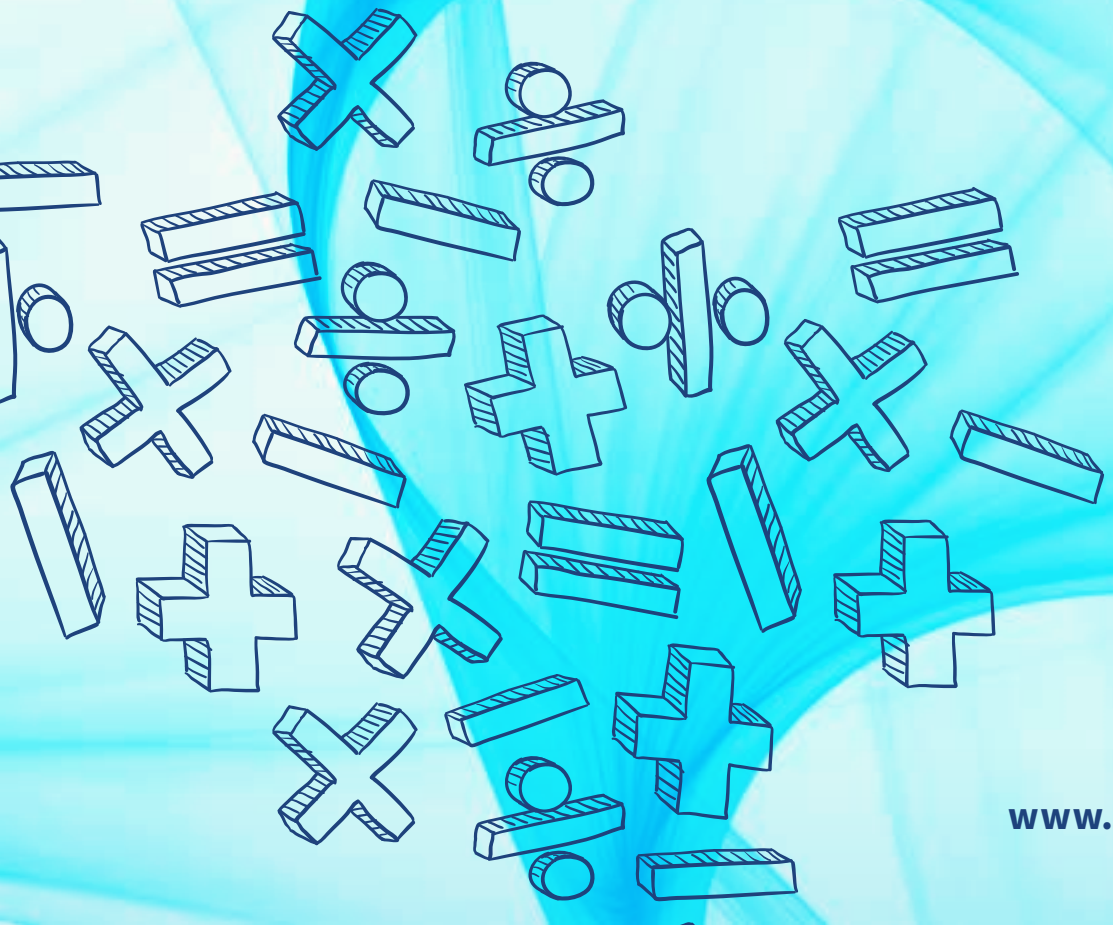
STEMscopes™ MATH

KINDERGARTEN
TEACHER LESSON SAMPLE

JOIN AND SEPARATE



www.stemscopes.com/math

Discover the wonder of mathematics in our everyday world with STEMscopes Math. Built from the ground up by practicing educators using the flexible 5E lesson model, STEMscopes Math provides you with everything you need to create a meaningful learning experience.

LEARNING WITHIN A REAL-WORLD, RELEVANT CONTEXT

Student learning is rooted in real-world scenarios. Real-world connection provides teachers a way to foster an understanding and appreciation for numbers by focusing on the relationship between mathematical concepts and students' experiences and interests. When real-world connection is incorporated into lessons, students can see how math fits into their daily lives.

STEMscopes Math uses the Hook, Explore Activities, and Problem-Based Tasks to engage students in real-world situations where math skill is needed. Life Connections, Career Connections, Math Today! News, and Math Story incorporate math into the everyday experiences and careers that students may encounter outside of the classroom.

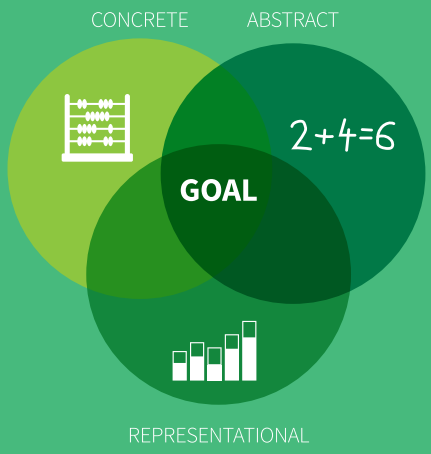
DESIGNED FOR NEW AND VETERAN TEACHERS

Every STEMscopes Math lesson is built to the standards, from the ground up. Chunking information into bite-size pieces, we make our units (called "scopes") digestible and engaging. Whether you're a new or veteran teacher, STEMscopes Math provides everything you need to create a meaningful learning experience.

CONCRETE-REPRESENTATIONAL-ABSTRACT (CRA) APPROACH

The CRA model is a powerful strategy for teaching new math concepts. It is a three-part constructivist process that transitions students from hands-on learning to the math we use as adults. As students progress through the Explore Activities (Lessons), they will transition from hands-on experiences with concrete objects to representational, pictorial models and ultimately arrive at symbolic representations, using only numbers, notations, and mathematical symbols.

Since state assessments often require students to solve problems at all three levels, the CRA model helps students succeed in high-stakes testing. Research-based studies show that students who use concrete materials to learn math develop more precise and comprehensive mental representations, show more motivation and on-task behavior, understand mathematical ideas, and better apply these ideas to life situations.



PROMOTING EQUITY

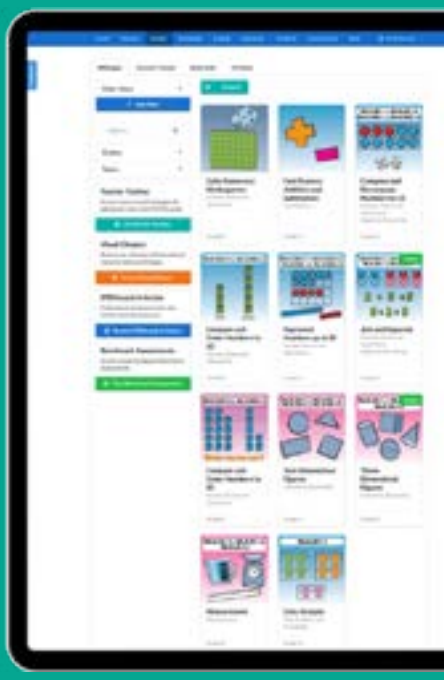
Implementing STEMscopes Math in the classroom provides every student access to high-quality, challenging learning opportunities. The activities within the program are scaffolded and differentiated so that all students find the content accessible, relatable, and challenging. The emphasis on collaborative learning and intentional discourse within the STEMscopes program promotes a sense of community in the classroom where students can learn from each other.

DIGITAL, PRINT, AND KITS

We are committed to delivering flexible, differentiated, student-centered instructional content through our digital platform, and we're all about making life easier for teachers.

DIGITAL CURRICULUM

Our **digital platform** allows you to assign work directly to student accounts, push content to Google Classroom, print materials on demand, and use our lessons in a whole-group or blended learning setting. Find coherent, 5E-based lessons that align with standards and seamlessly flow from one activity to the next.



Print and hands-on kits bring digital learning and real-world instruction together. These supplemental resources establish a concrete connection between school and home, helping teachers make education more equitable.

STUDENT PRINT

HANDS-ON KITS

STANDARDS

Aligning our math program to standards is at the core of what we do. STEMscopes Math fully supports your state standards, no matter where you are.

HOME

This is where you will find your lesson planning materials so you can facilitate fun, purposeful experiences for your students. Build your content knowledge, review the scope's standards, and access parent materials in the Home section.

ENGAGE

The Engage section lays the foundation for learning. You begin by pre-assessing students and filling knowledge gaps. The Hook lays out a storyline narrative to establish a purpose for learning and capture students' attention with real-world connections.

EXPLORE*

This is where students dig into the content. The Explore section includes scaffolded hands-on activities that build toward mastery of the standards. Each Explore prompt encourages rich mathematical discourse and student reasoning, and concludes with an Exit Ticket.

EXPLAIN*

Paired with Explore, the Explain section offers a variety of resources that connect the experiences of the Explore activities to the academic content students need to know. These resources include illustrated vocabulary cards, independent practice, and journal prompts that support the Explore activities and solidify student learning.

ELABORATE*

Workstations are a go! The Elaborate section makes differentiation a cinch with ready-made activities—digital and paper-based games, spiraled review, career connections, literacy connections, and more—perfect for rotations! Students continue learning while you make time for small group interventions and independent projects to support your struggling and advanced learners.

**Instructional elements in STEMscopes Mathematics are intended to work together. The elements in the Explain and Elaborate sections can be used to support student learning and provide opportunities for practice while students explore the concept.*

EVALUATE

Get the data you need from the assessment tools provided in the Evaluate section. From multiple choice-based assessments to an open-ended reasoning prompt, there's an evaluation for every student's learning style. You can also create your own assessments using the assessment builder tool.

INTERVENTION

Useful during Elaborate or as an after-school support, Intervention is a small hands-on activity designed to target students' conceptual misunderstanding while building their math skills. This is also a great re-teach and test prep tool!

ACCELERATION

Are your students ready to go above and beyond with what they've learned? In the Acceleration section, students complete a design challenge and relate learning to current events around the world. The activities prompt them to think more deeply about the content and its applications.

DIGITAL CURRICULUM SAMPLE

To review the lesson resources in the digital Kindergarten Scope, *Join and Separate*, access our digital curriculum sample at **www.stemscopes.com/math/national/curriculum-sample** and choose the Kindergarten grade level on the left *Grades* menu bar.

Kindergarten
SAMPLE LESSON

SCOPE (UNIT) **Join and Separate**
EXPLORE (LESSON) **Join and Separate with Objects and Drawings**

The following pages introduce lesson resources that guide you through the STEMscopes Math Kindergarten lesson. You will also notice we've provided supportive unit resources that would allow you to plan lessons throughout the year using STEMscopes Math.

This sample lesson ***does not include*** all the elements and features of our digital and print math curriculum.

RESOURCE LIST

The following resources, as well as additional resources not listed, can be found in the digital curriculum *Kindergarten Scope, Join and Separate*.

HOME
- Student Expectations
- Key Concepts
- Scope Overview
- Parent Letter

TEACHER TOOLBOX
- Scope List
- Scope and Sequence
- Lesson Planning Guide for 1-3 Explores
- Lesson Planning Guide for 3-5 Explores

EXPLORE
- Explore 1: Join and Separate with Objects and Drawings*

ELABORATE
- "Four in a Row" Fluency Builder*

EXPLAIN
- Vocabulary Cards*

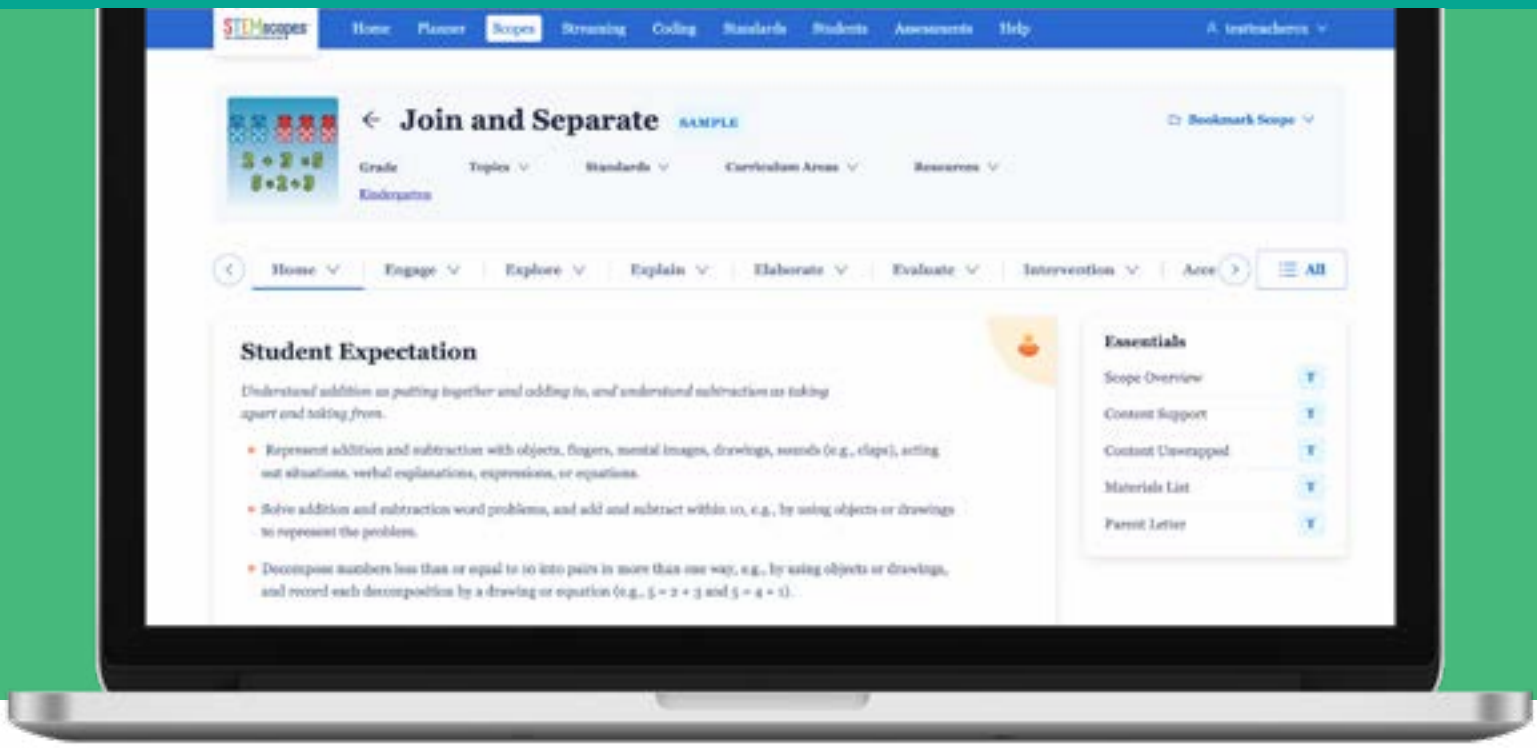
DAILY NUMERACY
- "Not Like the Others" Activity*

FACT FLUENCY
- "Sums with Five" Mini-Lesson*

**These activities are samples and do not represent all the activities and resources within our digital and print curriculum.*

Kindergarten SAMPLE LESSON

SCOPE (UNIT) **Join and Separate**



STUDENT EXPECTATIONS

Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from.

- Represent addition and subtraction with objects, fingers, mental images, drawings, sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations.
- Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem.
- Decompose numbers less than or equal to 10 into pairs in more than one way, e.g., by using objects or drawings, and record each decomposition by a drawing or equation (e.g., 5 = 2 + 3 and 5 = 4 + 1).

KEY CONCEPTS

- I can represent addition and subtraction with objects, fingers, mental images, drawings, sounds, acting out situations, verbal explanations, expressions, or equations.
- I can solve addition and subtraction word problems.
- I can add and subtract within 10 using objects to represent the problem.
- I can add and subtract within 10 using drawings to represent the problem.
- I can decompose numbers that are less than or equal to 10 into pairs in more than one way by using objects and recording each decomposition by a drawing.
- I can decompose numbers that are less than or equal to 10 into pairs in more than one way by using objects and recording each decomposition by an equation.
- I can decompose numbers that are less than or equal to 10 into pairs in more than one way by using drawings and recording each decomposition by a drawing.
- I can decompose numbers that are less than or equal to 10 into pairs in more than one way by using drawings and recording each decomposition by an equation.

Scope Overview

Join and Separate

Standards

- Represent addition and subtraction with objects, fingers, mental images, drawings, sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations.
- Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem.
- Decompose numbers less than or equal to 10 into pairs in more than one way, e.g., by using objects or drawings, and record each decomposition by a drawing or equation (e.g.,5 = 2 + 3 and 5 = 4 + 1).

If the APK reveals that students are not ready, move to the Foundation Builder!

Engage

- Accessing Prior Knowledge: Add and Subtract to 5
- Foundation Builder: Add and Subtract to 5
- Hook: Crabbing at Night

Home

- Scope Overview
- Content Support
- Standards Unwrapped

Explore

- Skill Basics: Acting Out Word Problems and Drawing Models
- Skill Basics: Representing Addition and Subtraction with Objects, Fingers, Mental Images, Drawings, and Sounds
- Skill Basics: Problem-Solving Model
- Explore 1: Join and Separate with Objects and Drawings
  - Exit Ticket
  - Show What You Know: Part 1
- Explore 2: Compose with Objects and Drawings
  - Exit Ticket
  - Show What You Know: Part 2
- Explore 3: Decompose with Objects and Drawings
  - Exit Ticket
  - Show What You Know: Part 3
- Skill Basics: Writing Equations
- Explore 4: Writing Equations and Explaining Strategies
  - Exit Ticket
  - Show What You Know: Part 4

Explain

- Picture Vocabulary
- Show What You Know
- My Math Thoughts
- Anchor Charts
- Interactive Notebook

Elaborate

- Fluency Builder
  - Go Fish
  - Four in a Row
  - Join and Separate Match
- Spiraled Review: Bake Sale
- Math Story: Field Trip to the Science Museum
- Problem-Based Task: The Bear Boogie
- Interactive Practice
  - Taco Time
  - Ice Cream Shop
- Life Connections: Zoo Nutritionist

Once all of the Explores have been taught, go back to the Hook for students to apply knowledge learned.

Evaluate

- Observation Checklist
- Show-and-Tell
- Skills Quiz

Intervention

- Small-Group Intervention
- Supplemental Aids

Acceleration

- Math Today: Interlocking Bricks Light Bulb
- Connection Station: Animals Change Their Environment

Instructional elements in STEMscopes Mathematics are intended to work together. The elements in the Explain and Elaborate sections can be used to support student learning and provide opportunities to practice while the students are exploring the concept.

Kindergarten – Join and Separate

Dear Parents,

Your child is about to explore joining and separating. To master this skill, your child will build on his or her knowledge of rote counting up to 10 with and without fingers and acting out verbal story problems to add and subtract up to 5 objects. As your child extends his or her knowledge of this concept throughout kindergarten, he or she will learn the following concepts:

- That when joining two sets together, he or she is modeling addition
- That when separating a group from a set, he or she is modeling subtraction
- That when composing or putting together two sets of objects, he or she is modeling addition to find the total
- That when decomposing or taking apart a number or set, he or she is modeling subtraction when finding the missing parts
- How to solve familiar word problems about real-life scenarios and add and subtract within 10
- How to explain the strategies used to solve, including acting out situations and using objects, drawings, mental images, sounds (e.g., claps), and equations

While working with your child at home, you may find the following vocabulary terms helpful in your communication about joining and separating. These are terms your child will be encouraged to use throughout our explorations and during our Math Chats, which are short, whole-group discussions at the conclusion of each activity.

- **Addition:** The process of combining two or more sets to find a total amount
- **Compose:** To combine numbers into parts or elements
- **Total:** The answer to an addition problem or equation
- **Subtraction:** The process of taking away a smaller amount from a larger amount to determine a total that is remaining
- **Difference:** A number that is the result of subtraction
- **Decompose:** To break into parts or elements
- **Equation:** A mathematical sentence that uses numbers, one or more operation symbols, and an equal sign

We will do many explorations in class to help your child learn these concepts from firsthand experiences. Encourage your child to share these experiences with you and to teach you what he or she has learned. Ask your child to identify examples of what he or she is learning in everyday life, or use the attached page for ideas of activities to do at home to apply the concept your child is learning in class.

Thank you for your support as your child begins this new learning adventure.

Sincerely,

Tic-Tac-Toe - Try This at Home

Snack Time Joining/Separating 1. Have your child choose a favorite snack. This might be fish crackers, teddy bear crackers, gummy candy, etc. 2. Tell your child a story problem using the snack as the characters, and have him or her act it out. Here is an example: There were 3 fish swimming, and 4 more fish joined them. How many fish are swimming now?	**Find the Total** 1. Write the numbers 1–10 on pieces of paper, and spread them out on the floor in an open area. 2. Tell your child a story problem using addition or subtraction that your child can solve using his or her fingers or objects. 3. Once your child finds the total or the difference, he or she will go to that number on the floor and stand on it. 4. Ask your child to tell you why he or she chose that answer.	**At the Table** 1. This activity could be done while you are out at a restaurant or before you eat at the table at home. 2. Ask questions: How many boys are at the table? How many girls are at the table? How many total people are we feeding tonight? 3. If someone gets up to leave, point it out and ask, How many people are there now?
Board Games 1. Find a simple counting board game to play as a family.	Free Space	**Dart Practice** 1. Create a dartboard on a piece of cardboard or paper using the numbers 1–5. 2. Take turns shooting 2 darts at the target and building the number of points that you score with blocks. 3. Add up your scores, and then compare to see who is winning each time. 4. You could also add some +2 and -2 spaces to the dartboard to practice subtracting, if you want.
Toy Stories 1. Have your child tell you a joining or separating story, using his or her favorite group of toys. 2. These could be dolls, horses, race cars, superheroes, etc. 3. Join in the fun, and create your own story for your child to solve.	**Cooking Math** 1. Involve your child in cooking dinner or baking a dessert. 2. Allow him or her to count out the number of scoops of an ingredient needed for the recipe. 3. Once you have your treat prepared, act out some story problems about joining and separating with your child. Here is an example: There are 6 cookies on the plate. You ate 1 cookie. How many cookies are left?	**Number Sentence Match** 1. Create joining or separating number sentences on sticky notes, pieces of paper, or index cards. 2. Write the totals or differences on a different type of paper so that they can be differentiated from the equation. 3. Place the cards facedown, and choose one equation card and one total or difference card to see if they match. 4. If they match, the player keeps the set. If they do not, the player turns them back over and play continues.

Kindergarten Scope List

Scope Name	Explores	Suggested Pacing
Represent Numbers to 10	5 Explores	2 weeks
Compare Numbers to 10	3 Explores	1 week
Join and Separate	4 Explores	2 weeks
Represent Numbers to at Least 20	4 Explores	2 weeks
Two-Dimensional Shapes	4 Explores	2 weeks

Scope Name	Explores	Suggested Pacing
Three-Dimensional Solids	4 Explores	2 weeks
Create and Compose 2-D Shapes and 3-D Solids	3 Explores	1 week
Measurement	5 Explores	2 weeks
Data Analysis	2 Explores	1 week
Money	2 Explores	1 week
Addition and Subtraction Fact Fluency	2 Activities	October - May
Daily Numeracy	8 Activities	September - May

STEMscopes Math Suggested Scope and Sequence

The STEMscopes Math program is flexible, and there are variations in implementation within the guidelines provided here. This Scope and Sequence is meant to serve as a tool for you to use as you find how STEMscopes Math best meets the needs of the students in your classroom.

Kindergarten

Week	Scope
1	• Establish classroom procedures • **Pre-Assessment Benchmark**
2	• Represent Numbers to 10
3	• Represent Numbers to 10
4	• Show-and-Tell Assessment for Represent Numbers to 10
5	• Compare Numbers to 10
6	• Compare Numbers to 10
7	• Show-and-Tell Assessment for Compare Numbers to 10
8	• Join and Separate
9	• Join and Separate

10	• Show-and-Tell Assessment for Join and Separate
11	• Represent Numbers to at Least 20
12	• Represent Numbers to at Least 20
13	• Show-and-Tell Assessment for Represent Numbers to at Least 20
14	• Two-Dimensional Shapes
15	• Two-Dimensional Shapes
16	• Show-and-Tell Assessment for Two-Dimensional Shapes • **Mid-Assessment Benchmark**
17	• Three-Dimensional Solids
18	• Three-Dimensional Solids
19	• Show-and-Tell Assessment for Three-Dimensional Solids
20	• Create and Compose 2-D Shapes and 3-D Solids

21	• Create and Compose 2-D Shapes and 3-D Solids
22	• Show-and-Tell Assessment for Create and Compose 2-D Shapes and 3-D Solids
23	• Measurement
24	• Measurement
25	• Show-and-Tell Assessment for Measurement
26	• Data Analysis
27	• Data Analysis
28	• Show-and-Tell Assessment for Data Analysis
29	• Money
30	• Show-and-Tell Assessment for Money
31	Review: • Represent Numbers to 10 • Represent Numbers to at Least 20 • Compare Numbers to 10 • Join and Separate
32	Review: • Two-Dimensional Shapes • Three-Dimensional Solids • Create and Compose 2-D Shapes and 3-D Solids
33	Review: • Measurement • Data Analysis • Money
34	• **Post-Assessment Benchmark**

35	Review: • Represent Numbers to 10 • Represent Numbers to at Least 20 • Compare Numbers to 10 • Join and Separate
36	Review: • Two-Dimensional Shapes • Three-Dimensional Solids

Week	Daily Numeracy
All	Additional or repeated standards are addressed in Daily Numeracy. These activities should be rotated through daily. To see the full list of what standards are addressed in these activities, please see the Daily Numeracy: Standards by Activity section in the Daily Numeracy Teacher Toolbox.

Whole-Group Plan (Kindergarten–1st Grade)

1–3 Explores

*Based on 90-minute class period	Day 1	Day 2	Day 3	Day 4	Day 5
Whole Group	Fact Fluency/Daily Numeracy Accessing Prior Knowledge Foundation Builder[1] Hook (Pre-Explore) Begin Skill Basics/Explores if time allows. Anchor Chart	Fact Fluency/Daily Numeracy Skill Basics/Explores[2] Anchor Chart Exit Ticket Show What You Know (Assist and reteach as needed.)	Fact Fluency/Daily Numeracy Skill Basics/Explores (continued) Anchor Chart Exit Ticket Show What You Know (Assist and reteach as needed.)	Fact Fluency/Daily Numeracy Hook (Post-Explore) Interactive Notebook Teacher Choice[3] All students: • Picture Vocabulary • My Math Thoughts • Life Connection • Spiraled Review Mastery Level: • Connection Station • Math Today Meets Level: • Math Story • Problem-Based Task Approaching Level: • Interactive Practice • Skills Quiz	Fact Fluency/Daily Numeracy Small Group Intervention (for students who need it) Observation Checklist Fluency Builder (Choose one.) (For students who don't need intervention)
Assessment and Closure	Accessing Prior Knowledge to determine readiness Formative assessment based on APK and student performance on Explore Allow students to share what they felt successful with and what they struggled with today.	Administer the Exit Ticket to assess student learning after the Explore. Allow students to work on Show What You Know – Part 1 as independent practice after first Explore.	Administer the Exit Ticket to assess student learning after the final Explores. Allow students to work on Show What You Know – Part 2 as independent practice after Explore 2.	Assess how students perform based on individual assignment chosen.	Show and Tell

The essential elements are highlighted. If time is limited, teach these elements to fully cover the standards.
[1]Use as intervention if APK shows foundational gaps.
[2]Set your pace according to the number of Explores included in this scope. Use Exit Tickets as well as Show What You Knows for each Explore completed.
[3]Teachers can choose from the following elements. We have suggested activities for students including recommended tasks for students at each skill level.

Small-Group Plan (Kindergarten–1st Grade)

1–3 Explores

*Based on 90-minute class period	Day 1	Day 2	Day 3	Day 4	Day 5
Whole Group ***20 Minutes**	Daily Numeracy Accessing Prior Knowledge Foundation Builder[1] Hook (Pre-Explore) Introduce stations.	Daily Numeracy Allow students to share what they learned yesterday. Discuss what students worked on. Anchor Chart	Daily Numeracy Allow students to share what they learned yesterday. Discuss what students worked on. Anchor Chart Add Picture Vocabulary words to word wall based on terms introduced in the lessons.	Daily Numeracy Hook (Post-Explore) Review any Explore or Show What You Know problems that gave students trouble. Anchor Chart Interactive Notebook	Daily Numeracy Spiraled Review Observation Checklist
Small-Group Instruction	Pull small groups of students to do: 1. The Foundation Builder (if they need previous grade level content) 2. Skill Basics/Explore 1[2]	Pull students to work with you to finish Skill Basics/Explores 1–2. Observation Checklist	Pull students to work with you on Skill Basics/Explores 2–3. Observation Checklist	Pull students to do Small Group Intervention based on needs. Observation Checklist	None
*Small group/ Stations 70 Minutes **Stations** ***Options are flexible.**	1. Fact Fluency 2. Interactive Practice 3. Fluency Builder 4. Life Connection 5. Spiraled Review 6. Show What You Know	1. Fact Fluency 2. Interactive Practice 3. Fluency Builder 4. My Math Thoughts 5. Spiraled Review 6. Show What You Know	1. Fact Fluency 2. Interactive Practice 3. Fluency Builder 4. Math Story 5. Spiraled Review 6. Show What You Know	Have students work in groups on the Problem-Based Task.	Have the following materials available for students who finish early. 1. Fact Fluency 2. Skills Quiz 3. Connection Station 4. Math Today 5. Spiraled Review
Assessment and Closure	Accessing Prior Knowledge to determine readiness Formative assessment based on APK and student performance to determine who needs to be pulled to small group Allow students to share what they felt successful with and what they struggled with today.	Administer the Exit Tickets to assess student learning after the Explores. Allow students to work on Show What You Knows as independent practice after Explores.	Administer the Exit Tickets to assess student learning after the Explores. Allow students to work on Show What You Knows as independent practice after Explores.	Students can be assessed by their performance on the Problem-Based Task.	Show and Tell

The essential elements are highlighted. If time is limited, teach these elements to fully cover the standards.
[1]Use as intervention if APK shows foundational gaps.
[2]Set your pace according to the number of Explores included in this scope. Use Exit Tickets as well as Show What You Knows for each Explore completed.

Whole-Group Plan (Kindergarten–1st Grade)

3–5 Explores

Week 1 *Based on 90-minute class period	Day 1	Day 2	Day 3	Day 4	Day 5
Whole Group	Fact Fluency/Daily Numeracy Accessing Prior Knowledge Foundation Builder[1] Hook (Pre-Explore)	Fact Fluency/Daily Numeracy Skill Basics/Explores[2] Anchor Chart Exit Ticket Show What You Know (Assist and reteach as needed.)	Fact Fluency/Daily Numeracy Skill Basics/Explores (continued) Anchor Chart Exit Ticket Show What You Know (Assist and reteach as needed.)	Fact Fluency/Daily Numeracy Skill Basics/Explores (continued) Anchor Chart Exit Ticket Show What You Know (Assist and reteach as needed.)	Fact Fluency/Daily Numeracy Skill Basics/Explores (continued) Anchor Chart Exit Ticket Show What You Know (Assist and reteach as needed.)
Assessment and Closure	Accessing Prior Knowledge to determine readiness Formative assessment based on APK and student performance on Explore Allow students to share what they felt successful with and what they struggled with today.	Administer the Exit Ticket to assess student learning after the Explore. Allow students to work on Show What You Know as independent practice after Explores.	Administer the Exit Ticket to assess student learning after the Explore. Allow students to work on Show What You Know as independent practice after Explores.	Administer the Exit Ticket to assess student learning after the Explore. Allow students to work on Show What You Know as independent practice after Explores.	Administer the Exit Ticket to assess student learning after the Explore. Allow students to work on Show What You Know as independent practice after Explores.

The essential elements are highlighted. If time is limited, teach these elements to fully cover the standards.
[1]Use as intervention if APK shows foundational gaps.
[2]Set your pace according to the number of Explores included in this scope. Use Exit Tickets as well as Show What You Knows for each Explore completed.

Whole-Group Plan (Kindergarten–1st Grade)

3–5 Explores

Week 2 *Based on 90-minute class period	**Day 6**	**Day 7**	**Day 8**	**Day 9**	**Day 10**
Whole Group	Fact Fluency/Daily Numeracy Skill Basics/Explores (continued) Anchor Chart Exit Ticket Show What You Know (Assist and reteach as needed.)	Fact Fluency/Daily Numeracy Hook (Post-Explore) Picture Vocabulary My Math Thoughts Math Today Life Connection	Fact Fluency/Daily Numeracy Interactive Notebook Math Story Problem-Based Task	Fact Fluency/Daily Numeracy Teacher Choice[3] Meets Level: • Connection Station • Spiraled Review Approaching Level: • Interactive Practice • Skills Quiz	Fact Fluency/Daily Numeracy Small Group Intervention (for students who need it) Observation Checklist Fluency Builder (Choose one.) (For students who do not need intervention)
Assessment and Closure	Administer the Exit Ticket to assess student learning after the Explore. Allow students to work on Show What You Know as independent practice after Explores.	Allow students to share what they felt successful with and what they struggled with today.	Assess how students perform on the Problem-Based Task.	Assess how students perform based on individual assessment chosen.	Show and Tell

The essential elements are highlighted. If time is limited, teach these elements to fully cover the standards.
[3]Choose from the following elements. We have suggested activities for students, including recommended tasks for students at each skill level.

Small-Group Plan (Kindergarten–1st Grade)

3–5 Explores

Week 1 *Based on 90-minute class period	**Day 1**	**Day 2**	**Day 3**	**Day 4**	**Day 5**
Whole Group *20 Minutes	Daily Numeracy Accessing Prior Knowledge Foundation Builder[1] Hook (Pre-Explore) Introduce stations.	Daily Numeracy Allow students to share what they learned yesterday. Discuss what students worked on.	Daily Numeracy Allow students to share what they learned yesterday. Discuss what students worked on. Anchor Chart	Daily Numeracy Allow students to share what they learned yesterday. Discuss what students worked on. Anchor Chart Review any Explore or Show What You Know problems that gave students trouble.	Daily Numeracy Allow students to share what they learned yesterday. Discuss what students worked on. Anchor Chart Review any Explore or Show What You Know problems that gave students trouble.
Small-Group Instruction *Small group/ Stations 70 Minutes	Pull small groups of students to do the Foundation Builder (if they need previous grade-level content). Begin Skill Basics/Explores[2]	Pull students to work with you on Skill Basics/Explore 1. Observation Checklist	Pull students to work with you on Skill Basics/Explore 2. Observation Checklist	Pull students to work with you on Skill Basics/Explore 3. Observation Checklist	None
Stations	1. Fact Fluency 2. Interactive Practice 3. Fluency Builder (from previous scope)	1. Fact Fluency 2. Interactive Practice 3. Fluency Builder (from previous scope)	1. Fact Fluency 2. Interactive Practice 3. Fluency Builder (from previous scope)	1. Fact Fluency 2. Interactive Practice 3. Fluency Builder (from previous scope)	1. Fact Fluency 2. Interactive Practice 3. Fluency Builder (from previous scope)
Assessment and Closure	Accessing Prior Knowledge to determine readiness Formative assessment based on APK and student performance to determine who needs to be pulled to small group.	Administer the Exit Ticket to assess student learning after the Explore. Allow students to work on Show What You Know as independent practice after Explore.	Administer the Exit Ticket to assess student learning after the Explore. Allow students to work on Show What You Know as independent practice after Explore.	Administer the Exit Ticket to assess student learning after the Explore. Allow students to work on Show What You Know as independent practice after Explore.	Administer the Exit Ticket to assess student learning after the Explore. Allow students to work on Show What You Know as independent practice after Explore.

The essential elements are highlighted. If time is limited, teach these elements to fully cover the standards.
[1]Use as intervention if APK shows foundational gaps.
[2]Set your pace according to the number of Explores included in this scope. Use Exit Tickets as well as Show What You Knows for each Explore completed.

Small-Group Plan (Kindergarten–1st Grade)

3–5 Explores

Week 2 *Based on 90-minute class period	Day 6	Day 7	Day 8	Day 9	Day 10
Whole Group *20 Minutes	Daily Numeracy Allow students to share what they learned yesterday. Discuss what students worked on. Anchor Chart Review any Explore or Show What You Know problems that gave students trouble.	Daily Numeracy Allow students to share what they learned yesterday. Discuss what students worked on. Anchor Chart Review any Explore or Show What You Know problems that gave students trouble.	Daily Numeracy Allow students to share what they learned yesterday. Discuss what students worked on. Add Picture Vocabulary words to word wall based on terms introduced in the lessons.	Daily Numeracy Allow students to share what they learned yesterday. Discuss what students worked on. Review any Explore or Show What You Know problems that gave students trouble.	Daily Numeracy Spiraled Review Observation Checklist
Small-Group Instruction *Small group/ Stations 70 Minutes	Pull students to work with you on Skill Basics/Explore 4. Observation Checklist	Pull students to work with you on Skill Basics/Explore 5. Observation Checklist	Hook (Post-Explore) Interactive Notebook	Small Group Intervention Observation Checklist	None
Stations	1. Life Connection 2. Spiraled Review 3. Show What You Know	1. My Math Thoughts 2. Spiraled Review 3. Show What You Know	1. Math Story 2. Spiraled Review 3. Show What You Know	1. Problem-Based Task 2. Skills Quiz	Have the following materials available for students who finish early. 1. Connection Station 2. Math Today 3. Spiraled Review
Assessment and Closure	Administer the Exit Ticket to assess student learning after the Explore. Allow students to work on Show What You Know as independent practice after Explore.	Administer the Exit Ticket to assess student learning after the Explore. Allow students to work on Show What You Know as independent practice after Explore.	Administer the Exit Tickets to assess student learning.	Students can be assessed by their performance on the Problem-Based Task.	Show and Tell

The essential elements are highlighted. If time is limited, teach these elements to fully cover the standards.
[1]Use as intervention if APK shows foundational gaps.
[2]Set your pace according to the number of Explores included in this scope. Use Exit Tickets as well as Show What You Knows for each Explore completed.

Join and Separate SAMPLE

Explore 1 - Join and Separate with Objects and Drawings

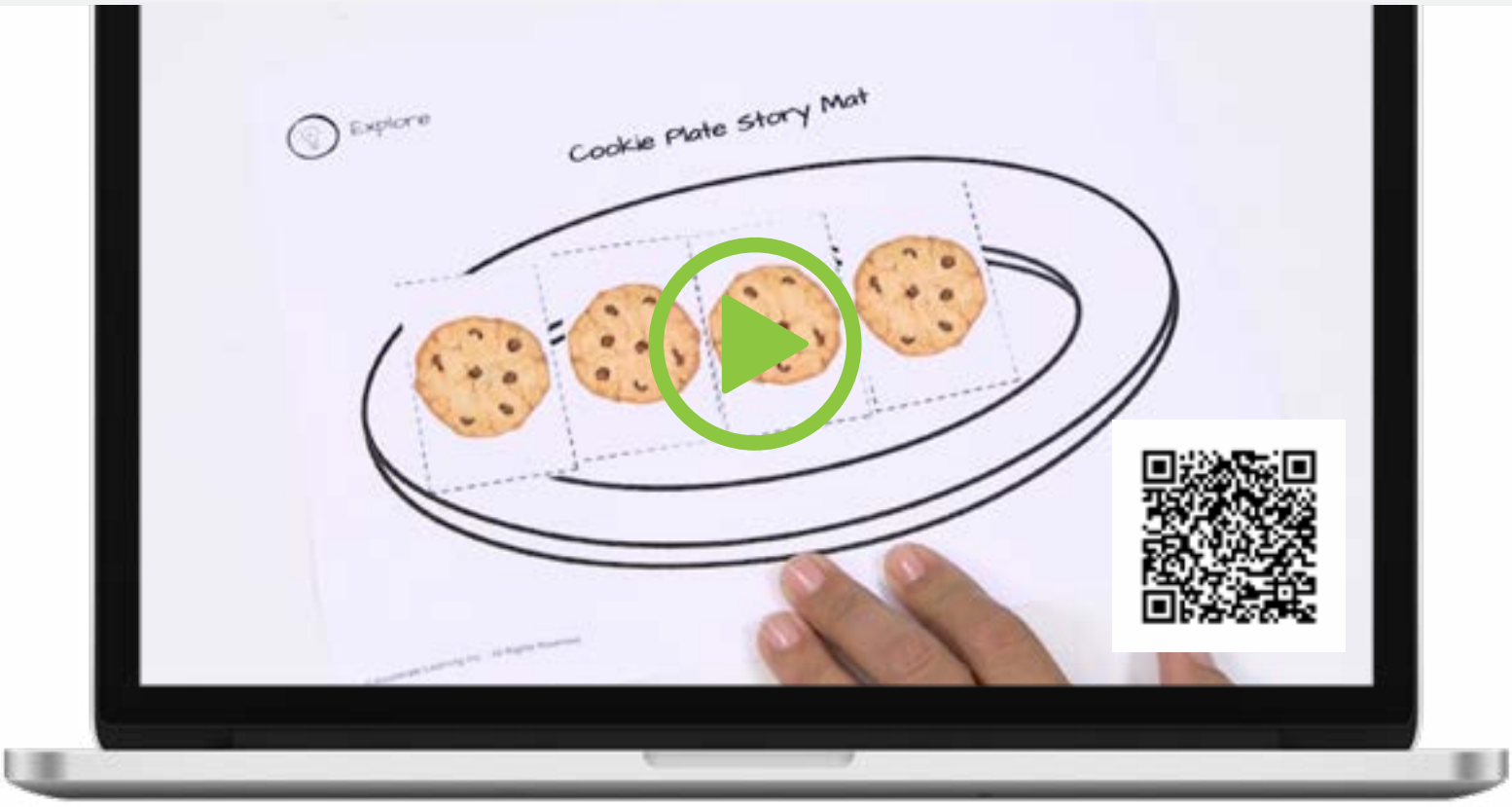
Prior to completing this Explore, have students complete **Skill Basics - Acting Out Word Problems and Drawing Models**, **Skill Basics - Representing Addition and Subtraction with Objects, Fingers, Mental Images, Drawings and Sounds**, and **Skill Basics - Problem Solving Model** so they can apply the skill to this concept.

Description

Students model and solve joining and separating word problems using objects and a story mat. They draw the result of the word problems and verbally explain the strategies they used to solve.

Standards for Mathematical Practice

- **MP.1 Make sense of problems and persevere in solving them:** Students understand that mathematics involves solving problems and discussing how to solve them. They use concrete objects or pictures to help them conceptualize and solve problems.
- **MP.2 Reason abstractly and quantitatively:** Students recognize that a number represents a specific quantity and connect the quantity to written symbols.
- **MP.6 Attend to precision:** Students develop mathematical communication skills needed to effectively discuss their reasoning.



Materials

Printed

1 Student Journal (per student)
1 Cookie Plate Story Mat (per pair)
1 Cookie Cutouts (per pair)
1 Set of Task Cards for projection (per teacher, optional)
1 Exit Ticket (per student)

Reusable

1 Projector or document camera (per teacher)
1 Resealable bag (per pair)
1 Pair of scissors (per student)
1 Glue stick (per pair)

Consumable

1 Sheet of card stock (per pair, optional)

Preparation

- Plan to have students work with partners to complete this activity.
- Print a set of Cookie Cutouts on card stock, and laminate for durability for each pair of students. Cut out and place 10 Cookie Cutouts in a resealable bag.
- Print a Cookie Plate Story Mat for each pair of students.

- Prepare to project the Task Cards one by one during the lesson.
- Print the Student Journal and Exit Ticket for each student.
- **Go Digital!** Have students explore or present their solutions using virtual manipulatives! The manipulatives used in this lesson can be found in the Explore drop-down menu and can be digitally assigned to students.
- For students who need more support in recalling information, please see our 1–10 Number Chart Supplemental Aids element in the Intervention section.

Procedure and Facilitation Points

Part I: The Mouse Thief (Join and Separate through 5)

1. Read the following scenario: *Last weekend, Mia baked cookies for her family. Several times when Mia turned around, some of her cookies were missing, so she had to bake more. Mia decided to hide around the corner to see if she could catch the cookie thief. She did! The thief was a cute little mouse carrying cookies back to his family waiting in his mouse hole.*
2. Give each partnership a bag of Cookie Cutouts and a Cookie Plate Story Mat. Tell students that they are to use the manipulatives and mat to act out and solve the problems. Allow the students a few moments to discover the manipulatives and experience how they work with their partners.
3. Project Task 1 slide from the Task Cards document. Read the word problem aloud as students follow along: *Mia baked 5 cookies. The mouse took 4 of the cookies. How many cookies does Mia have left?*
4. Give partners a minute or two to solve the word problem from Task 1 on their own. Ask the following questions after students have had the opportunity to think:
    a. **DOK-1** What are we trying to find out? How many cookies are left.
    b. **DOK-1** How many cookies did we start with? Mia started with 5 cookies.
    c. **DOK-1** What happens to the cookies in this story problem? The mouse took 4 of the cookies.
    d. **DOK-1** How many cookies were left at the end? There was only 1 cookie left.
    e. **DOK-2** How did you solve the problem using the mat and the cookie manipulatives? Answers will vary. For example: We put the 5 cookies Mia started with on our plate. Then we took away the 4 cookies that the mouse took. We were left with only 1 cookie on the plate.
    f. **DOK-3** Was this a joining or a separating problem? How do you know? It was a separating problem because we had 5 cookies and we took away 4 of them, so we split up the 5 cookies into 2 parts: the 4 that the mouse took and the 1 that was left.
5. Give each student a copy of the Student Journal. Explain to students that they have solved the problem using the mats and cookie cutouts, and now they show their solutions by drawing them and filling in the sentence stems on their Student Journals. Explain that they can represent the cookies in the problems by drawing circles.

6. Solve Task Cards 2–5 by working together as a class and in partners. Have students clear their mats by removing all the cookie cutouts. Have students repeat steps 4 and 5 for Task Cards 2–5 as the cards are projected by the teacher. Have students work with their partners.
7. Monitor and talk with students as needed to check for understanding by using guided questions. Ask the following questions:
    a. **DOK-2** How did your group solve this story problem? Answers will vary, but students should be able to explain how many cookies they started with, why they think the problem is joining or separating, and how many total cookies there are in the end.
    b. **DOK-3** Is this a joining or separating problem? How do you know? Answers will vary. For example: It was a joining problem because we were adding more cookies to what we started with. It was a separating problem because some cookies were eaten, so that means they were taken away.
8. After students have completed all 5 tasks and the first part of the Student Journal, bring the class together as a whole group.
9. After the Explore, invite the class to a Math Chat to share their observations and learning.

Math Chat	
Questions	**Sample Student Responses**
DOK-2 Before you begin solving a problem, what should you do first?	I need to read the *whole* problem and make sure that I understand what is happening and what I am trying to find.
DOK-1 What actions did we see in our problems from Part I?	Sometimes cookies were being joined together, and sometimes cookies were being separated.
DOK-1 What does *joining* mean?	Two things were combined to find a total.
DOK-1 What does *separating* mean?	Something was taken away from something else to find a total.

Part II: Oh Brother!

1. Read the following scenario: *After Mia faced the mouse thief, she decided to bake more cookies to share with her math club after school. When she was baking cookies this time, she faced a much bigger thief than the mouse—her brother Sam! He had friends over, and they loved to eat her cookies hot out of the oven. Before she knew it, she was in a battle to bake and save enough cookies for her math club.*

2. Challenge students to work with their partners to solve the problems on their own. (Continue to project and read each Task Card aloud at reasonable intervals.)
3. Remind students to perform the same steps they did in Part I:
    a. Read/listen to the problem all the way through.
    b. Figure out what action is happening (joining or separating).
    c. Model the problem using the cookie manipulatives.
    d. Draw the number of cookies on the plate.
    e. Fill in the blank to complete the sentence stem on the Student Journal.
4. Have students continue to discuss with their partners why a problem demonstrates joining or separating. Walk around and monitor students for understanding by asking guided questions.
5. After students have completed tasks 6–10 and the second part of the Student Journal, bring the class together as a whole group.
6. After the Explore, invite the class to a Math Chat to share their observations and learning.

Math Chat	
Questions	**Sample Student Responses**
DOK-2 What was similar about the task cards in Part II?	Answers will vary. Some of the task cards had joining problems, and some of the task cards had separating problems. We used the cookies and the plates. The Student Journal still had us draw our answer and fill in the correct number in the sentence stem.
DOK-2 What was different about the Task Cards in Part II?	Answers will vary. The Task Cards used larger numbers—up to 10 instead of just up to 5. Some of the Task Cards had us doing two steps, like joining and separating as part of one task.
DOK-1 What operation did you perform today when you joined cookies together?	Addition
DOK-1 What operation did you perform today when you separated cookies?	Subtraction

7. When students are done, have them complete the Exit Ticket to formatively assess their understanding of the concept.

Instructional Supports

1. Put students in pairs, and have students explain to each other how they found their answers. Even if students used the same strategies to find their answers, it may be helpful for them to explain it to help clarify their thinking and solidify their learning.
2. Identify the situation or action on the Task Cards that helps determine the act of joining or separating. Discuss these situations with students to help them as they solve using their manipulatives. Another option is to allow students to draw a picture of the action or act it out.
3. In Step 3 of the markdown, students work with their partners to act out each problem situation with their manipulatives. Encourage students to share their thinking with partners before sharing in a whole-group setting. This gives students an opportunity to develop confidence when asked to share in the larger group.

Language Acquisition Strategy

The following Language Acquisition Strategy is supported in this Explore activity. See the strategies below for ways to support a student's language development.

Students will use high-frequency English words to identify everyday experiences including retelling with simple information, which can be supported by the use of visuals or language used in the classroom setting routinely.

Beginner: Have numbers printed on a sheet of paper or written on the board of possible answers so that the student can point when asked “How many cookies _____?”

Intermediate: Provide sentence frames projected on-screen or on sentence strips where they are easily accessible to all students, such as the following.

Sentence frame 1: They have _____ cookies.
Sentence frame 2: There are _____ cookies.

Advanced: Post conversation sentence stems in an easily accessible place where all students can see and use them during their conversation about how they solved each problem. Use the following sentence stems:
First I _____.

Next I _____.

The answer is _____.

It is a joining problem because _____.

It is a separating problem because_____.

Explore

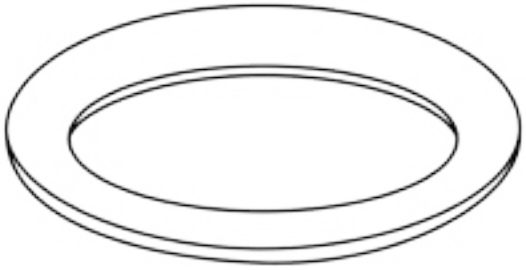
Join and Separate
Explore 1

Name: _____ Date: _____

Join and Separate with Objects and Drawings

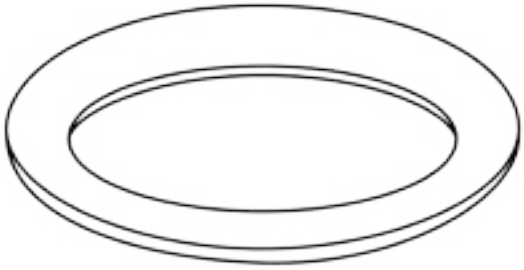
Part 1: Draw a picture to show your answer. Then, fill in the blank.

Task 1



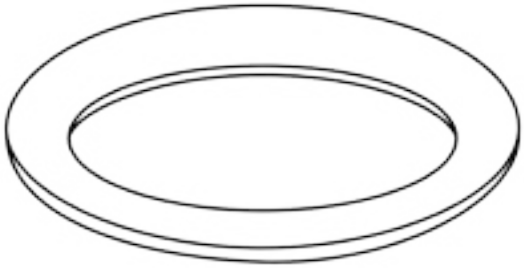
Mia has _____ cookie left.

Task 2



The mouse took _____ cookies.

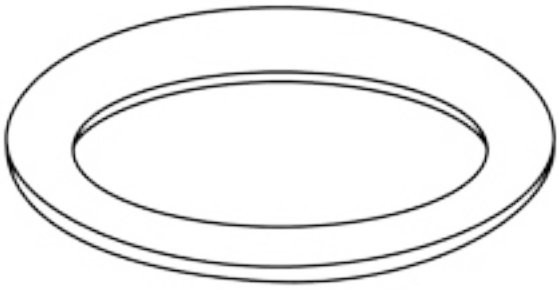
Task 3



Mia has _____ cookies left.

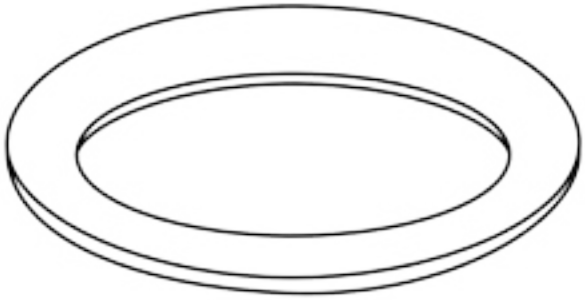
Explore

Task 4



Mia has _____ cookies left.

Task 5

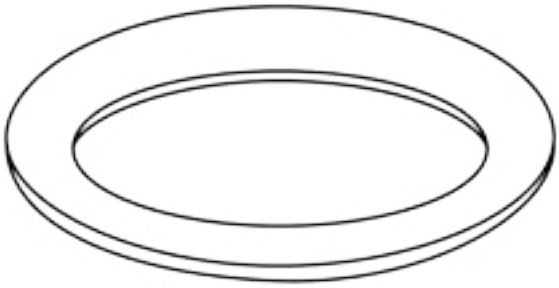


Mia baked _____ cookies.

Explore

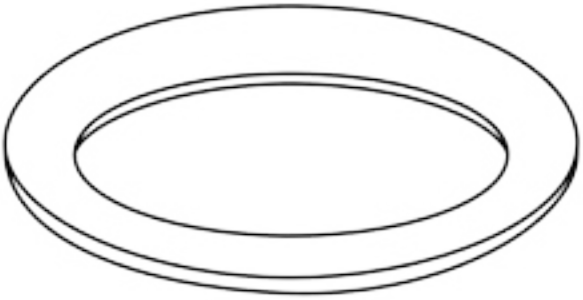
Part II: Draw a picture to show your answer. Then, fill in the blank.

Task 6



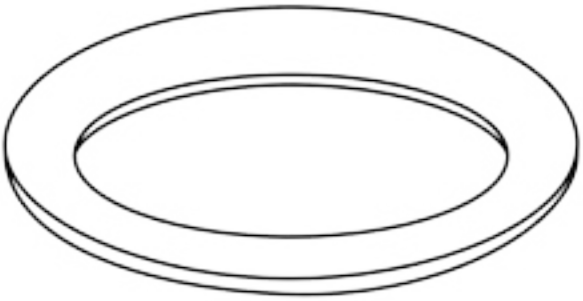
Mia has _____ cookies.

Task 7



Sam took _____ cookies.

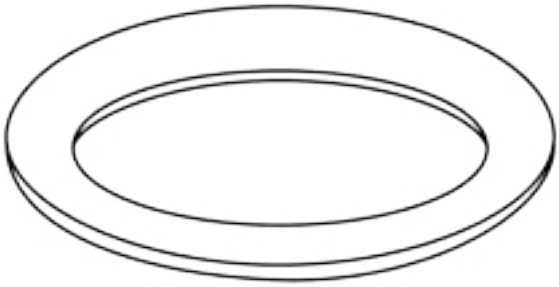
Task 8



Mia has _____ cookies left.

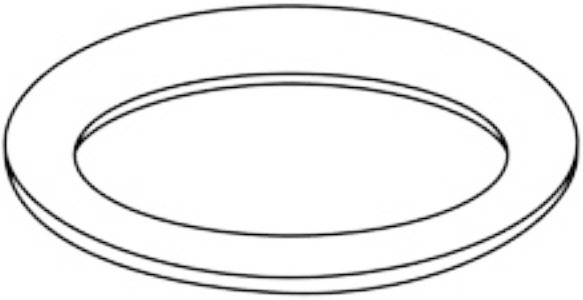
Explore

Task 9



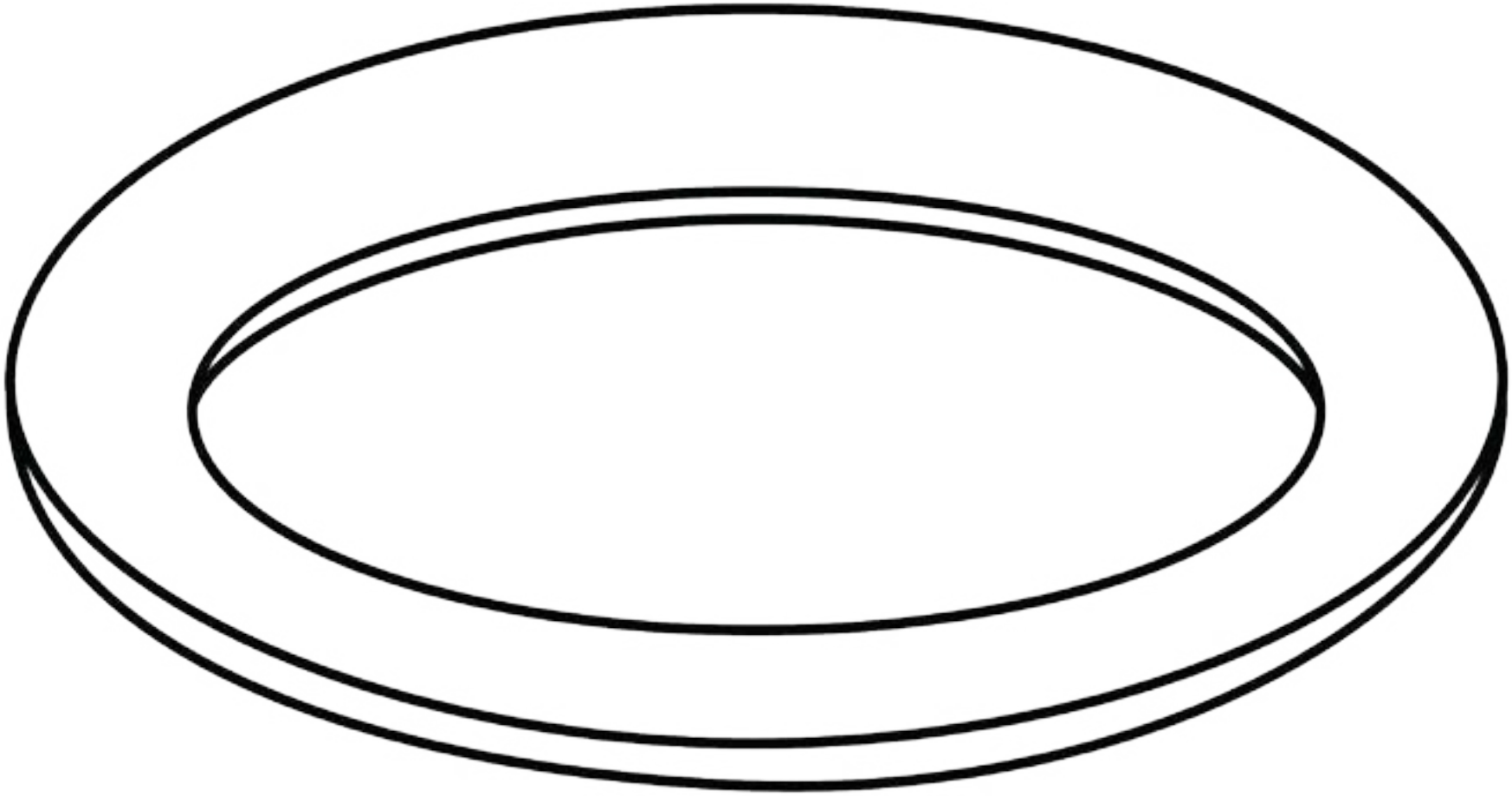
Sam has _____ cookies.

Task 10



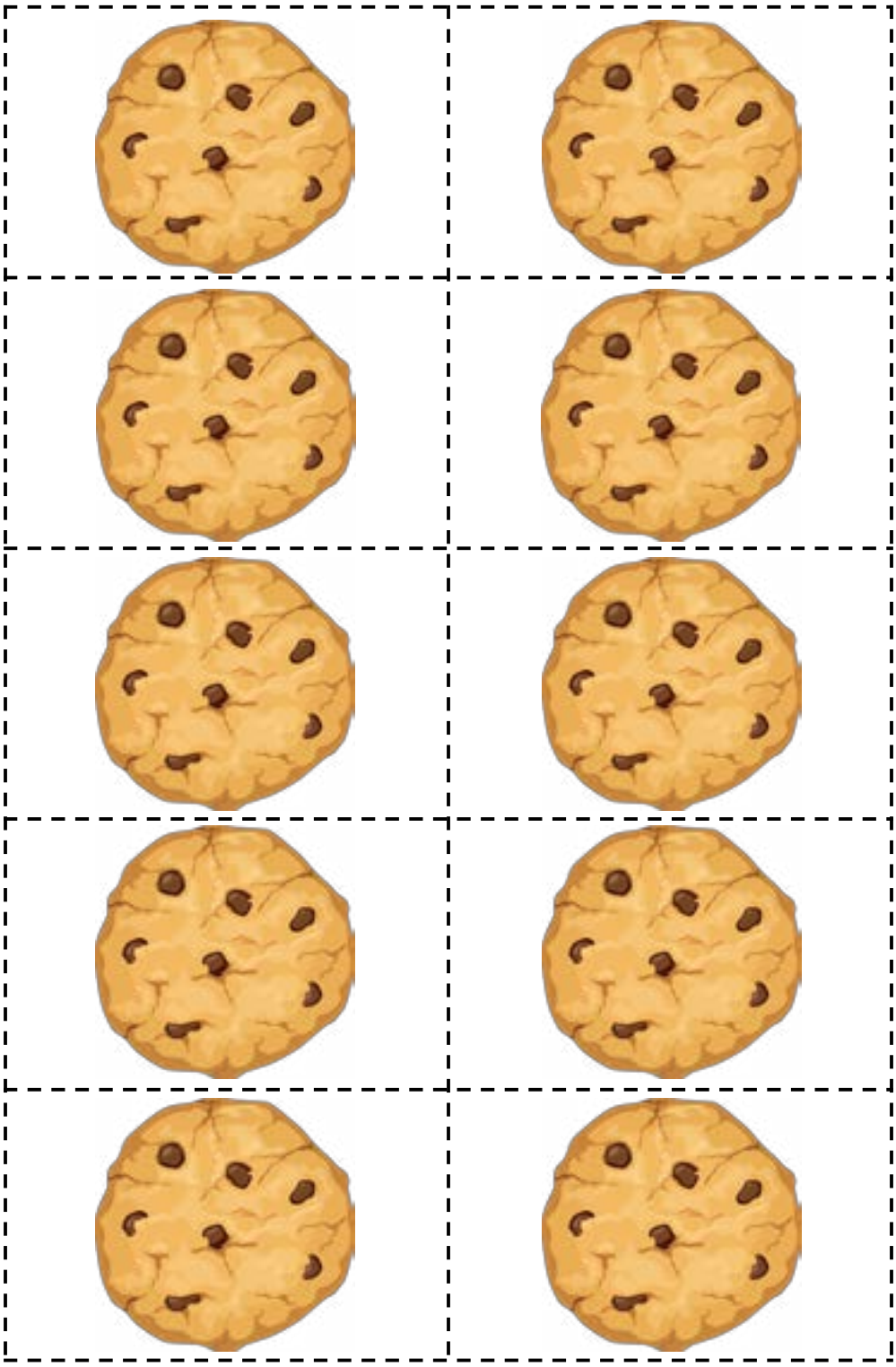
Mia baked _____ cookies.

Cookie Plate Story Mat



Explore

Cookie Cutouts



Explore

Join and Separate
Explore 1

Task 1

Mia baked 5 cookies. The mouse took 4 of the cookies. How many cookies does Mia have left?

Explore

Join and Separate
Explore 1

Task 2

The mouse took 3 cookies for his children and 1 cookie for his wife. How many cookies did he take?

Explore

Task 3

Mia baked 4 cookies. The mouse was hungry so he ate 2 cookies. How many cookies does Mia have left?

Explore

Join and Separate
Explore 1

Task 4

Mia baked 3 big cookies. The mouse took all 3 of the cookies. How many cookies does Mia have left?

Explore

Join and Separate
Explore 1

Task 5

Mia baked 2 cookies. Then she baked 3 more cookies. How many cookies did Mia bake?

Explore

Join and Separate
Explore 1

Task 6

Mia baked 4 cookies. Her mom gave her 2 more cookies. Then, Sam took 1 cookie. How many cookies does Mia have now?

Explore

Task 7

Sam took 4 cookies and was still hungry, so he took 4 more. How many cookies did he take?

Join and Separate
Explore 1

Explore

Task 8

Mia baked 10 cookies. 5 went into Sam's lunchbox. How many cookies does Mia have left?

Explore

Join and Separate
Explore 1

Task 9

Sam took 7 cookies. Mia gave him 2 more. How many cookies does he have now?

Explore

Join and Separate
Explore 1

Task 10

Mia baked 9 cookies. Sam took 3 cookies. Mia baked 2 more cookies. How many cookies does Mia have now?

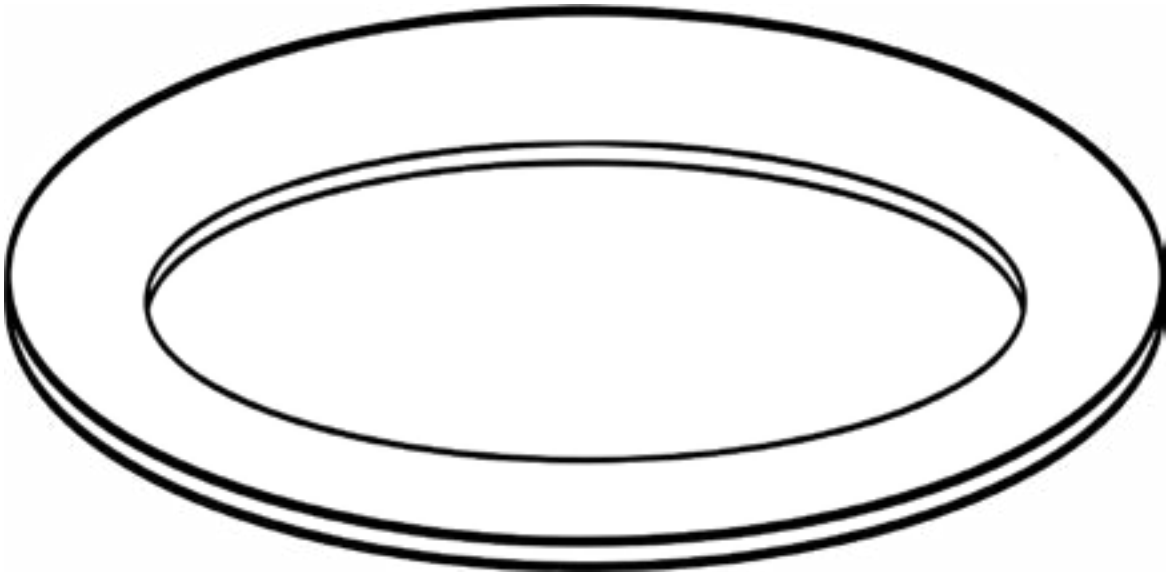
Explore

Name: _____ Date: _____

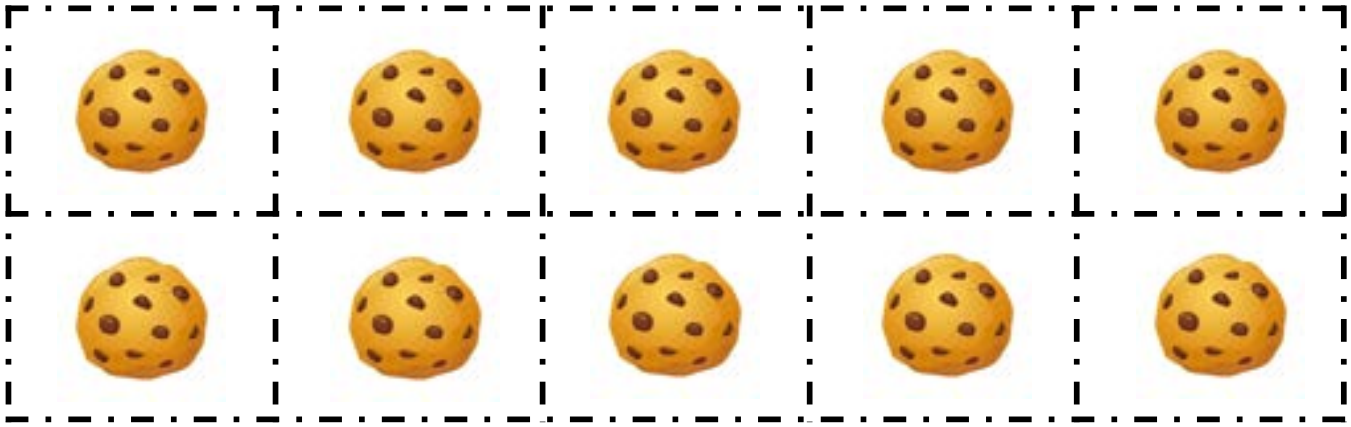
Join and Separate with Objects and Drawings Exit Ticket

Cut out the cookie pictures at the bottom to use on your cookie plate. Glue the final amount of cookies left to the plate. Complete the sentence below the plate.

Mia baked 8 cookies. The mouse took 4 cookies. How many cookies does Mia have left?



Mia has _____ cookies left.



Math Chat

Join and Separate
Explore 1
Part 1

Math Chat
Before you begin solving a problem, what should you do first?
What actions did we see in our problems from Part I?
What does *joining* mean?
What does *separating* mean?

Question 1:

Before you begin solving a problem, what should you do first?

Question 2:

What actions did we see in our problems from Part I?

Math Chat

Question 3:

What does *joining* mean?

Question 4:

What does *separating* mean?

Math Chat

Join and Separate
Explore 1
Part 2

Math Chat
What was similar about the task cards in Part II?
What was different about the task cards in Part II?
What operation did you perform today when you joined cookies together?
What operation did you perform today when you separated cookies?

Question 1:

What was similar about the task cards in Part II?

Question 2:

What was different about the task cards in Part II?

Math Chat

Question 3:

What operation did you perform today when you joined cookies together?

Question 4:

What operation did you perform today when you separated cookies?

Join and Separate SAMPLE

Fluency Builder - Four in a Row

Description

Students play this game in pairs. They take turns solving problems involving addition and subtraction. For each correct answer, students mark a game space. The first student to mark four game spaces in a row wins.

Materials

Printed
1 Instruction Sheet (per pair)
1 Game Board (per pair)
1 Set of Playing Cards (per pair)
1 Student Recording Sheet (per student)

Reusable
1 Envelope or resealable bag (per pair)
1 Set of two-color counters (per pair)

Consumable
20 Sticky notes (per pair)

Preparation

- Print the Game Board for each pair.
- Print the Student Recording Sheet, back-to-back, for each student.
- Print and cut out sets of double-sided Playing Cards. Consider laminating the cards and placing them in an envelope or resealable bag for long-term use.
- Place a sticky note over each answer on the Playing Cards so students solving the problem can view the card without seeing the answer.

Procedure and Facilitation Points

1. Demonstrate playing the game with a student opponent.
    a. The dealer shuffles the deck of Playing Cards and deals them equally between the two players. Each player may view all dealt cards at once.
    b. Each player chooses which side of the two-color counter he or she wants to use to mark his or her spot.
    c. Players alternate turns. During each turn, a player chooses one card and shows it to the other player. The opponent solves the problem on the Student Recording Sheet, and the first player checks the answer by looking under the sticky note.
    d. Each time a player solves a problem correctly, the player places a counter in one game space. The player who successfully covers four connected spaces in a row (horizontally, vertically, or diagonally) wins.
    e. If all game cards are used and no player has covered four spaces in a row, then the game results in a draw.
2. Distribute materials.
3. Have students play the game.

Join and Separate

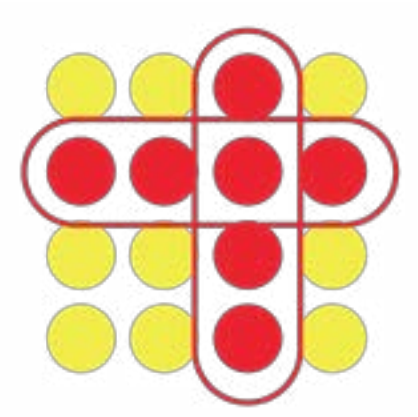
Fluency Builder

Four in a Row

Your partner shows you a card.

You solve the problem.

You cover a space.



4 in a row wins!

Join and Separate

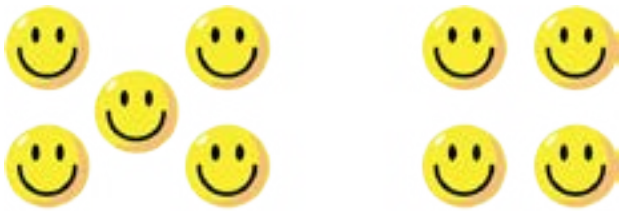
Fluency Builder

Four in a Row
Game Board

Join and Separate

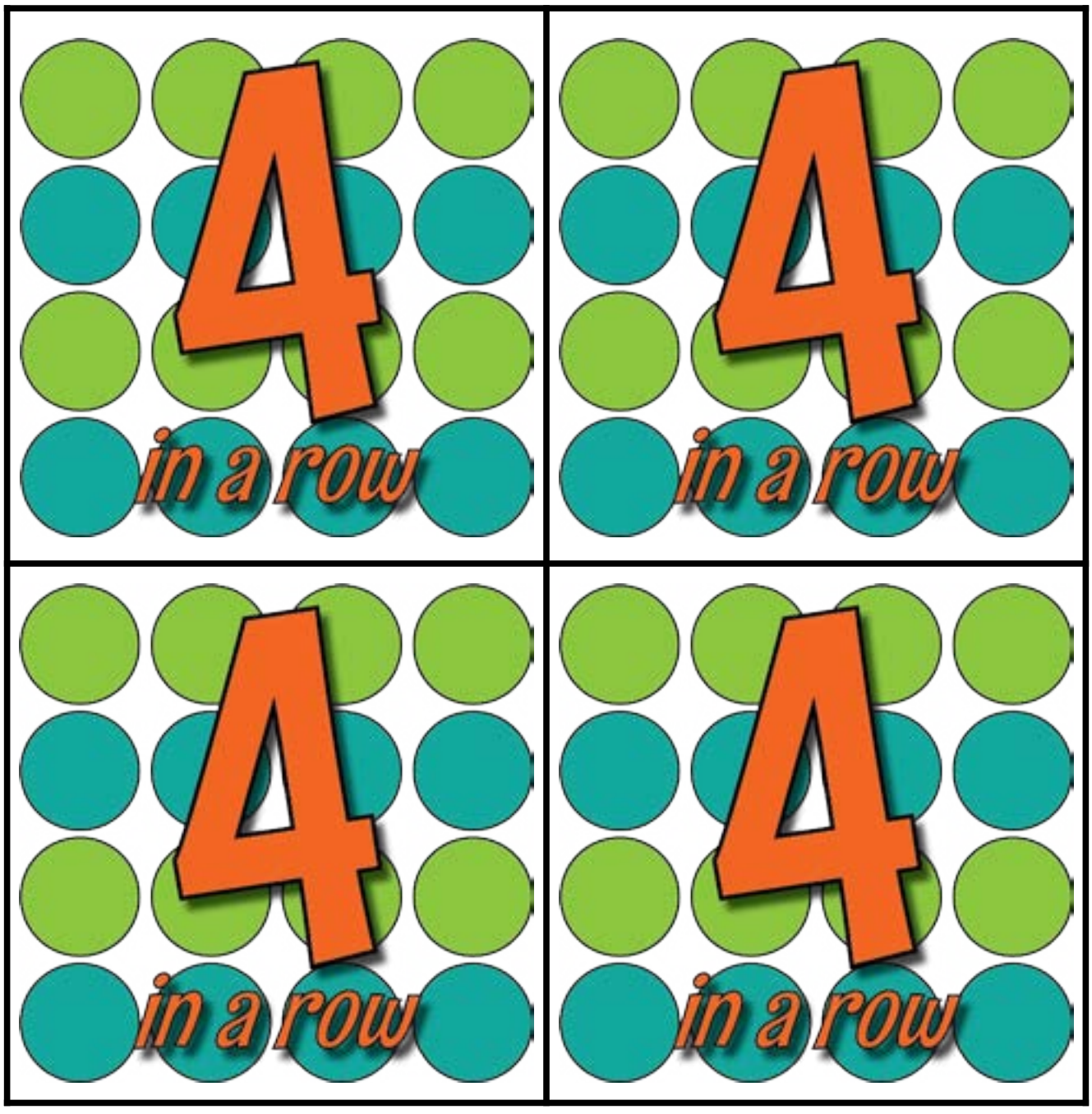
Fluency Builder

Four in a Row Playing Cards (Front of Page 1)

 5 + 4 = 9	 4 + 3 = 7
 9 – 5 = 4	 7 – 4 = 3

Fluency Builder

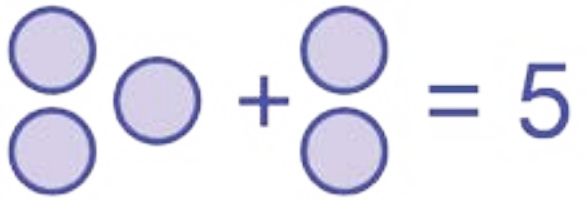
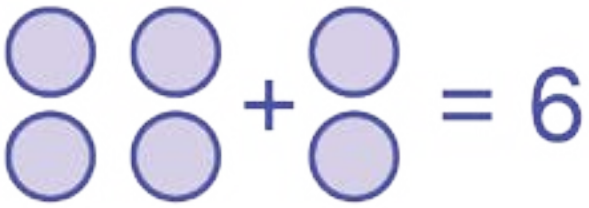
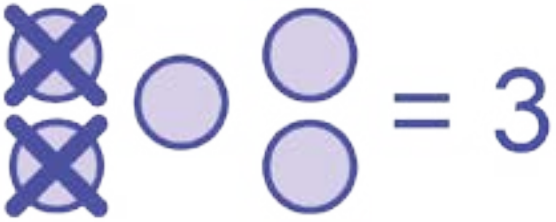
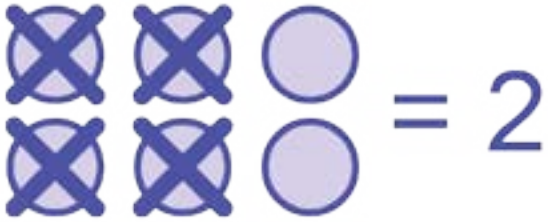
Four in a Row Playing Cards (Back of Page 1)



Fluency Builder

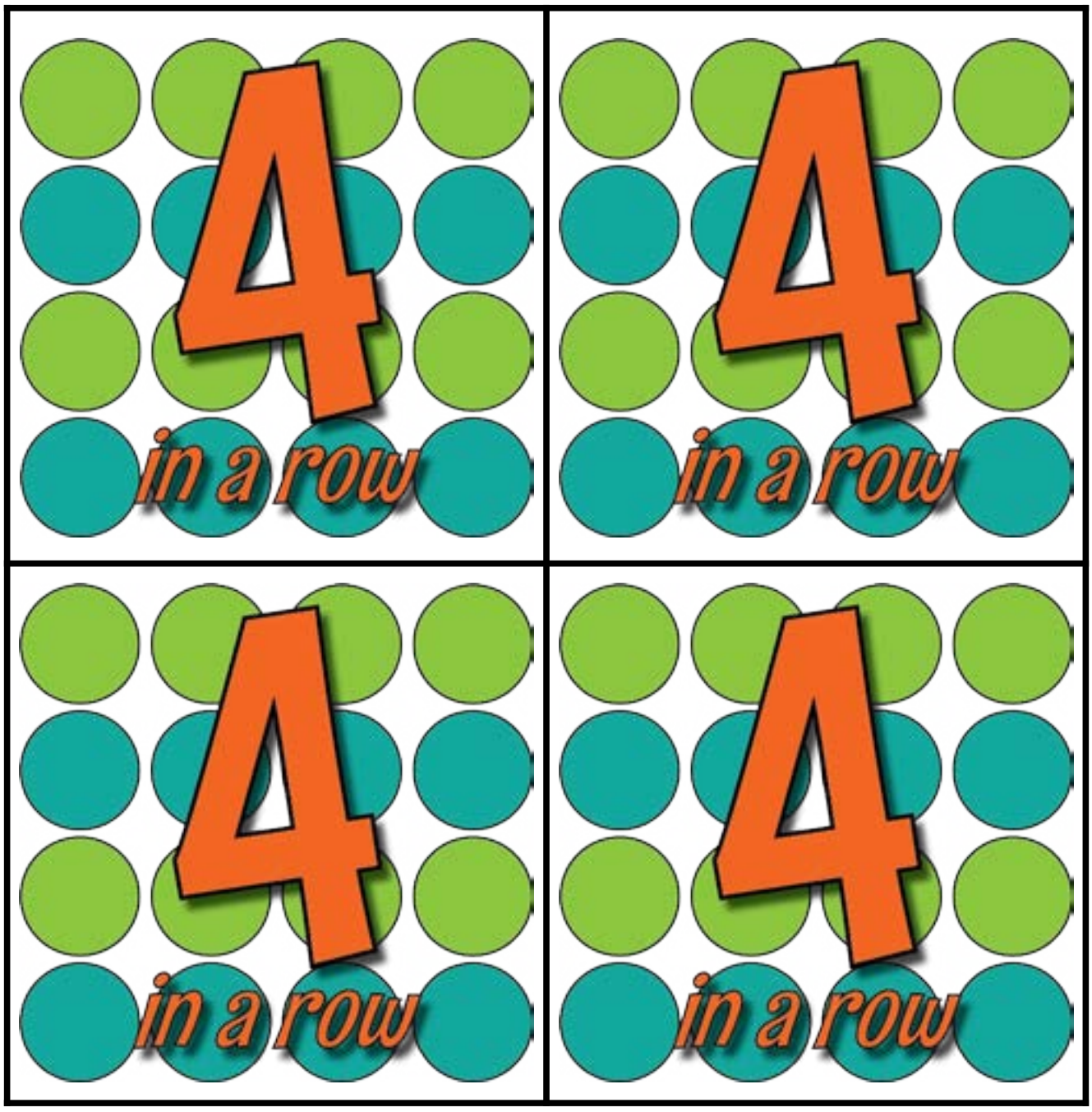
Join and Separate

Four in a Row Playing Cards (Front of Page 2)

Draw and Solve! 3 + 2 = ? 	**Draw and Solve!** 4 + 2 = ? 
Draw and Solve! 5 - 2 = ? 	**Draw and Solve!** 6 - 4 = ? 

Fluency Builder

Four in a Row Playing Cards (Back of Page 2)



Fluency Builder

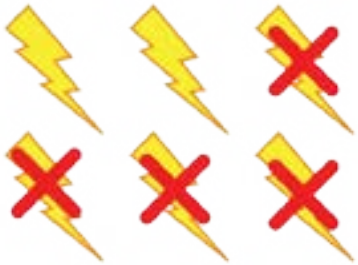
Join and Separate

Four in a Row Playing Cards (Front of Page 3)

4 + 4 = 8

2 + 4 = 6

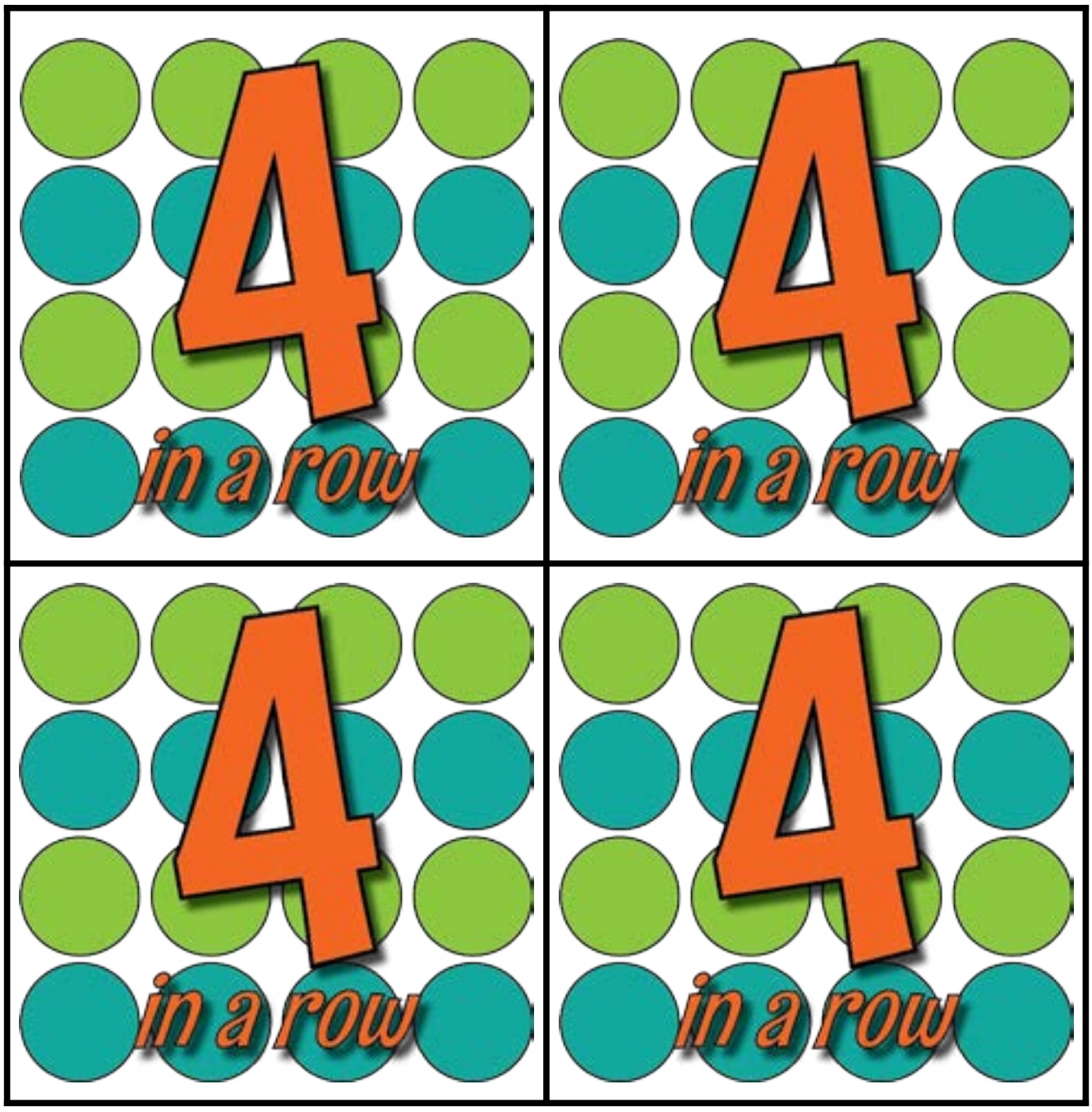
8 – 4 = 4



6 – 4 = 2

Fluency Builder

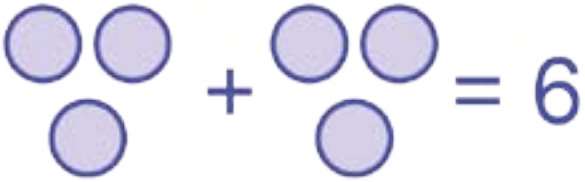
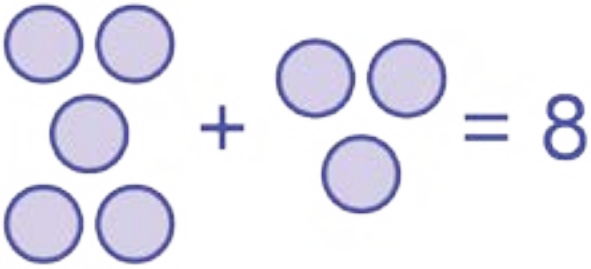
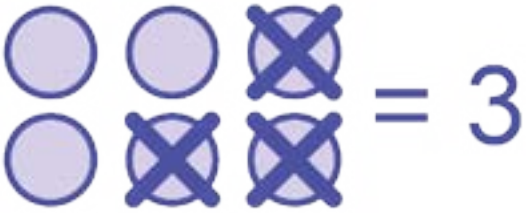
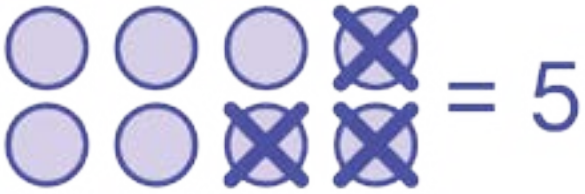
Four in a Row Playing Cards (Back of Page 3)



Fluency Builder

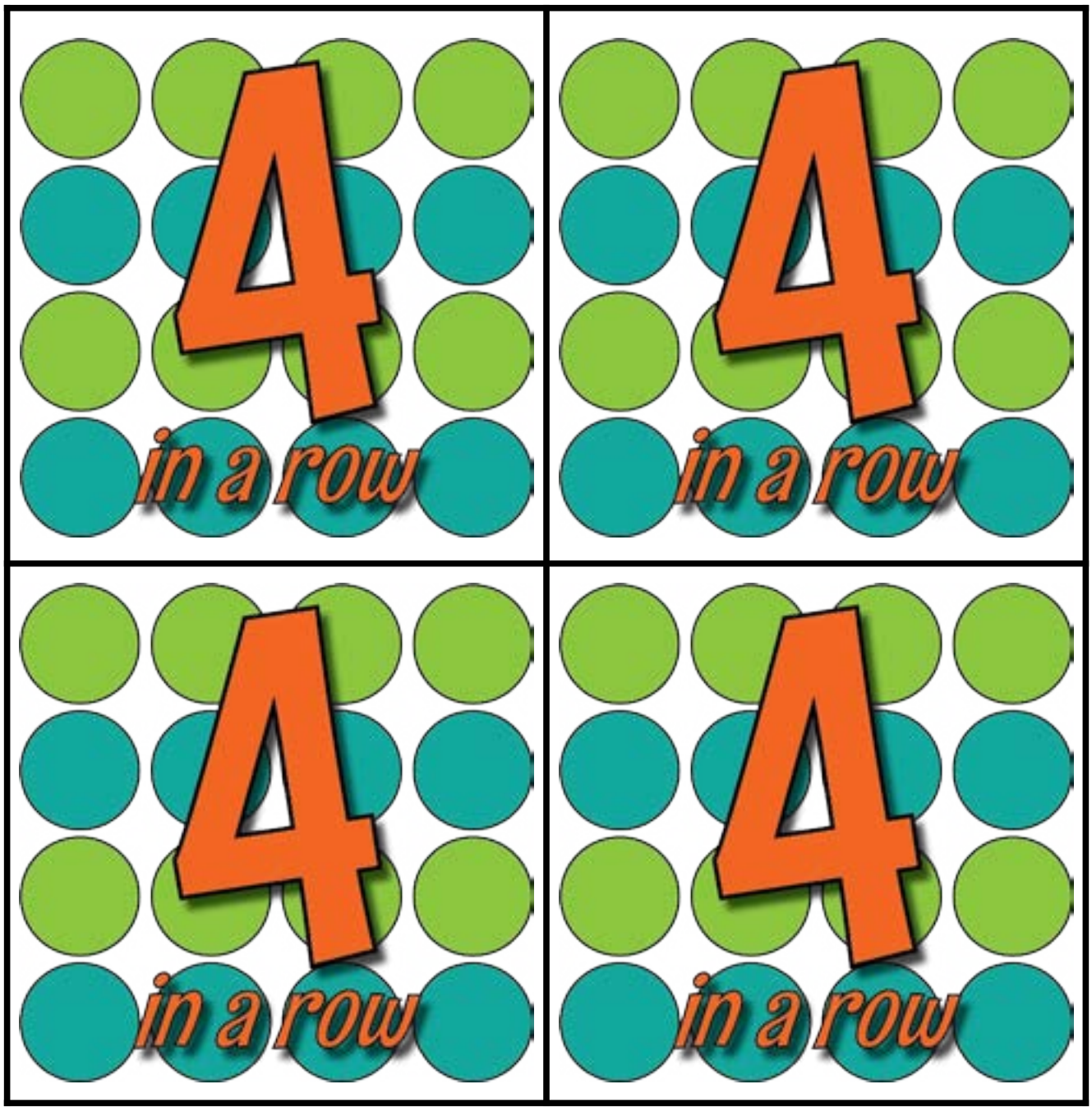
Join and Separate

Four in a Row Playing Cards (Front of Page 4)

Draw and Solve! **3 + 3 = ?** 	**Draw and Solve!** **5 + 3 = ?** 
Draw and Solve! **6 - 3 = ?** 	**Draw and Solve!** **8 - 3 = ?** 

Fluency Builder

Four in a Row Playing Cards (Back of Page 4)

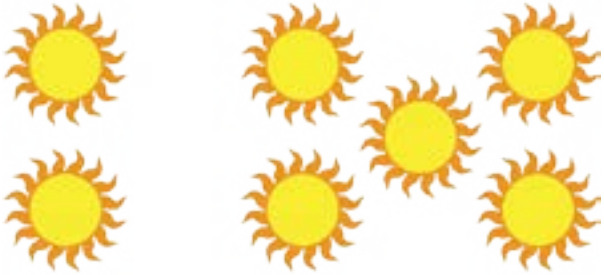


Fluency Builder

Join and Separate

Four in a Row Playing Cards (Front of Page 5)

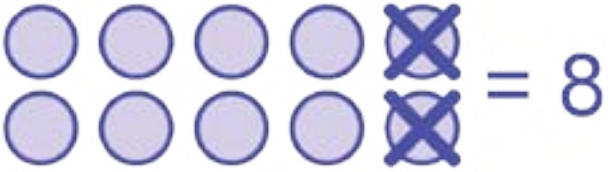
8 + 2 = 10



2 + 5 = 7

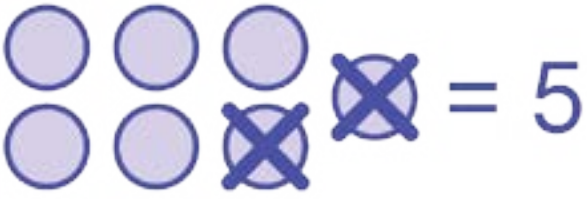
Draw and Solve!

10 - 2 = ?



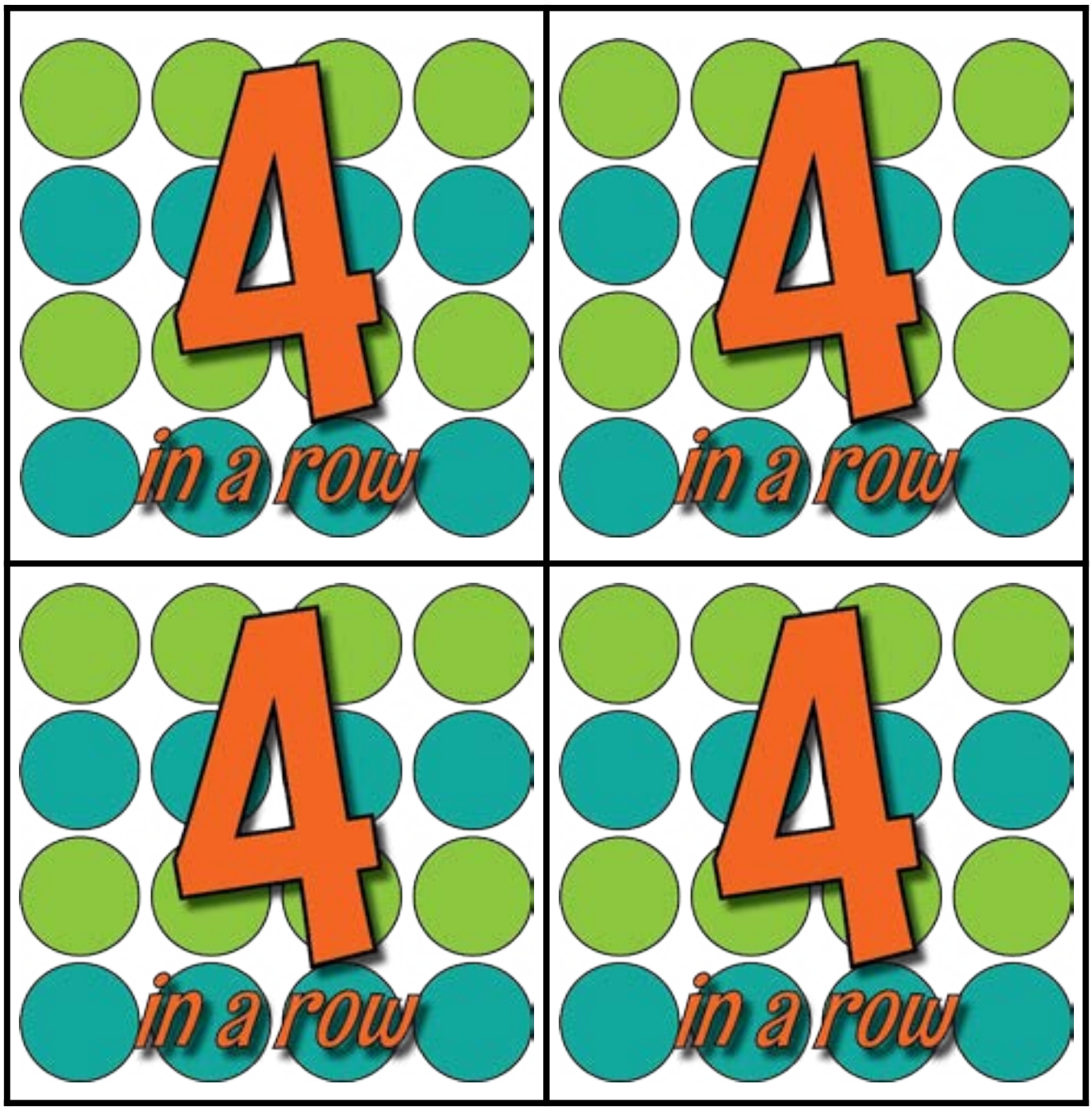
Draw and Solve!

7 - 2 = ?



Fluency Builder

Four in a Row Playing Cards (Back of Page 5)



Join and Separate

Fluency Builder

Name: _____ Date: _____

Student Recording Sheet

Fluency Builder

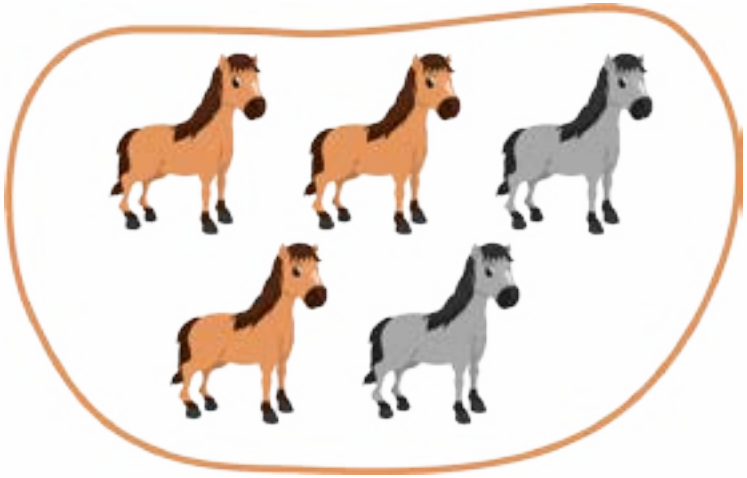
Join and Separate

Join and Separate

Picture Vocabulary

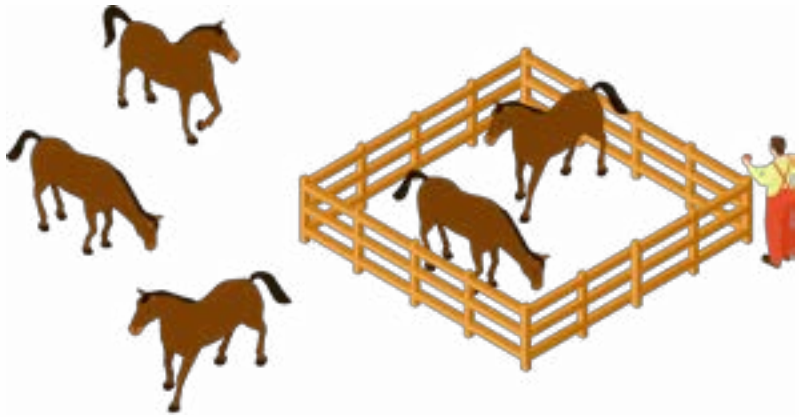
1

Join



2

Separate

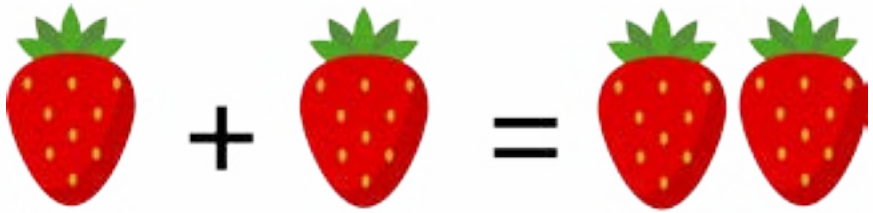


3

Solve

4

Add

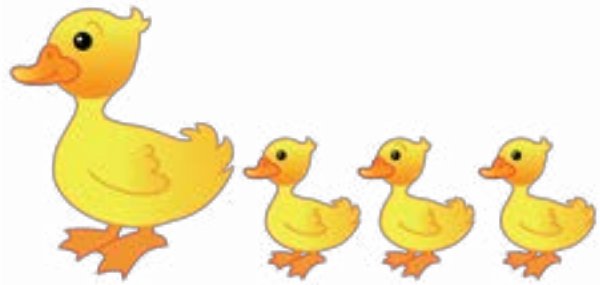


5

Subtract

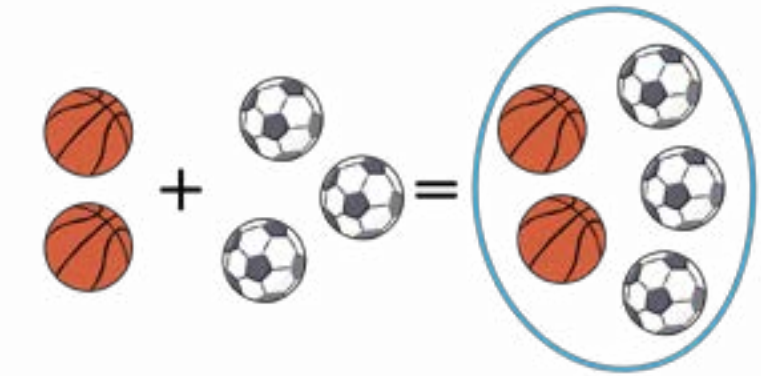
6

Total



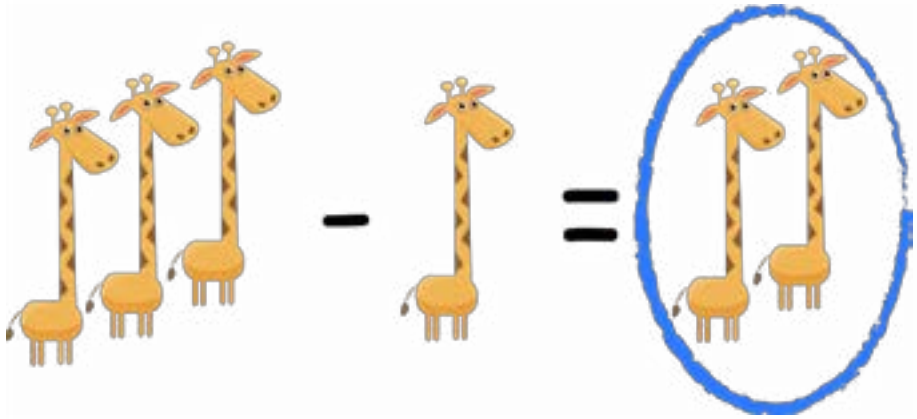
7

Sum

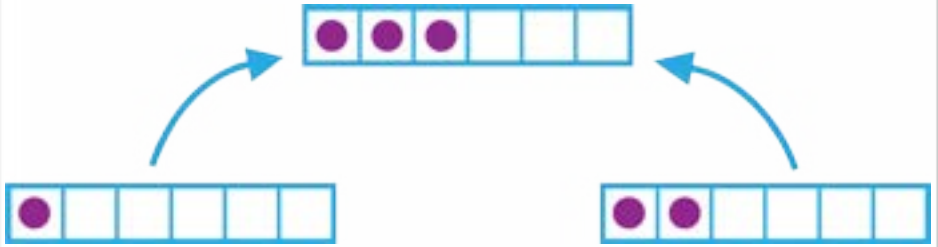


8

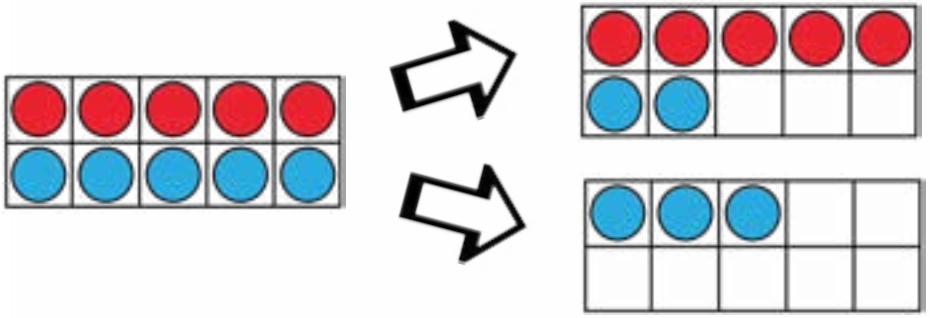
Difference



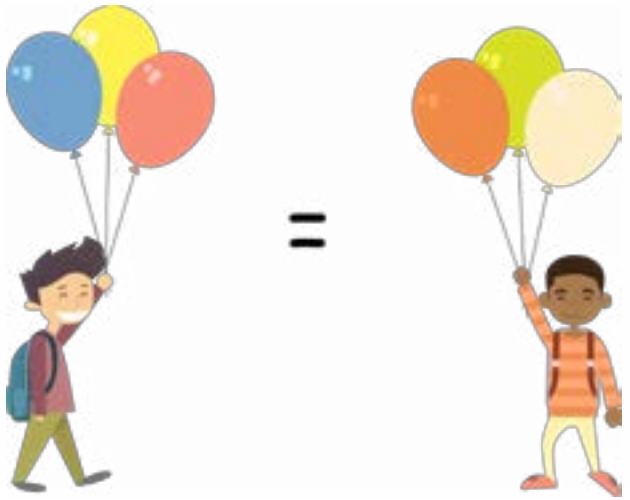
Compose



Decompose



Equal



WHAT IS DAILY NUMERACY?

The goal of Daily Numeracy is to empower students to reason with numbers in an accurate, efficient, and flexible way. We have included a carefully crafted, purposeful activity sample designed to help students build their thinking and reasoning around relationships and connections. Each grade level has numerous Daily Numeracy activities.

Not Like the Others Activity

DESCRIPTION

Students describe the characteristics of an object in a set of 4 and discuss how it is different from the others.

MATERIALS

PRINTED

- 1 Slideshow (per class)

REUSABLE

- 1 Projector or document camera (per class)

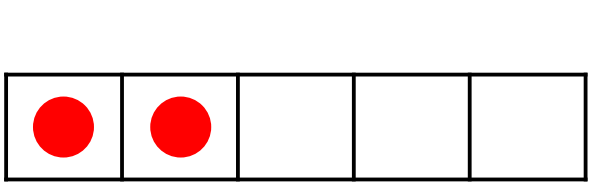
PREPARATION

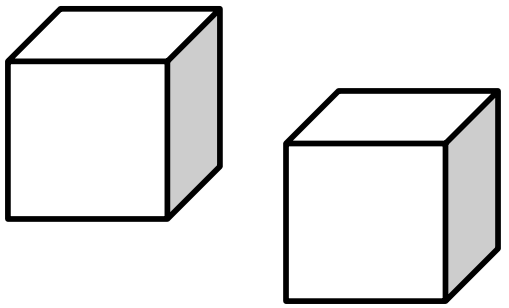
- Prepare to project the Slideshow prompt of the day for the class.

PROCEDURE AND FACILITATION POINTS

1. Gather students together and project the Slideshow prompt of the day. Students should not have anything with them for this activity.
2. Give students a minute of silent think time as they look at the pictures on the prompt. Ask students relevant guiding questions:
   a. What do you notice?
   b. Which one is not like the others?
   c. What characteristic makes it different?
   d. How are these objects similar?
   e. Do you see another object that is not like the others?
3. Listen to multiple student responses. Accept any answer with accurate reasoning.
4. As students discuss which one is not like the others, ask the class if they agree or disagree. Provide the following sentence stems for their responses:
   a. I agree because …
   b. I disagree because …
   c. Can you explain why you …?

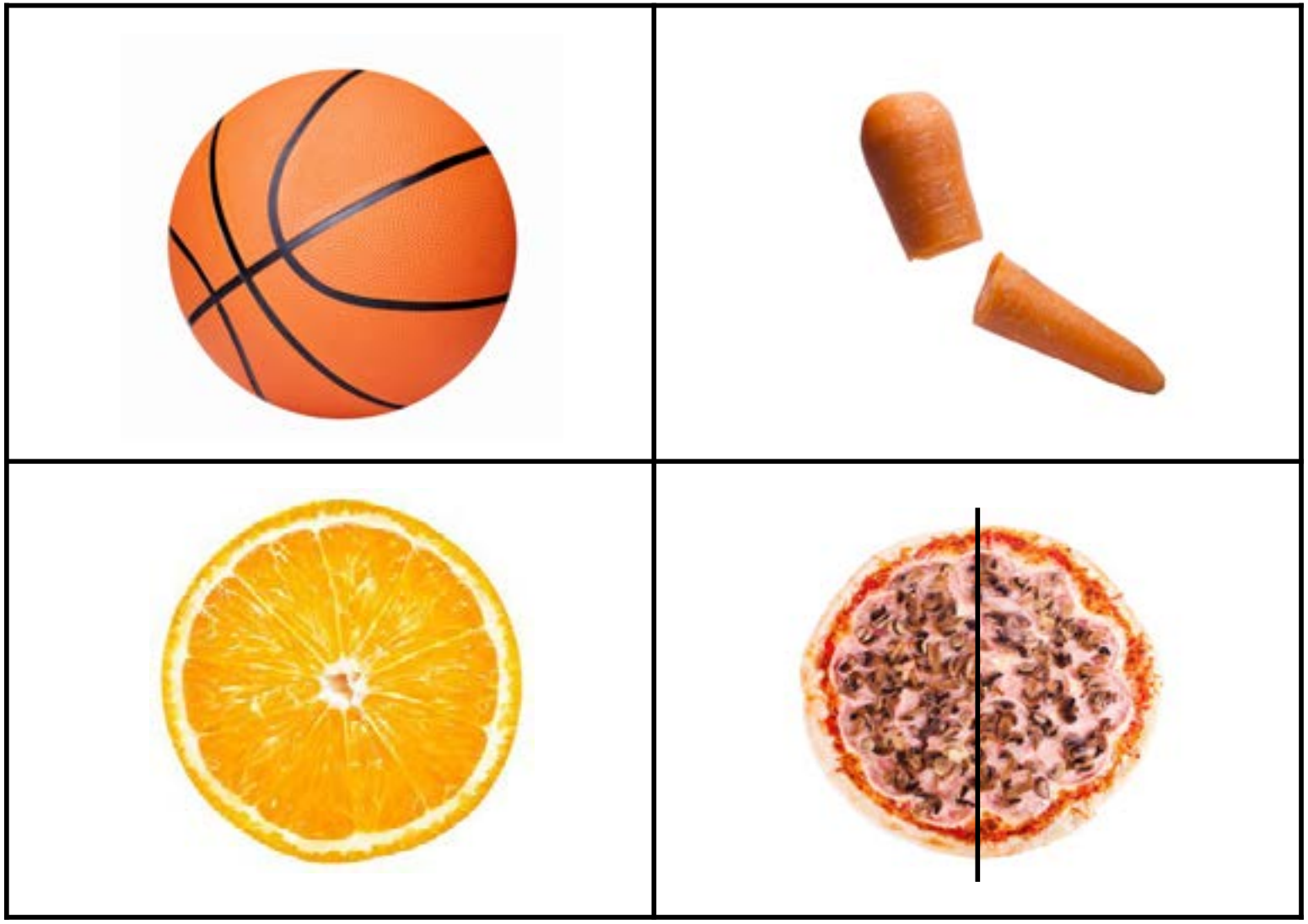
Daily Numeracy



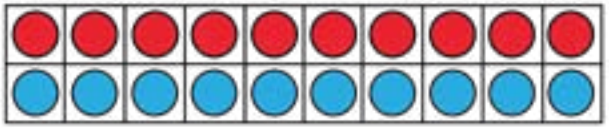
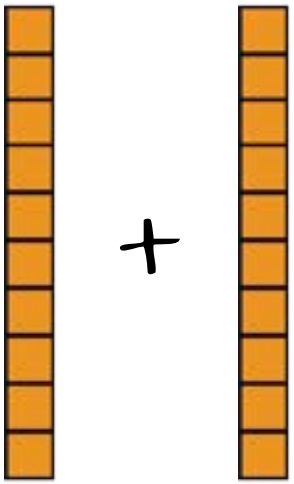


2

Daily Numeracy



Daily Numeracy

20	
	10 and 8 and 1

WHAT IS FACT FLUENCY?

In order for students to be successful as they progress into upper grades, they need to have a solid understanding of the concepts of addition and subtraction, and they also need to be fluent in the thinking strategies necessary for solving such facts. As you use the STEMscopes Math program, you will come to see how your students are starting to rely on their thinking skills and strategies as opposed to their fingers or skip-counting methods. Each grade level has numerous Fact Fluency activities.

Sums with Five Mini-Lesson

DESCRIPTION

Students use a five frame and counters to find sums within 5.

MATERIALS

PRINTED

- 1 Five Frame (per student)
- 1 Recording Sheet (per student)

REUSABLE

- 5 Two-colored counters (per pair and teacher)

CONSUMABLE

- 1 Brown paper bag (per pair and teacher)

PREPARATION

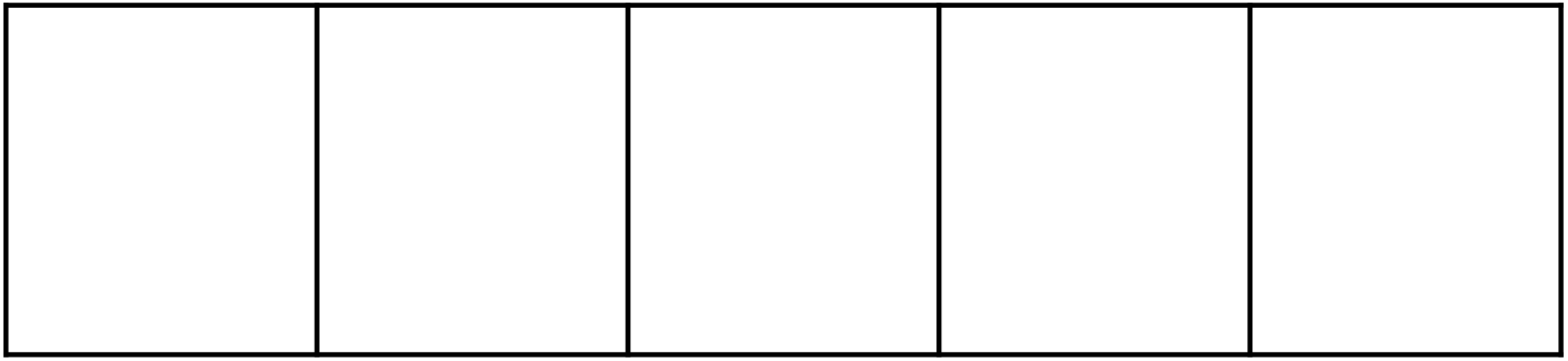
- Have students work with partners to complete this activity.
- Place 5 two-colored counters in a brown paper bag for each partnership and for teacher demonstrations.
- Print the Five Frame for each partnership.
- Print the Recording Sheet for each student.

PROCEDURE AND FACILITATION POINTS

1. Say: "We are going to play a game called 'Grab for a Sum.' I am going to grab some counters out of the bag." Grab from 0–5 counters and show students the counters you grabbed.
2. Ask the following questions:
   a. How many counters did I grab? Answers vary from 0–5.
   b. What strategy did you use to know how many I grabbed? Answers will vary. I counted them one by one. I just looked at them and knew there were 3.
   c. Do you think I will grab the same number of counters each time I place my hand in the bag? Why or why not? Answers will vary. No, because there are not enough in the bag to grab the same exact amount. Sometimes you could trick us and grab 0 counters.
3. Place the counters on the five frame and ask students to tell you how many you have. Make sure students understand that the number you grab is still that number when you place the counters on the five frame. Write the number on the board.
4. Say: "I am going to grab some more counters." Grab from 0–4 counters and show students the counters you grabbed. Place this group of counters one by one on the five frame.
5. Ask the following questions:
   a. How many counters did I grab the first time? Answers vary from 0–5.
   b. How many did I grab now? Answers vary from 0–4.
   c. What strategy did you use to know how many I grabbed? Answers will vary. I counted them one by one. I just looked at them and knew there were 3.
   d. How can we join the counters to find the sum? Answers will vary. We can line them up. We can count them one by one. We can count on from __.
   e. How can you describe what you have just done? Answers will vary. Three and two is five, or two plus three equals five.

6. Show students how you can place the counters on a five frame and count to find the sum. Discuss how sometimes we can look at counters and automatically know how many are there without counting them one by one.
7. Write "and" or the plus sign "+" on the board to the right of the first number you wrote. Then write the number with "equals" or "=" after it. Example: "3 and 2 equals ____." or "3 + 2 = ___". Discuss how to record the first number of counters joined with the second number of counters. Discuss how to count both sets to find the sum.
8. Say: "This is how we record our work and write our number sentence. We could also write the number sentence with the sum at the beginning. We could write 5 = 2 + 3 because both sides of the equal sign are balanced."
9. Say: "Now we will place the counters back in the paper sack so we can play again." Note: Do steps 1–8 one more time. On one turn, grab 0 counters to discuss adding 0.
10. Say: "Now it is time for you to work with a partner to play *Grab for a Sum*."
11. Partner students up, and distribute the paper bags and Five Frames to each partnership. Give each student a copy of the Recording Sheet.
12. Circulate around the room while making sure that students are taking turns grabbing counters to find the sum. Prompt students to say the number sentence as they are finding sums up to 5. Remind students to record their work on the Recording Sheet.
13. Have students continue until they have found at least 5 sums with their partnership's counters.
14. Discuss the following questions:
    a. How many counters did each of you grab? Answers vary from 0–5.
    b. What strategy did you use to know how many you grabbed? Answers will vary. For example: I counted them one by one. I just looked at them and knew there were 3.
    c. What is the sum of your counters and your partner's counters? How did you know? Answers will vary. We placed them on the five frame and counted them all. We started with 2 and counted on. I just looked at them and knew there were 5.
    d. How can you record your work? Answers will vary. For example: I can write 3 + 2 = 5.
    e. Is there another way you could write the number sentence? Answers will vary. Yes, I could write 5 = 3 + 2; I could write 2 + 3 = 5.
    f. How can you describe what you have just done? Answers will vary. Three and two is five or two plus three equals five.

Five Frame



Fact Fluency

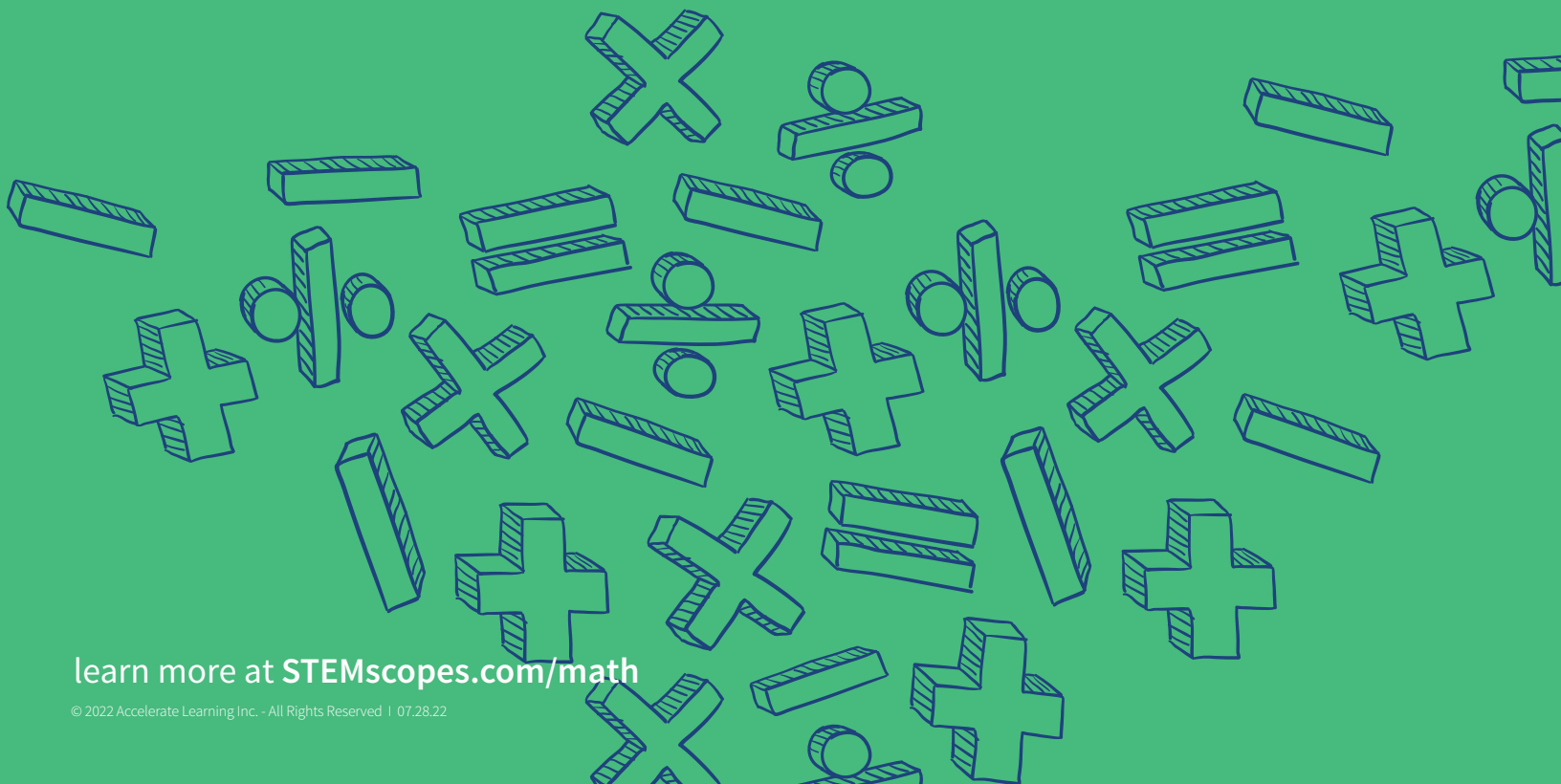
Fact Fluency: Sums within 5
Mini Lesson

Name: _____ Date: _____

Recording Sheet

For each round, record how many counters you grabbed and how many counters your partner grabbed. Write the sum. Say the number sentence to your partner.

Round	Number Sentence
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	



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