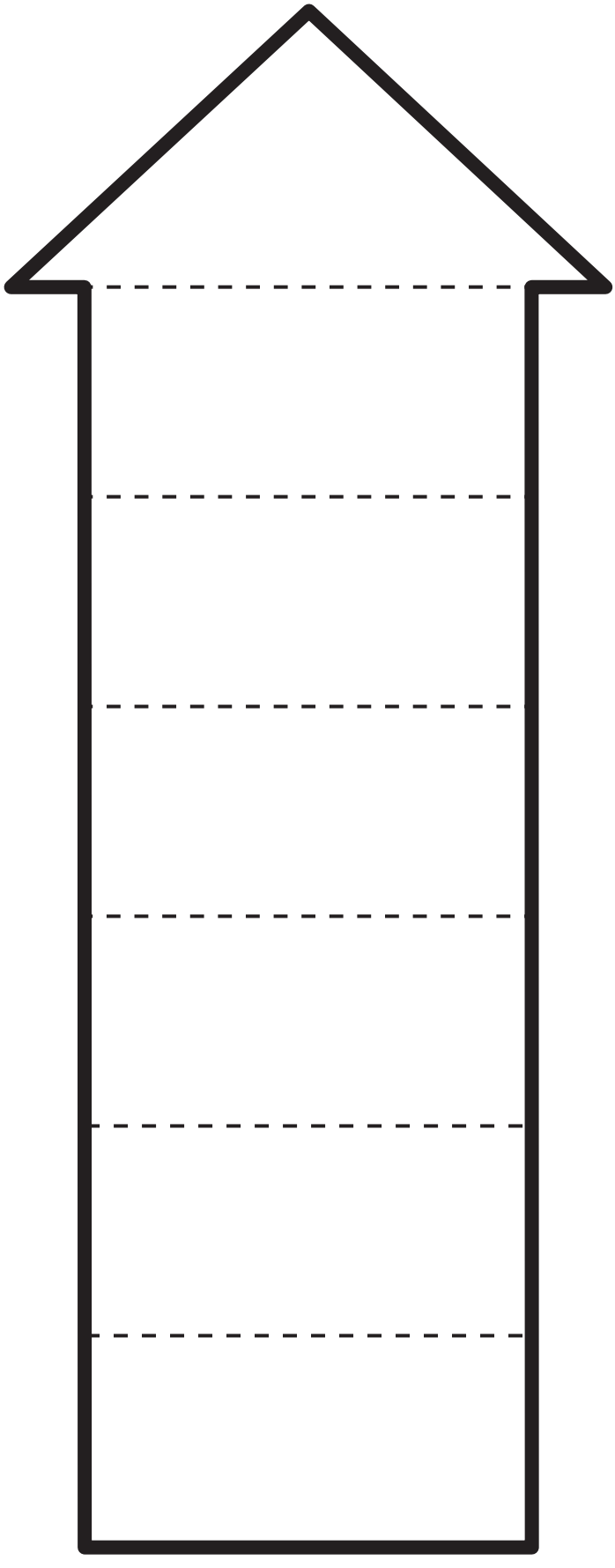
Accordion Folds

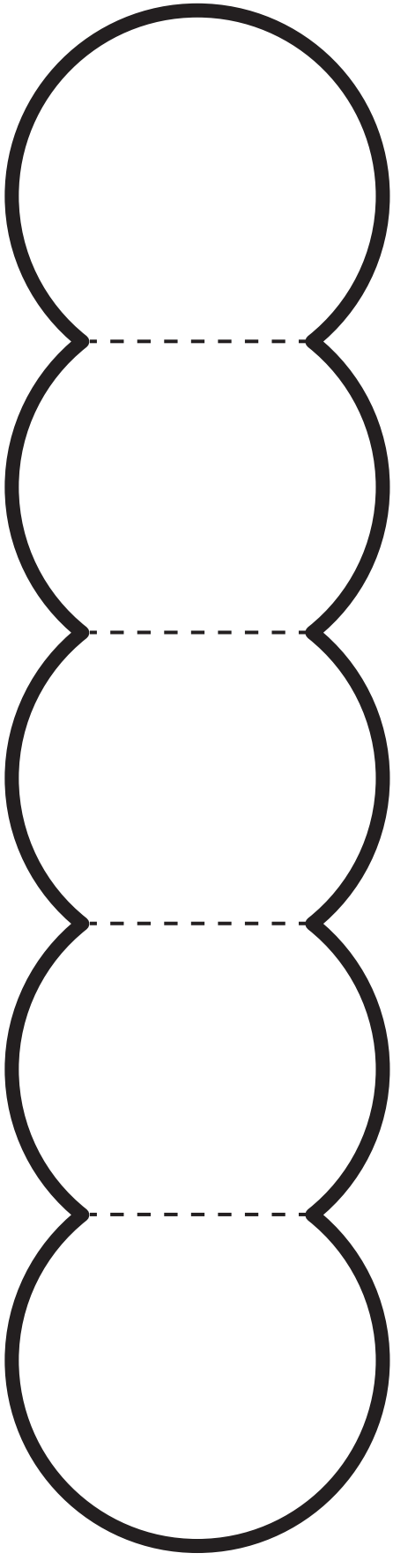
Cut out the accordion pieces on the solid lines. Fold on the dashed lines, alternating the fold direction. Apply glue to the back of the last section to attach it to a notebook page.

You may modify the accordion books to have more or fewer pages by cutting off extra pages or by having students glue the first and last panels of two accordion books together.



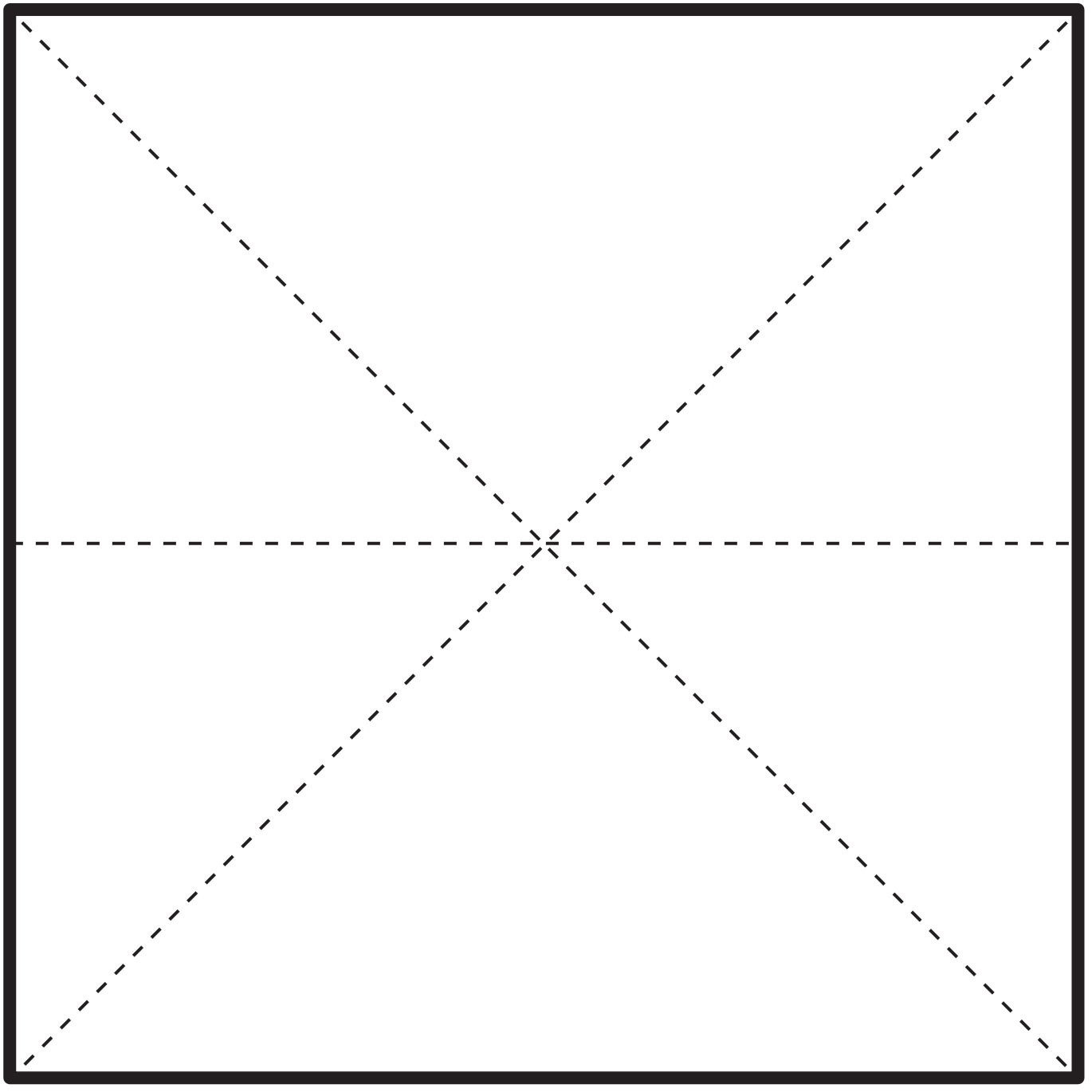
Accordion Folds





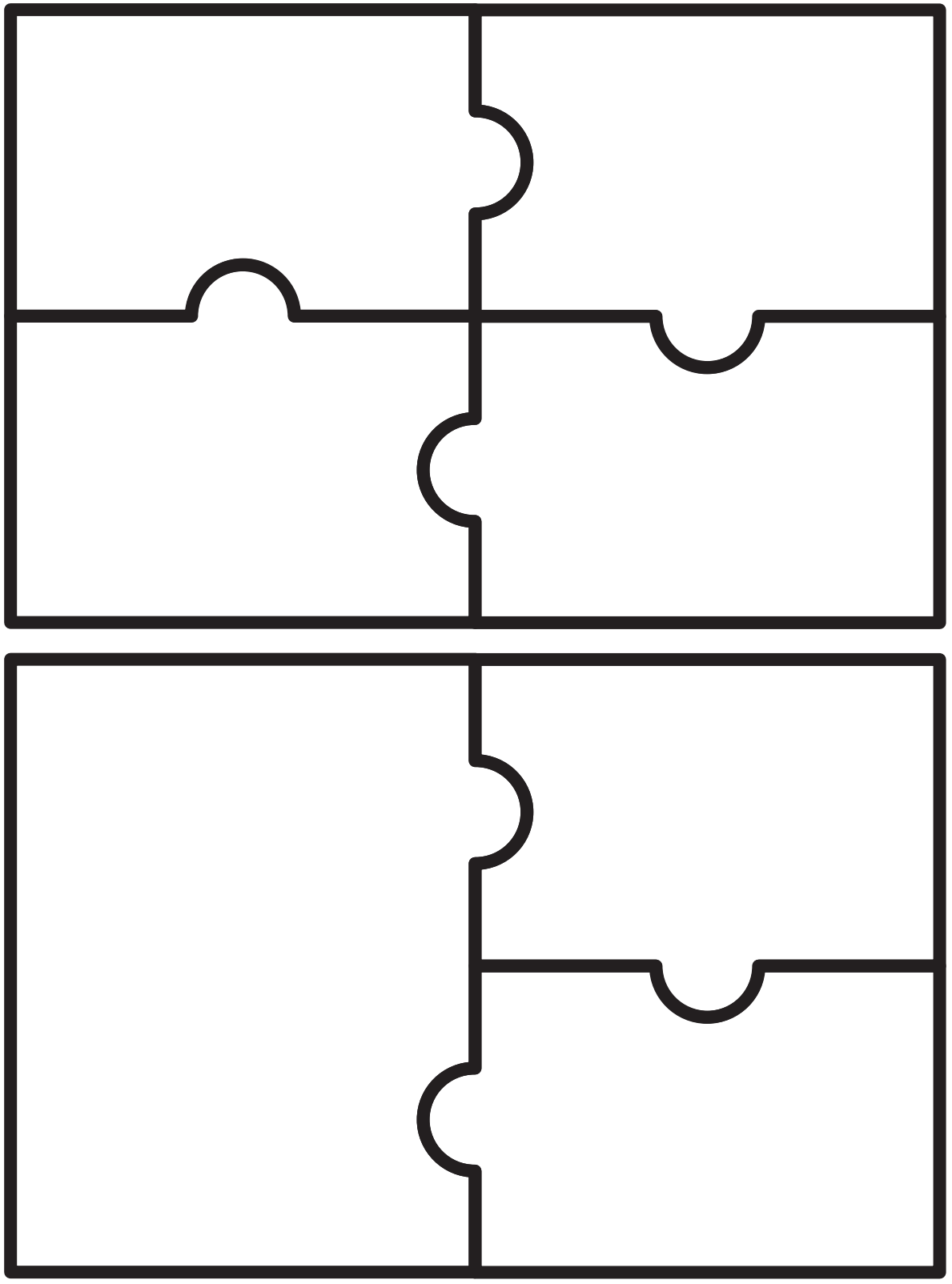
Clamshell Fold

Cut out the clamshell fold on the solid lines. Fold and unfold the piece on the three dashed lines. With the piece oriented so that the folds form an X with a horizontal line through it, pull the left and right sides together at the fold line. Then, keeping the sides touching, bring the top edge down to meet the bottom edge. You should be left with a triangular shape that unfolds into a square. Apply glue to the back of the triangle to attach the clamshell to a notebook page.



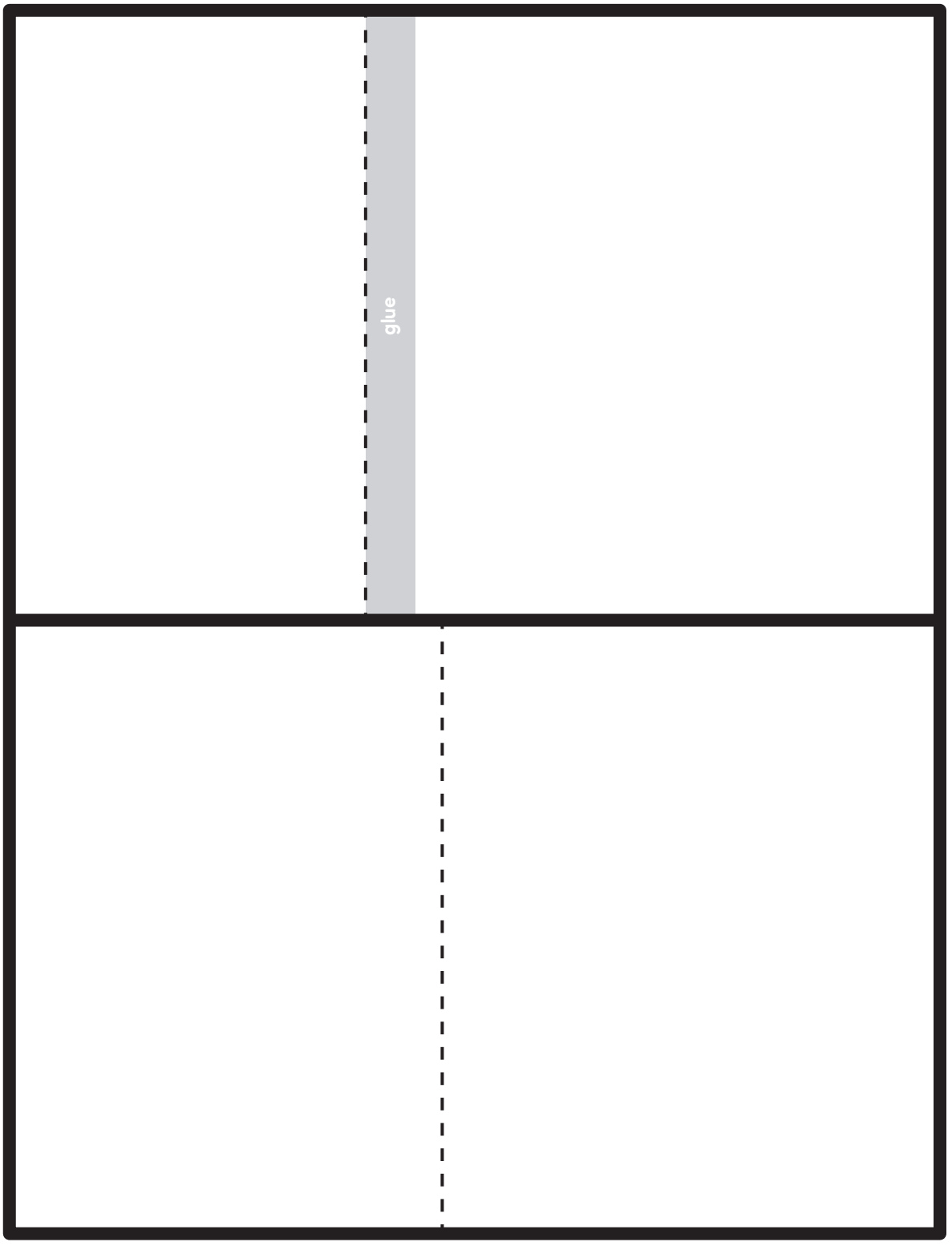
Puzzle Pieces

Cut out each puzzle along the solid lines to create a three- or four-piece puzzle. Apply glue to the back of each puzzle piece to attach it to a notebook page. Alternately, apply glue only to one edge of each piece to create flaps.



Flip Book

Cut out the two rectangular pieces on the solid lines. Fold each rectangle on the dashed lines. Fold the piece with the gray glue section so that it is inside the fold. Apply glue to the gray glue section and place the other folded rectangle on top so that the folds are nested and create a book with four cascading flaps. Make sure that the inside pages are facing up so that the edges of both pages are visible. Apply glue to the back of the book to attach it to a notebook page.

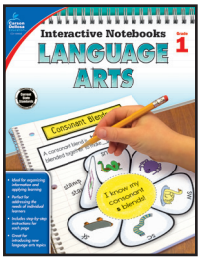


Interactive Notebooks

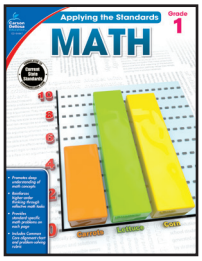
MATH

Interactive notebooks are a fun new way to teach and reinforce effective note taking for students of all ages. Students are able to personalize learning to fit their own needs as they create fun, interactive notebook pages for each new math topic. Students will learn organization, color-coding, summarizing, and other useful skills while creating portfolios of individual learning that they will refer back to all year long. This book will guide you through setting up, creating, and maintaining interactive notebooks throughout the year. It is an invaluable resource for anyone who wants to begin using this effective tool for skill retention in the classroom.

Look for these and other great Carson-Dellosa titles to support standards-based instruction in the classroom.



Interactive Notebooks
Language Arts
Grade 1
CD-104652



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