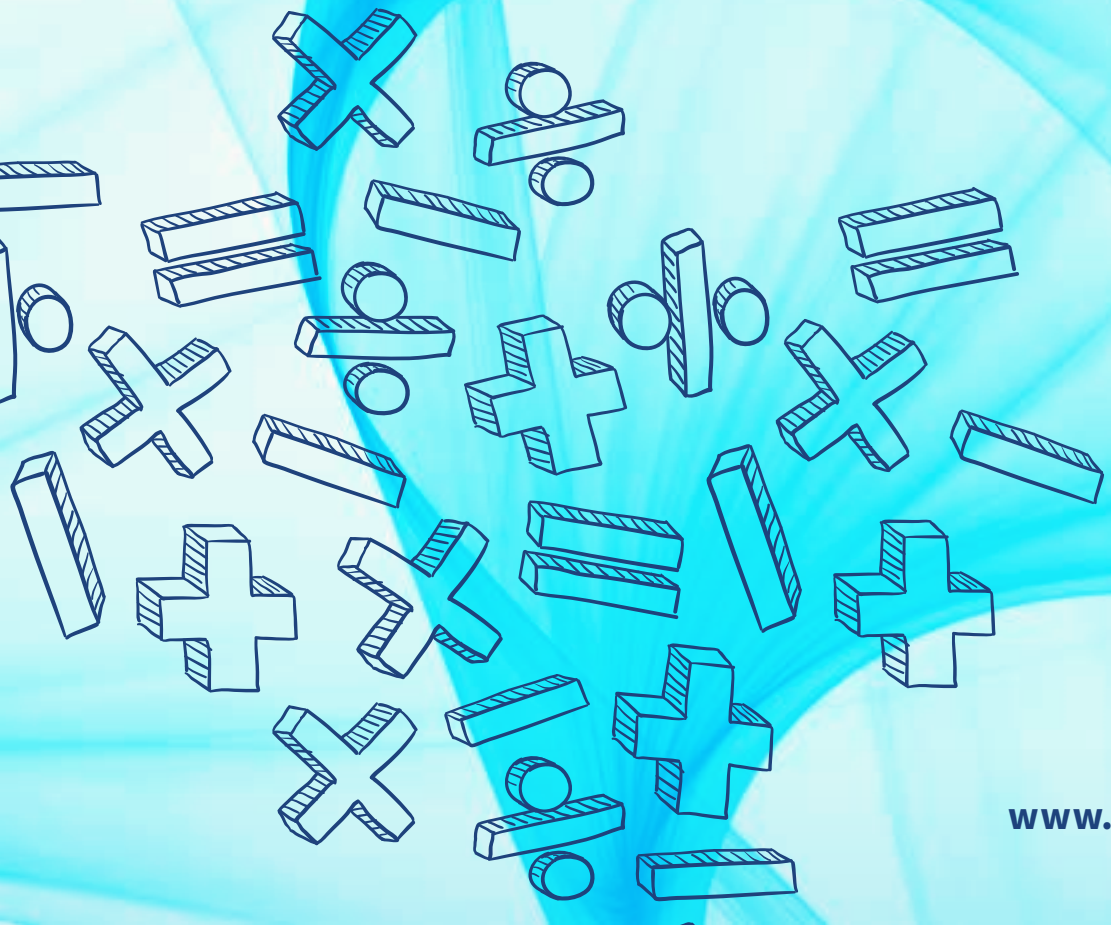
STEMscopes™ MATH

2ND GRADE
TEACHER LESSON SAMPLE

REPRESENT NUMBERS TO 1,000



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.

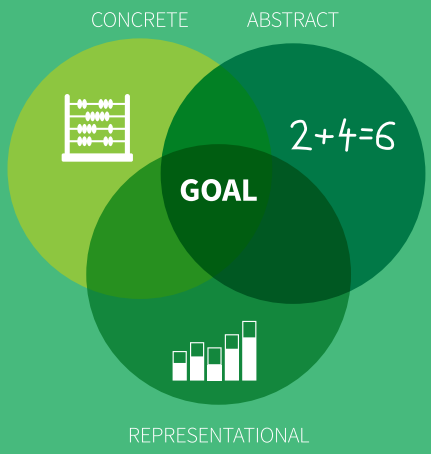
DESIGNED FOR NEW AND VETERAN TEACHERS

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

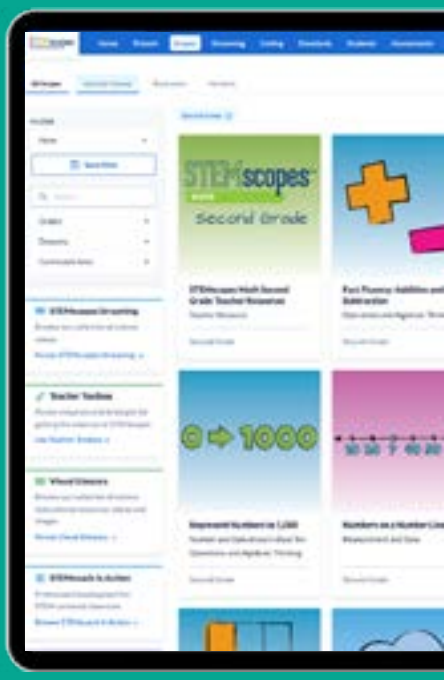
Implementing STEMscopes Math in the classroom provides every student access to high-quality, challenging learning opportunities. The activities within the program are scaffolded and differentiated so that all students find the content accessible, relatable, and challenging. The emphasis on collaborative 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 Second Grade Scope, *Represent Numbers to 1,000*, access our digital curriculum sample at **www.stemscopes.com/math/national/curriculum-sample** and choose the Second Grade level on the left *Grades* menu bar.

Second Grade
SAMPLE LESSON

SCOPE (UNIT) **Represent Numbers to 1,000**
EXPLORE (LESSON) **Grouping Hundreds and Tens to Count Collections**

The following pages introduce resources to help you get the most out of your STEMscopes Math Grade 2 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 *Grade 2 Scope, Represent Numbers to 1,000.*

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: Grouping Hundreds and Tens to Count Collections*

ELABORATE
- "Go Fish" Fluency Builder*

EXPLAIN
- Vocabulary Cards*

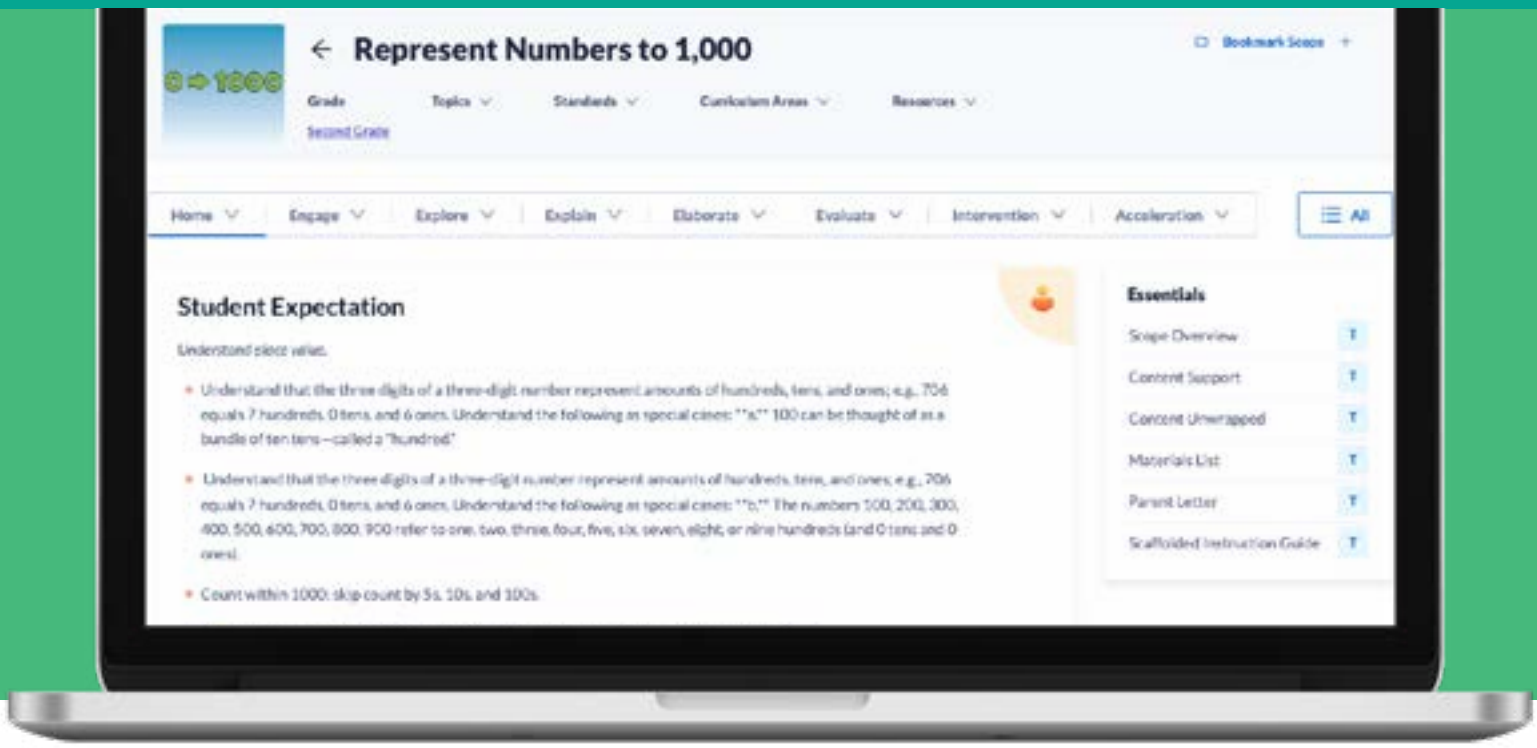
DAILY NUMERACY
- "Not Like the Others" Activity*

FACT FLUENCY
- "Related Facts within 10" Mini-Lesson*

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

Second Grade SAMPLE LESSON

SCOPE (UNIT) **Represent Numbers to 1,000**



STUDENT EXPECTATIONS

Understand place value.

- Understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones; e.g., 706 equals 7 hundreds, 0 tens, and 6 ones. Understand the following as special cases:
  - 100 can be thought of as a bundle of ten tens—called a “hundred.”
- Understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones; e.g., 706 equals 7 hundreds, 0 tens, and 6 ones. Understand the following as special cases:
  - The numbers 100, 200, 300, 400, 500, 600, 700, 800, 900 refer to one, two, three, four, five, six, seven, eight, or nine hundreds (and 0 tens and 0 ones).
- Count within 1,000; skip count by 5s, 10s, and 100s.
- Read and write numbers to 1,000 using base-10 numerals, number names, and expanded form.

Work with equal groups of objects to gain foundations for multiplication.

- Determine whether a group of objects (up to 20) has an odd or even number of members, e.g., by pairing objects or counting them by 2s; write an equation to express an even number as a sum of two equal addends.

KEY CONCEPTS

- I can read numbers to 1,000 using base-10 numerals, number names, and expanded form.
- I can write numbers to 1,000 using base-10 numerals, number names, and expanded form.
- I can determine whether a group of objects (up to 20) has an odd or even number by pairing objects or counting them by 2s.
- I can write an equation to express an even number as a sum of two equal addends.
- I can understand that three digits of a three-digit number represent amounts of hundreds, tens, and ones, which are included in special cases such as: * 100 can be thought of as a bundle of ten tens—called a “hundred.” * The numbers 100, 200, 300, 400, 500, 600, 700, 800, and 900 refer to one, two, three, four, five, six, seven, eight, and nine hundreds (and 0 tens and 0 ones).
- I can count within 1,000 skip counting by 5s.
- I can count within 1,000 skip counting by 10s.
- I can count within 1,000 skip counting by 100s.

Scope Overview

Standards

- Understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones; e.g., 706 equals 7 hundreds, 0 tens, and 6 ones. Understand the following as special cases:
  A) 100 can be thought of as a bundle of ten tens – called a "hundred."
  B) The numbers 100, 200, 300, 400, 500, 600, 700, 800, and 900 refer to one, two, three, four, five, six, seven, eight, or nine hundreds (and 0 tens and 0 ones).
- Count within 1000; skip-count by 5s, 10s, and 100s.
- Read and write numbers to 1000 using base-ten numerals, number names, and expanded form.
- Determine whether a group of objects (up to 20) has an odd or even number of members, e.g., by pairing objects or counting them by 2s; write an equation to express an even number as a sum of two equal addends.

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

Engage

- Accessing Prior Knowledge: Represent Numbers to 100
- Foundation Builder: Represent Numbers to 100
- Hook: Chips in a Bag

Home

- Scope Overview
- Content Support
- Standards Unwrapped

Explore

- Skill Basics: Power of Ten
- Explore 1: Grouping Hundreds and Tens to Count Collections
  - Exit Ticket
  - Show What You Know: Part 1
- Skill Basics: Introduce Base Ten Blocks and How to Represent
- Explore 2: Grouping Hundreds, Tens, and Ones to Count Collections
  - Exit Ticket
  - Show What You Know: Part 2
- Skill Basics: Different Ways to Write a Number (Standard Form, Word Form, Expanded Form, Pictorial Model)
- Explore 3: Representing Numbers in Different Ways
  - Exit Ticket
  - Show What You Know: Part 3
- Explore 4: Counting and Place Value Patterns
  - Exit Ticket
  - Show What You Know: Part 4
- Skill Basics: Even and Odd Numbers with Partners
- Explore 5: Even and Odd
  - Exit Ticket
  - Show What You Know: Part 5

Elaborate

- Fluency Builder
  - Go Fish
  - Four in a Row
  - Risky Wagers
- Spiraled Review: Zoo Field Trip
- Math Story: Riverwalk Pet Shop
- Problem-Based Task: Base-Ten Buildings
- Interactive Practice
  - Taco Tycoon
  - Jungle Journey
- Life Connections: Fundraiser

Explain

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

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.

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

Evaluate

- Decide and Defend: What's My Place?
- Standards-Based Assessment
- Skills Quiz

Intervention

- Small-Group Intervention
- Supplemental Aids

Acceleration

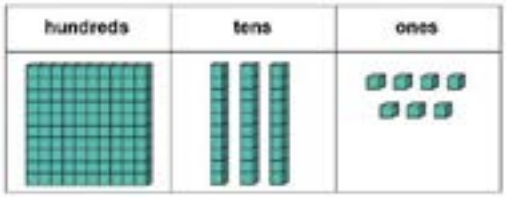
- Math Today: Panda on a Plane
- Connection Station: Natural Earth Events

Second Grade – Represent Numbers to 1,000

Dear Parents,

Your child is about to explore representing numbers to 1,000. To master this skill, your child will build on his or her knowledge of representing numbers up to 100. As your child extends his or her knowledge of this concept throughout second grade, he or she will learn the following concepts:

- How to use models and place value mats to understand that the place value system is based on the number 10. For example, this represents the number 137:



- How to represent the three digits of a three-digit number as amounts of hundreds, tens, and ones
- How to count within 1,000 and skip count by 5s, 10s, and 100s
- How to determine whether a number to 20 is odd or even by pairing numbers to find if there is an unmatched pair

While working with your child at home, you may find the following vocabulary terms helpful in your communication about representing numbers to 1,000. 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.

- **Compose**: To combine or build a number
- **Decompose**: To break apart a number into smaller parts
- **Standard form**: The number form of a given number (e.g., 1,106)
- **Word form**: The word form of a given number (e.g., one thousand one hundred six)
- **Expanded form**: An expression that represents the value of each digit (e.g., 1000 + 100 + 6)

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

Number Find and Describe 1. Ask your child to find any three-digit number at home or while out with you. 2. Have your child describe to you the number of hundreds, tens, and ones in the number he or she chose.	**Number Strips** 1. Write the numbers 0–9 on 10 strips of paper so that every strip has a different number. 2. Ask your child to build a number with a given amount of hundreds, tens, and ones. 3. Have your child say the number aloud and write the standard form. 4. Let your child challenge you to build numbers with the strips, and then have your child check your work.	**Find up to 1,000** 1. When you are out of the house with your child, look for examples of numbers less than 1,000. 2. Discuss what the different digits in the number represent.
Roll a Number 1. Write the place values on a piece of paper. 2. Have your child roll a die for each place value from the ones to the hundreds and then record that number in expanded form. 3. Write the number in standard and word form.	Free Space	**Odd or Even** 1. Pick a collection of up to 20 items such as toy figurines, coins, or stickers. 2. Ask your child to pair them until there are 0 items or 1 item left over. 3. Have your child define the number of items as odd (1 item left over) or even (0 items left over). 
Take It Apart 1. Write any number up to 1,000 on a piece of paper. 2. Have your child cut each digit of the number apart but keep the digits in order. 3. Ask your child to draw each place value using the base-ten models. Your child will draw squares for hundreds, lines for tens, and dots for ones.	**Place Value Addition** 1. Choose any number up to 1,000, and write it for your child to see. 2. Have your child name each digit and its place value (e.g., 1 in the hundreds place). 3. Ask your child how many of each place value he or she needs to add to make that number. 4. Have your child say aloud his or her addition sentence. For example, 1 hundred plus 5 tens plus 8 ones is 158.	**Which Ones Don't Have Partners?** 1. With your child, draw the numbers 1 through 10 using dots, making sure to draw pairs of dots together. 2. Go back through each drawing, and find the numbers that do not have partners. Give these numbers the group name *odd*. 3. Ask your child to find other examples of odd numbers.

Second Grade Scope List

Scope Name	Explores	Suggested Pacing
Represent Numbers to 1,000	5 Explores	2 Weeks
Numbers on a Number Line	3 Explores	1 Week
Compare Numbers to 1,000	2 Explores	1 Week
Fractions	2 Explores	1 Week
Addition and Subtraction Strategies	4 Explores	2 Weeks
Addition and Subtraction Problem Solving	4 Explores	2 Weeks
Money	5 Explores	2 Weeks
Arrays	2 Explores	1 Week
Two-Dimensional Shapes	3 Explores	1 Week
Three-Dimensional Solids	5 Explores	2 Weeks
Length	3 Explores	1 Week
Area	2 Explores	1 Week
Time	4 Explores	2 Weeks
Data Analysis	4 Explores	2 Weeks
Addition and Subtraction Fact Fluency	10 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 lean on as you find how STEMscopes Math best meets the needs of the students in your classroom.

SECOND GRADE

Week	Scope	Clusters
1	• Establish classroom procedures • **Pre-Assessment Benchmark**	Major
2	• Represent Numbers to 1,000	Major
3	• Represent Numbers to 1,000	Major
4	• Represent Numbers to 1,000	Major
5	• Numbers on a Number Line	Major
6	• Numbers on a Number Line	Major
7	• Compare Numbers to 1,000	Major
8	• Compare Numbers to 1,000	Major
9	• Fractions	Additional
10	• Fractions	Additional
11	• Addition and Subtraction Strategies	Major
12	• Addition and Subtraction Strategies	Major
13	• Addition and Subtraction Problem Solving	Major
14	• Addition and Subtraction Problem Solving	Major
15	• Money	Supporting
16	• Money	Supporting
17	• Money	Supporting
18	• Arrays	Supporting
19	• Arrays • **Mid-Assessment Benchmark**	Major
20	• Two-Dimensional Shapes	Additional
21	• Two-Dimensional Shapes	Additional
22	• Three-Dimensional Solids	Additional

Week	Scope	Clusters
23	• Three-Dimensional Solids	Additional
24	• Length	Major
25	• Length	Major
26	• Area	Additional
27	• Area	Additional
28	• Time	Supporting
29	• Time	Supporting
30	• Data Analysis	Supporting
31	• Data Analysis	Supporting
32	• **Post-Assessment Benchmark**	Major
33	Review: • Represent Numbers to 1,000 • Compare Numbers to 1,000	Major
34	Review: • Addition and Subtraction Strategies • Addition and Subtraction Problem Solving • Arrays	Major
35	Review: • Fractions • Area • Time	Supporting/ Additional
36	Review: • Money • Two-Dimensional Shapes • Three-Dimensional Solids	Supporting/ Additional

Week	Daily Numeracy	Clusters
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.	Major

Whole-Group Plan (2nd 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 Connections • Spiraled Review Mastery Level: • Decide and Defend • Math Today • Connection Station 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) Fluency Builder (Choose one.) (For students who do not 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 as independent practice after the 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 the Explore.	Assess how students perform based on individual assignment chosen.	Standards-Based Assessment

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 (2nd 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 Standards-Based Assessment
Small-Group Instruction *Small group/ Stations 70 Minutes	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.	Pull students to work with you on Skill Basics/Explores 2–3.	Pull students to do Small Group Intervention based on needs.	None
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.	1. Fact Fluency 2. Decide and Defend 3. Skills Quiz 4. Connection Station 5. Math Today 6. 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 Ticket to assess student learning after the Explore. Allow students to work on Show What You Know as independent practice after the 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 the Explore.	Student success with intervention can be assessed using the Checkup. Other students can be assessed by their performance on the Problem-Based Task.	Standards-Based Assessment

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 (2nd 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 the 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 the 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 the 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 the 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.

Whole-Group Plan (2nd 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 Spiraled Review	Fact Fluency/Daily Numeracy Interactive Notebook Math Story Problem-Based Task	Fact Fluency/Daily Numeracy Teacher Choice[3] Meets Level: • Decide and Defend • Connection Station Approaching Level: • Interactive Practice • Skills Quiz	Fact Fluency/Daily Numeracy Small Group Intervention (for students who need it) 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 the Explore.	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.	Standards-Based Assessment

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 (2nd 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 and discuss what students worked on.	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 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.	Pull students to work with you on Skill Basics/Explore 2.	Pull students to work with you on Skill Basics/Explore 3.	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 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 the 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 the 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 the 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 the 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 (2nd 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 Standards-Based Assessment
Small-Group Instruction	Pull students to work with you on Skill Basics/Explore 4.	Pull students to work with you on Skill Basics/Explore 5.	Hook (Post-Explore) Interactive Notebook	Small Group Intervention	None
*Small group/ Stations 70 Minutes **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 4. Decide and Defend 5. Skills Quiz	Have students work in groups on the Problem-Based Task.	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 the 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 the Explore.	Administer the Exit Tickets to assess student learning.	Student success with intervention can be assessed using the Checkup. Other students can be assessed by their performance on the Problem-Based Task.	Standards-Based Assessment

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.

Represent Numbers to 1,000 SAMPLE

Explore 1 - Grouping Hundreds and Tens to Count Collections

Prior to completing this Explore, have students complete **Skill Basics - Power of Ten** so they can apply the skill to this concept.

Description

Students count a collection up to 1,000 by grouping objects into hundreds and tens.

Standards for Mathematical Practice

- **MP.4 Model with mathematics:** Students represent place value using concrete and pictorial representations.
- **MP.7 Look for and make use of structure:** Students find a structure in the place value system by grouping 10 ones into a unit of 1 ten and 10 tens into a unit of 1 hundred.

Materials

Printed

1 Student Journal (per student)

1 Exit Ticket (per student)

Reusable

1 Set of straws (per station)

- Station 1 – 130 straws
- Station 2 – 610 straws
- Station 3 – 390 straws
- Station 4 – 850 straws
- Station 5 – 570 straws
- Station 6 – 240 straws

10 Rubber bands (per station)

Consumable

6 Tissue boxes, or other small containers (per class)

Preparation

- Plan to divide the class into 6 groups to complete this activity.
- Set up the following stations with the specified number of straws in a tissue box (or other small container) and a set of 10 rubber bands:
  - Station 1 – 130 straws
  - Station 2 – 610 straws
  - Station 3 – 390 straws
  - Station 4 – 850 straws
  - Station 5 – 570 straws
  - Station 6 – 240 straws
- Print the Student Journal and Exit Ticket for each student.
- For students who need more support in recalling information, please see our Place Value Mat Supplemental Aids elements in the Intervention section.

Procedure and Facilitation Points

1. Read the following scenario: *STEMscopes Coffee Shop is taking an inventory of their supplies. You have been assigned to inventory the supply of straws. Your boss needs to know how many straws are in each*

container to determine how many more straws need to be ordered next week. Can you help find the total number of straws in each container from the coffee shop's supply room?

2. Divide the class into 6 groups, and place one group at each station.
3. Direct students' attention to the container of straws and rubber bands. Allow students a few moments to discover the manipulatives and experience how they work with their groups.
4. Instruct students to count the straws in the container at their stations. Encourage students to think about the most efficient way to count the straws using the rubber bands provided.
5. Monitor and talk with students as needed to check for understanding by using guiding questions.
    a. **DOK-2** How are you grouping the straws from your container? Answers will vary. I counted groups of 10. Then I grouped groups of 10 to make 100.
    b. **DOK-2** How are you using the rubber bands? Answers will vary. I am putting a rubber band around ten groups of ten to represent one hundred.
    c. **DOK-2** What are you counting by to find the total number of straws? Answers will vary. I am counting ones. I am counting by tens. I am counting by hundreds.
    d. **DOK-3** Is there another way to group the straws to make counting more efficient? Answers will vary. I could count groups of ten and then make ten groups of ten to equal one hundred. Counting by hundreds will make counting more efficient.
6. Give each student a copy of the Student Journal and ask students to record a pictorial model and the number of hundreds and tens for their number of straws. They will record the number of groups of ten in the total number of straws.
7. Have students rotate to each station, and repeat steps 4 through 6. When students have completed each station and the Student Journal, bring the class together as a whole group.
8. After the Explore, invite the class to a Math Chat to share their observations and learning.

Math Chat	
Questions	**Sample Student Responses**
DOK-3 Explain how you drew a pictorial model of your total straw counts.	We drew a large square to represent one hundred. We drew a line to represent ten.
DOK-1 How many straws were at each station?	Station 1 – 130 straws Station 2 – 610 straws Station 3 – 390 straws Station 4 – 850 straws Station 5 – 570 straws Station 6 – 240 straws

DOK-2 How many hundreds of straws were at station 3?	3
DOK-3 How did you count your straws to find this number?	We counted 39 groups of ten. Then we grouped ten groups of ten to make one hundred. We did that three times until we could not make any more groups of one hundred.
DOK-2 How many groups of ten did you make at station 5?	57 *Students might initially say 7 tens when looking at the Student Journal, but guide them to the understanding that there were 57 groups of ten to begin with, and then they used those to make five hundreds.*
DOK-2 How many groups of ten are in 610?	61
DOK-2 How many hundreds are in 43 groups of ten?	4
DOK-2 What number is equal to 75 groups of ten?	750
DOK-2 What number is equal to 5 hundreds and 9 tens?	590
DOK-3 What was the most efficient way to count the straws?	Counting groups of ten to form groups of one hundred made counting easier and quicker. Once we made as many groups of ten as possible, we could put ten groups together to make one hundred.
DOK-2 What did you skip count by to make counting the straws more efficient? Why is this more efficient than counting by ones?	We skip counted by tens. This is more efficient than counting by ones because it takes less time to count a large number/amount of objects.

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

Instructional Supports

1. Review prerequisite skills such as skip counting.
2. Review how to draw a pictorial model prior to distributing the Student Journal.
3. If students are struggling to keep track of the sets of hundred and ten, provide a place value chart where students can place the straws.

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 self monitor their oral and written language and utilize self-corrective communication strategies.

Beginner: Model responses for students to repeat. When asking about the number of straws at each station, point to the groups of hundreds or tens. Prompt students to say "There are ___ hundreds and ___ tens."

Intermediate: Model and support students in using the question parts to answer, replacing the word order and changing 'you' to 'I'. For example:

How are you grouping the straws from your container? Student responds: I am grouping the straws by ___.

What are you counting by to find the total number of straws? Student responds: I am counting by ___.

Advanced: Provide word walls and anchor charts depicting the words *hundreds* and *tens*. Students may use these to self monitor as they are responding to questions or talking with partners.

Name: _____ Date: _____

Grouping Hundreds and Tens to Count Collections

Draw a pictorial model for the total number of straws at each station. Write how many hundreds and tens there are in this number. Write how many groups of ten there are in the total number.

Station 1

Pictorial Model	Number of Straws
	_____ Hundreds _____ Tens _____ groups of ten in _____

Station 2

Pictorial Model	Number of Straws
	_____ Hundreds _____ Tens _____ groups of ten in _____

Station 3

Pictorial Model	Number of Straws
	_____ Hundreds _____ Tens _____ groups of ten in _____

Station 4

Pictorial Model	Number of Straws
	_____ Hundreds _____ Tens _____ groups of ten in _____

Station 5

Pictorial Model	Number of Straws
	_____ Hundreds _____ Tens _____ groups of ten in _____

Station 6

Pictorial Model	Number of Straws
	_____ Hundreds _____ Tens _____ groups of ten in _____

Reflect

What was the most efficient way to count the straws?

_____

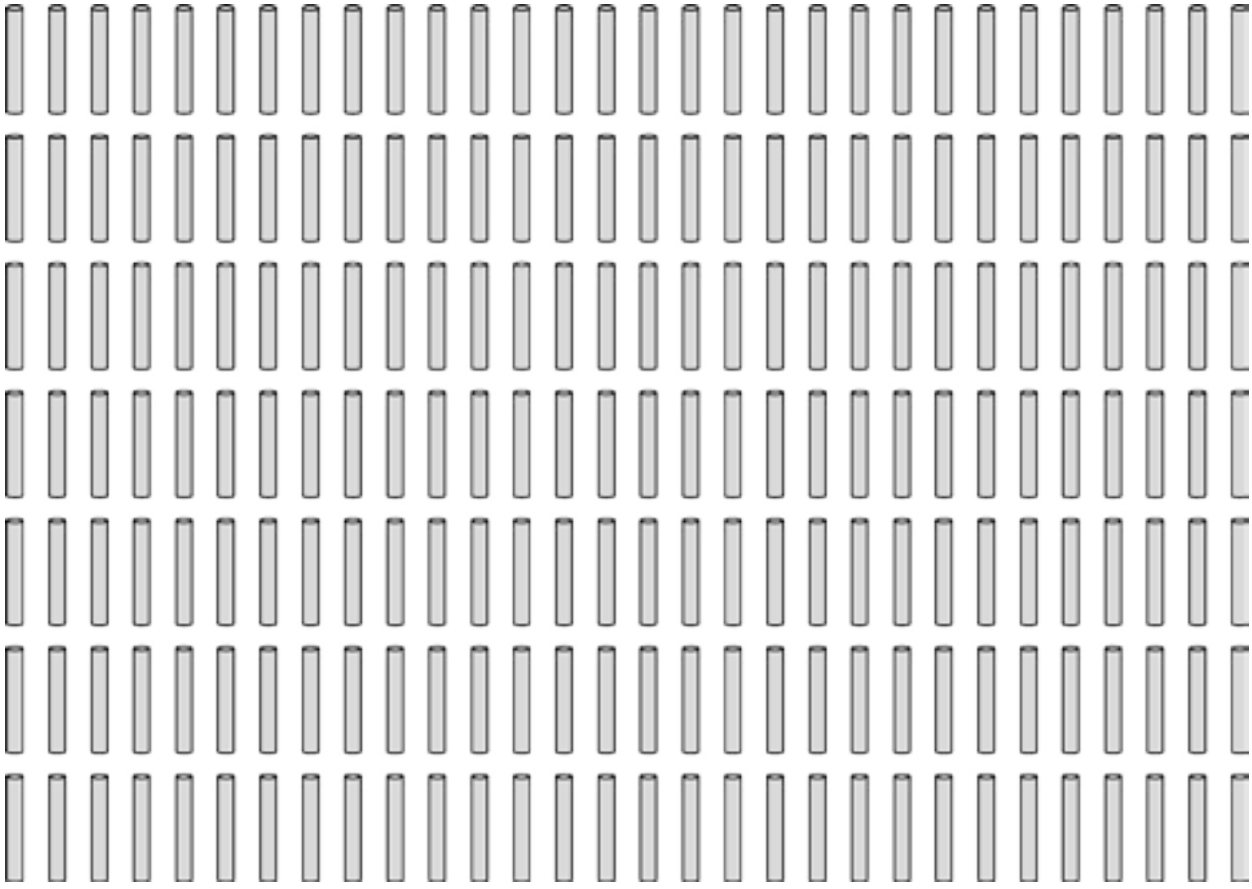
_____

Explore

Name: _____ Date: _____

Grouping Hundreds and Tens to Count Collections
Exit Ticket

Count the collection of straws shown below. Circle groups of ten and groups of one hundred. Write how many hundreds and tens there are for the total number of straws. Write how many groups of ten are in this number.



Total Number of Straws =

Hundreds

Tens

_____ groups of ten in _____

Math Chat

Math Chat
Explain how you drew a pictorial model of your total straw counts.
How many straws were at each station?
How many hundreds of straws were at station 3?
How did you count your straws to find this number?
How many groups of ten did you make at station 5?
How many groups of ten are in 610?
How many hundreds are in 43 groups of ten?

Math Chat

Represent Numbers to 1,000
Explore 1

Math Chat
What number is equal to 75 groups of ten?
What number is equal to 5 hundreds and 9 tens?
What was the most efficient way to count the straws?
What did you skip count by to make counting the straws more efficient? Why is this more efficient than counting by ones?

Math Chat

Question 1:

Explain how you drew a pictorial model of your total straw counts.

Math Chat

Represent Numbers to 1,000
Explore 1

Question 2:

How many straws were at each station?

Math Chat

Question 3:

How many hundreds of straws were at station 3?

Math Chat

Represent Numbers to 1,000
Explore 1

Question 4:

How did you count your straws to find this number?

Math Chat

Question 5:

How many groups of ten did you make at station 5?

Math Chat

Represent Numbers to 1,000
Explore 1

Question 6:

How many groups of ten are in 610?

Math Chat

Question 7:

How many hundreds are in 43 groups of ten?

Math Chat

Represent Numbers to 1,000
Explore 1

Question 8:

What number is equal to 75 groups of ten?

Math Chat

Question 9:

What number is equal to 5 hundreds and 9 tens?

Math Chat

Represent Numbers to 1,000
Explore 1

Question 10:

What was the most efficient way to count the straws?

Math Chat

Question 11:

What did you skip count by to make counting the straws more efficient? Why is this more efficient than counting by ones?

Represent Numbers to 1,000 SAMPLE

Fluency Builder - Go Fish

Description

Students work in small groups to play a Go Fish card game in which the goal is to match the pictorial representation of a number with the standard, expanded, or written form of the number.

Materials

Printed
1 Instruction Sheet (per group)
1 Set of Go Fish Cards (per group)
1 Student Recording Sheet (per student)

Reusable
1 Envelope or resealable bag (per group)

Preparation

- Print and cut enough sets of Go Fish Cards for students to share in small groups (no more than four students per group). When printing the cards, be sure to print them front to back so the game logo is on one side of each card. It is suggested that you laminate each set and place them in an envelope or resealable bag for long-term use.
- Print a Student Recording Sheet for every student.

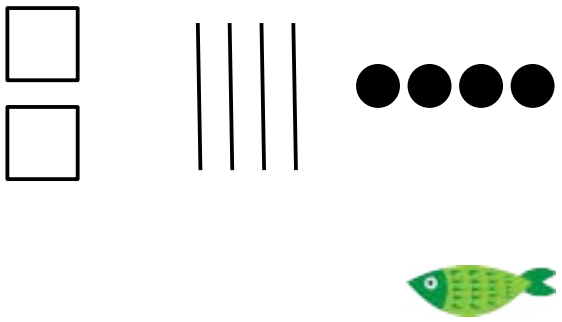
Procedure and Facilitation Points

1. Demonstrate a few rounds of this game with a group of students.
   a. Each player is dealt five cards. Players place all other cards facedown in a pile.
   b. Moving clockwise, each player chooses one card from his or her hand and asks another player for a match. If someone asks a player for a card in his or her possession, the player must give it to him or her. If the player does not have that type of card, the opponent must “go fish” by taking a card from the facedown pile.
   c. Players put any matches they receive faceup on the table in front of them. A card showing a pictorial representation of a number may be matched with a card that shows the corresponding standard, expanded, or word form (or vice versa). Matching pairs also have matching fish images.
   d. The game continues until all hands are empty and there are no more cards to be drawn.
   e. Each pair of matching cards is worth one point. The winner is the player with the most points.
   f. Have students choose one match from the game to complete the Student Recording Sheet.
2. Distribute the materials.
3. Have students play the game.

Represent Numbers to 1,000

Fluency Builder

Go Fish Cards (Front of Page 1)



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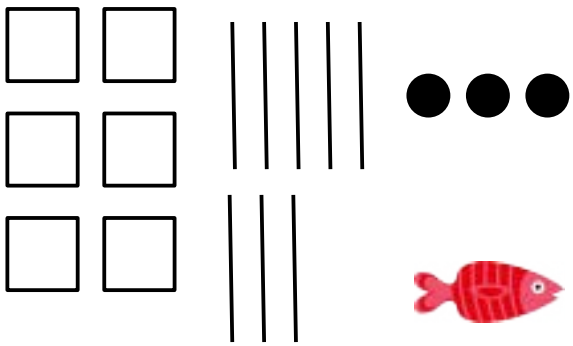
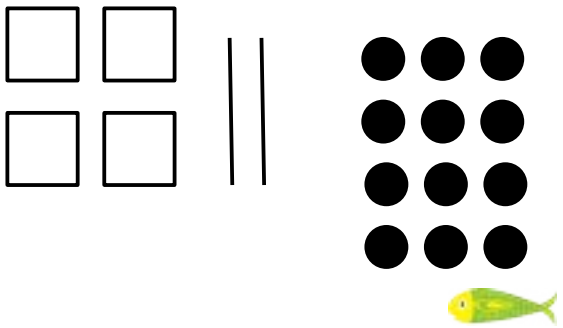
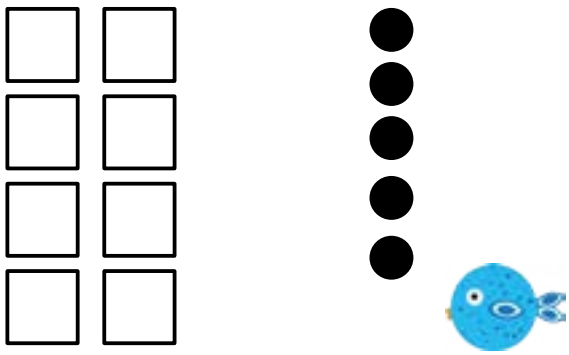


Six hundred eighty-three



4 hundreds
2 tens
12 ones



800 + 5

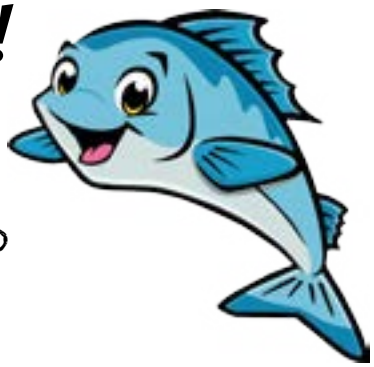
Fluency Builder

Go Fish Cards (Back of Page 1)

Go Fish!

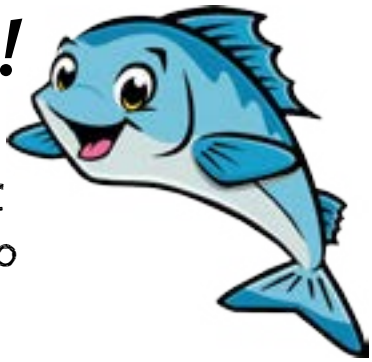
Represent Numbers to 1,000

Go Fish!



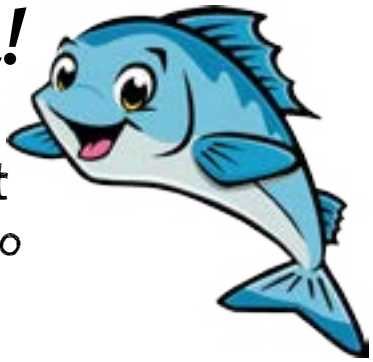
Represent Numbers to 1,000

Go Fish!



Represent Numbers to 1,000

Go Fish!



Represent Numbers to 1,000

Go Fish!

Represent Numbers to 1,000

Go Fish!

Represent Numbers to 1,000

Go Fish!

Represent Numbers to 1,000

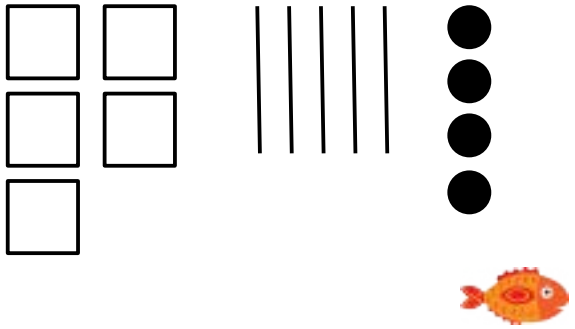
Go Fish!

Represent Numbers to 1,000

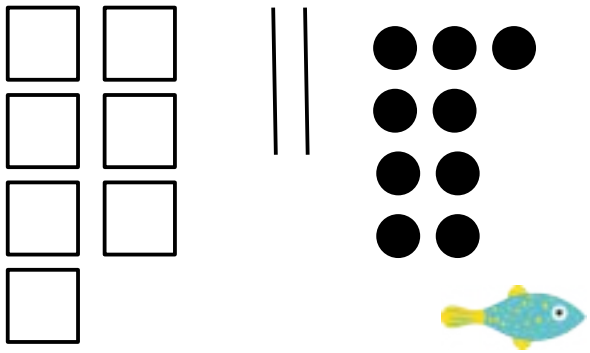
Represent Numbers to 1,000

Fluency Builder

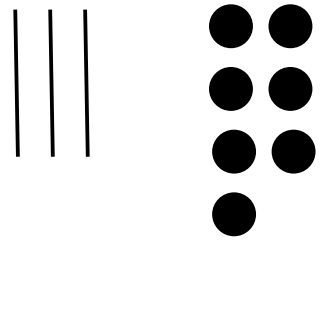
Go Fish Cards (Front of Page 2)



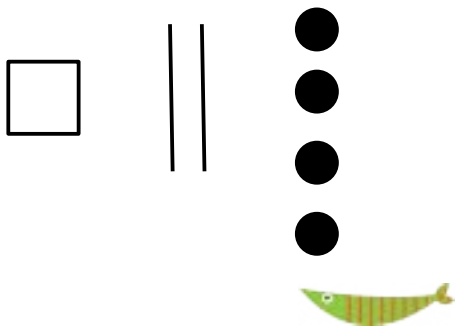
five hundred fifty-four



700 + 20 + 9



3 tens
7 ones



Hundreds	Tens	Ones
1	2	4

Fluency Builder

Go Fish Cards (Back of Page 2)

Go Fish!

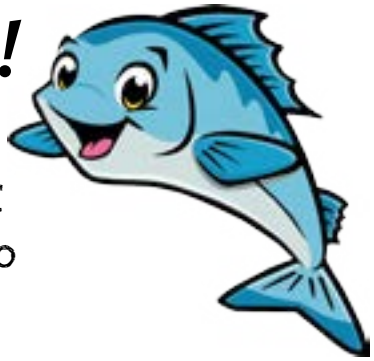
Represent Numbers to 1,000

Go Fish!

Represent Numbers to 1,000

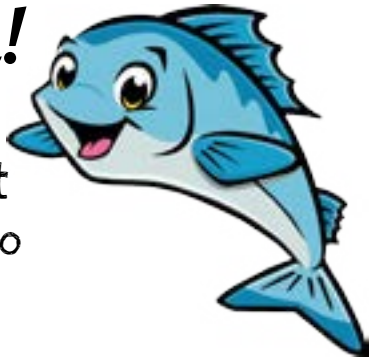
Go Fish!

Represent Numbers to 1,000



Go Fish!

Represent Numbers to 1,000



Go Fish!

Represent Numbers to 1,000

Go Fish!

Represent Numbers to 1,000

Go Fish!

Represent Numbers to 1,000

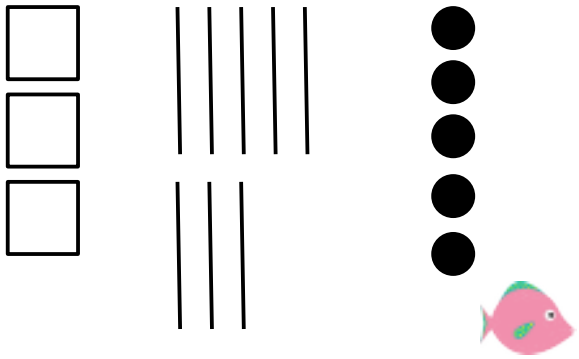
Go Fish!

Represent Numbers to 1,000

Represent Numbers to 1,000

Fluency Builder

Go Fish Cards (Front of Page 3)



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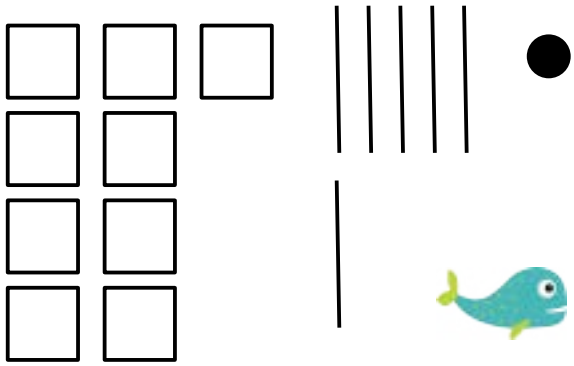
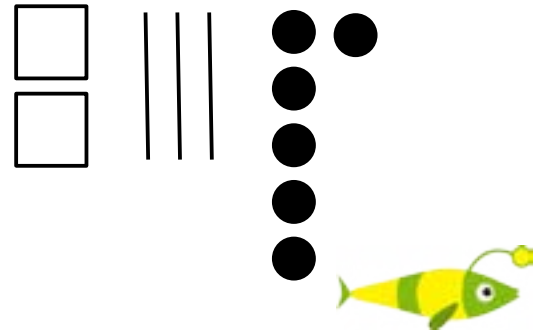
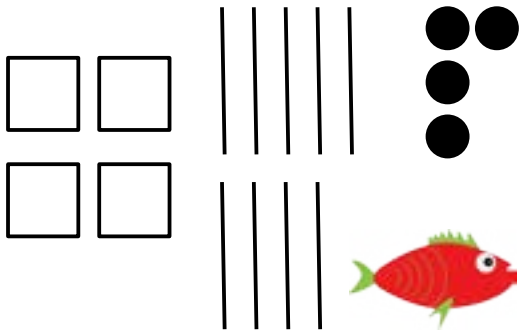


9 hundreds
6 tens
1 one



200 + 30 + 6



494

Fluency Builder

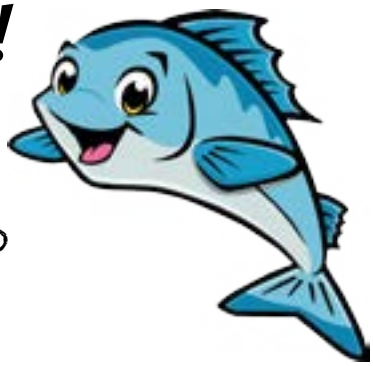
Go Fish Cards (Back of Page 3)

Go Fish!

Represent Numbers to 1,000

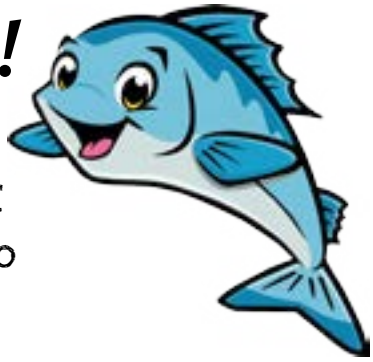
Go Fish!

Represent Numbers to 1,000



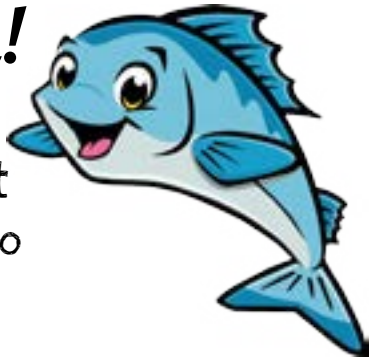
Go Fish!

Represent Numbers to 1,000



Go Fish!

Represent Numbers to 1,000



Go Fish!

Represent Numbers to 1,000

Go Fish!

Represent Numbers to 1,000

Go Fish!

Represent Numbers to 1,000

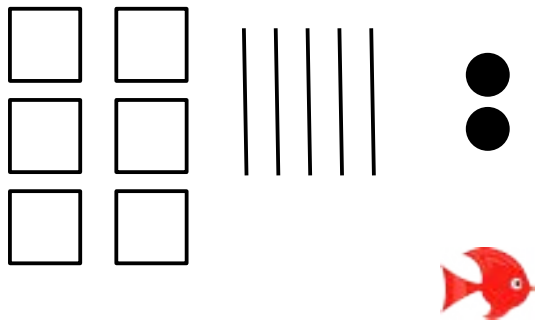
Go Fish!

Represent Numbers to 1,000

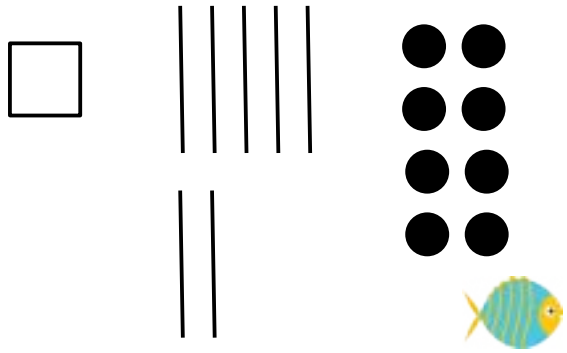
Represent Numbers to 1,000

Fluency Builder

Go Fish Cards (Front of Page 4)



six hundred fifty-two



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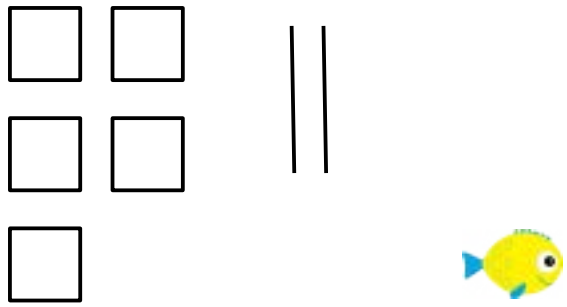
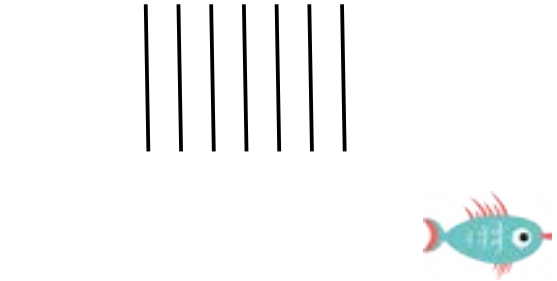


500 + 20



Hundreds	Tens	Ones
	7	0

Fluency Builder

Go Fish Cards (Back of Page 4)

Go Fish!

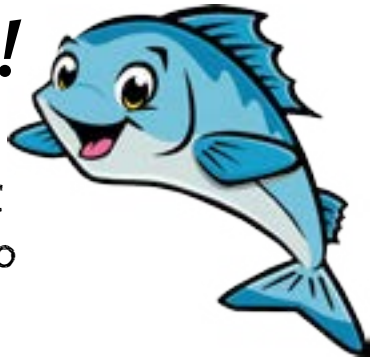
Represent Numbers to 1,000

Go Fish!

Represent Numbers to 1,000

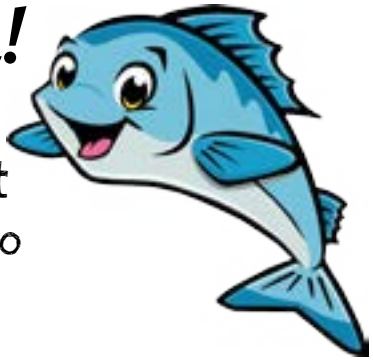
Go Fish!

Represent Numbers to 1,000



Go Fish!

Represent Numbers to 1,000



Go Fish!

Represent Numbers to 1,000

Go Fish!

Represent Numbers to 1,000

Go Fish!

Represent Numbers to 1,000

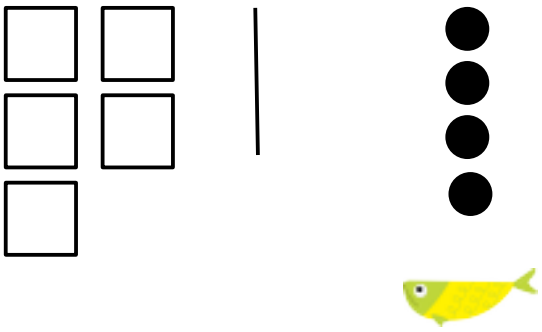
Go Fish!

Represent Numbers to 1,000

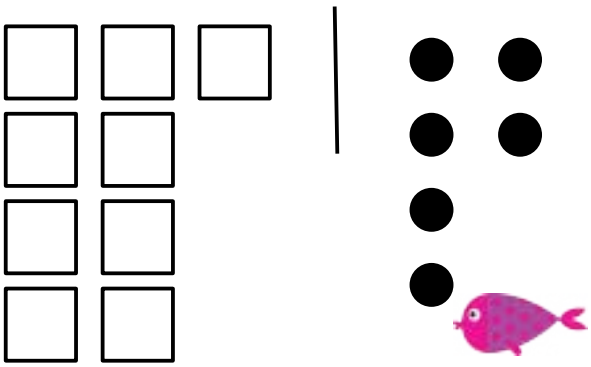
Represent Numbers to 1,000

Fluency Builder

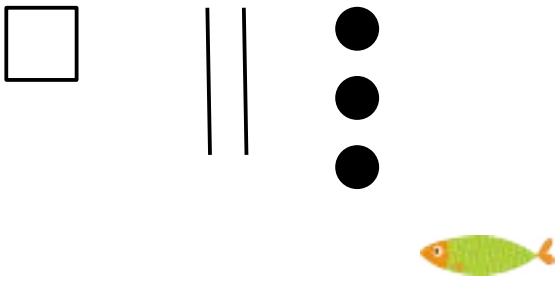
Go Fish Cards (Front of Page 5)



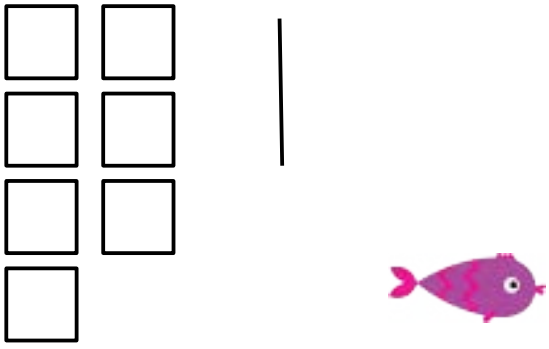
five hundred fourteen



900 + 10 + 6



1 hundred
2 tens
3 ones



710

Fluency Builder

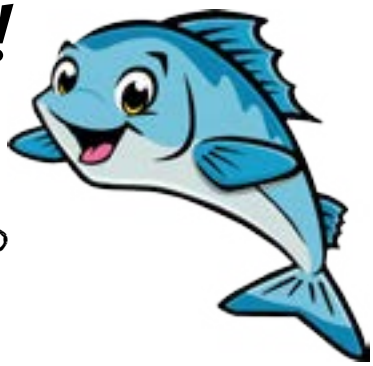
Go Fish Cards (Back of Page 5)

Go Fish!

Represent Numbers to 1,000

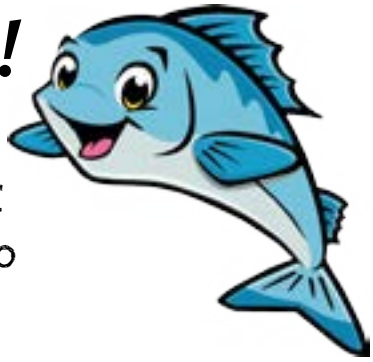
Go Fish!

Represent Numbers to 1,000



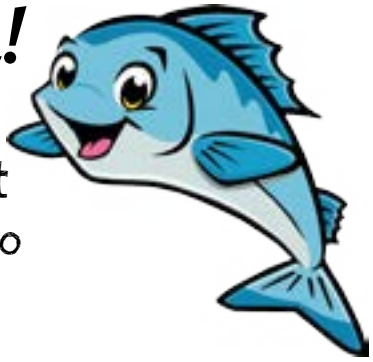
Go Fish!

Represent Numbers to 1,000



Go Fish!

Represent Numbers to 1,000



Go Fish!

Represent Numbers to 1,000

Go Fish!

Represent Numbers to 1,000

Go Fish!

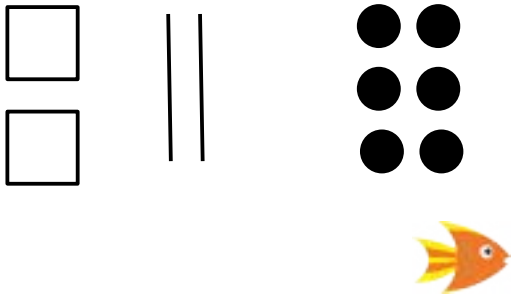
Represent Numbers to 1,000

Go Fish!

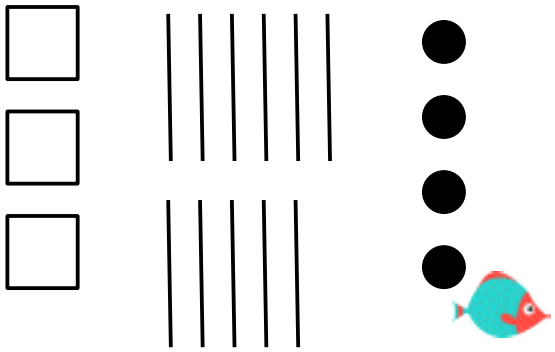
Represent Numbers to 1,000

Fluency Builder

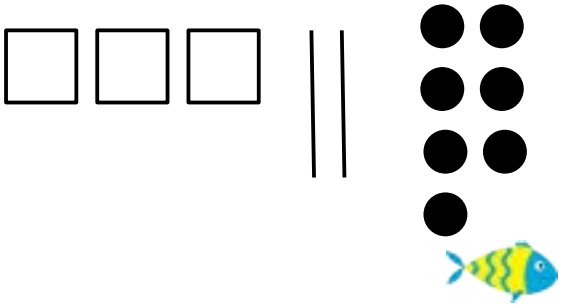
Go Fish Cards (Front of Page 6)



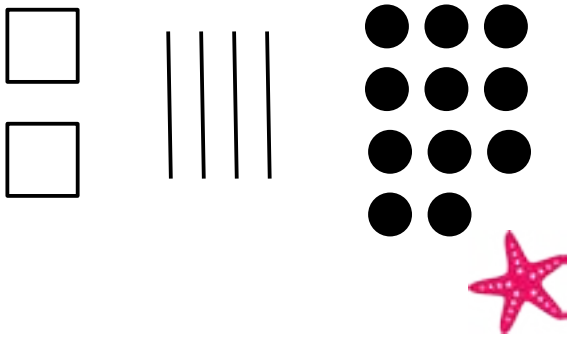
two hundred twenty-six



3 hundreds
11 tens
4 ones



Hundreds	Tens	Ones
3	2	7



2 hundreds
4 tens
11 ones

Fluency Builder

Go Fish Cards (Back of Page 6)

Go Fish!

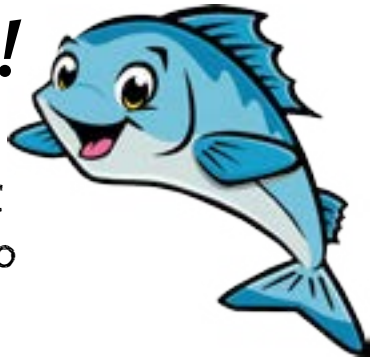
Represent Numbers to 1,000

Go Fish!

Represent Numbers to 1,000

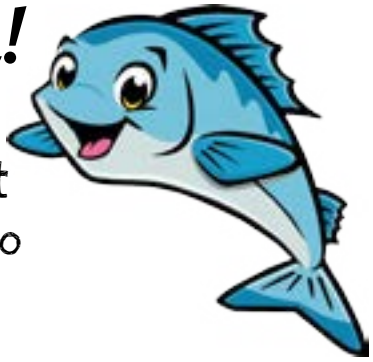
Go Fish!

Represent Numbers to 1,000



Go Fish!

Represent Numbers to 1,000



Go Fish!

Represent Numbers to 1,000

Go Fish!

Represent Numbers to 1,000

Go Fish!

Represent Numbers to 1,000

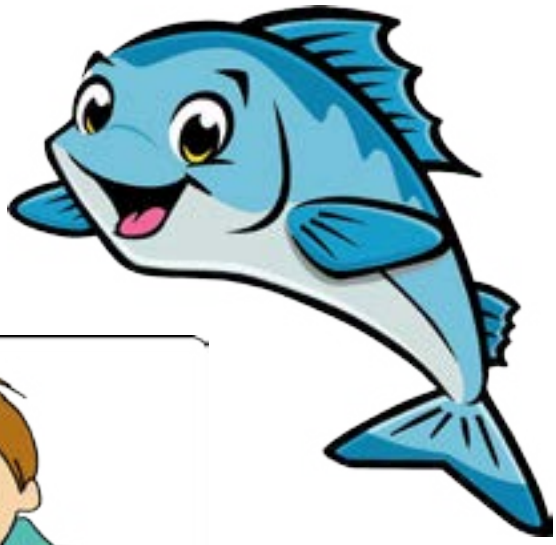
Go Fish!

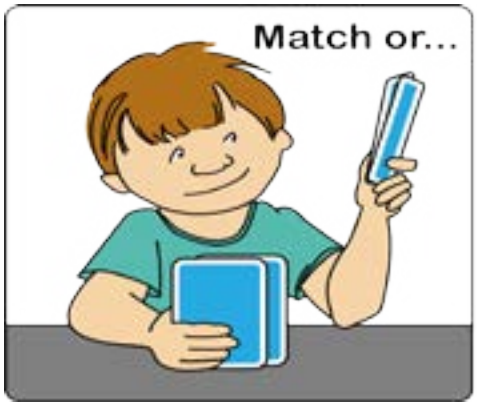
Represent Numbers to 1,000

Represent Numbers to 1,000

Fluency Builder

Go Fish!





Represent Numbers to 1,000

Fluency Builder

Name: _____ Date: _____

Go Fish!

Student Recording Sheet

1. Choose a match.

2.

Draw the pictorial representation.	

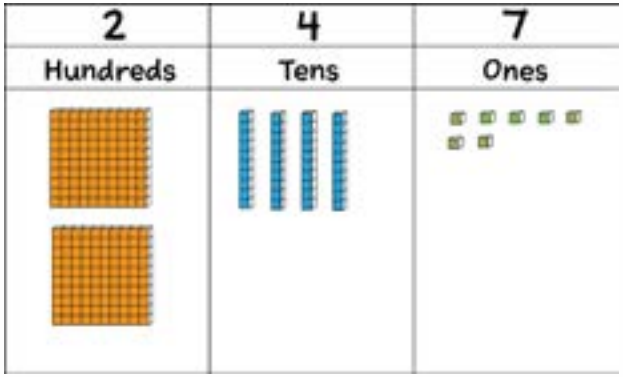
3.

Write the standard, expanded, or word form.	

Represent Numbers to 1,000

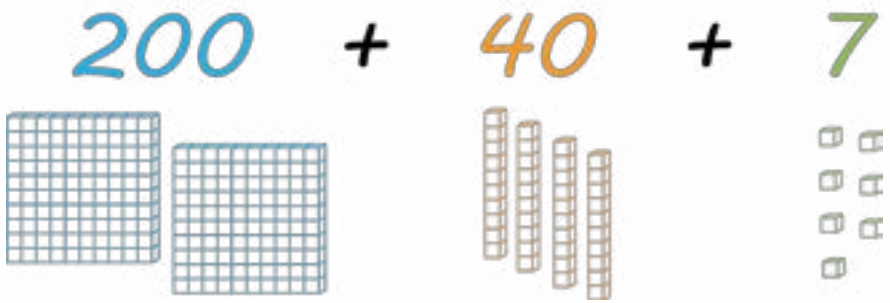
Picture Vocabulary

Place Value



The value of a digit that depends on its location within a number

Expanded Form



A representation of a number by place value that shows the value of each digit

Standard Form

247

The simplest representation of a number

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)

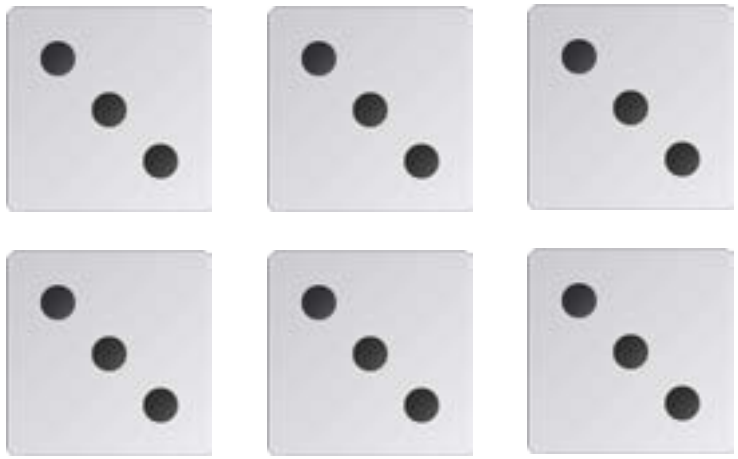
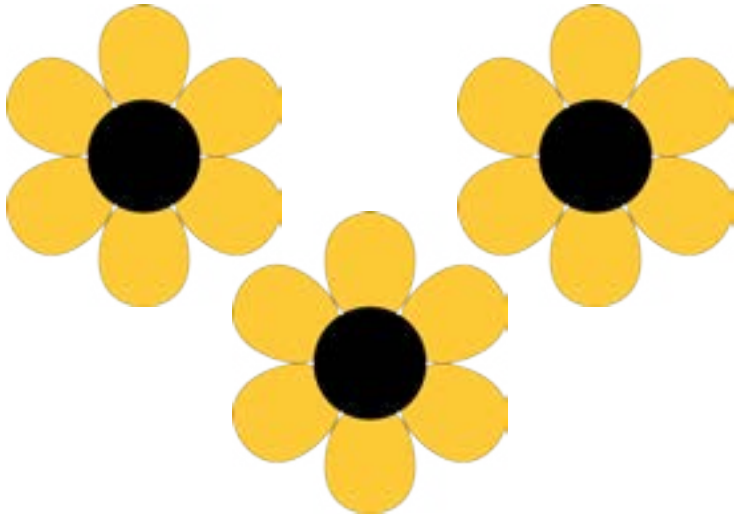
PREPARATION

- 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

	ten + eight
	6 + 6 + 6

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.

Related Facts within 10 Mini-Lesson

DESCRIPTION

Students use counters to find related facts within 10.

MATERIALS

REUSABLE

- 10 Two-colored counters (per pair and per teacher)
- 1 Plastic plate (per pair and per teacher)

PREPARATION

- Have students work with partners to complete this activity.
- Gather 10 two-colored counters and 1 plastic plate with 1 big section and 2 small sections for each pair and a set for teacher demonstration.
- Print and cut out a set of Related Fact Triangles for each pair of students.
- Print a Recording Sheet for each student.

PROCEDURE AND FACILITATION POINTS

1. Have students work with partners to complete this activity.
   a. Gather 10 two-colored counters and 1 plastic plate with 1 big section and 2 small sections for each pair and a set for teacher demonstration.
   b. Print and cut out a set of Related Fact Triangles for each pair of students.
   c. Print a Recording Sheet for each student.
2. Ask the following questions:
   a. Do I still have 10 counters total? Yes. (Students can count to confirm there are still 10 counters.)
   b. What two numbers (or sets of counters) can I add together to get 10? I can add 3 and 7 to get 10.
   c. Is there another way we can add those numbers? Yes, I can add 7 and 3 to get 10.
   d. What number can I subtract from 10 to get 3? I can subtract 7 from 10 to get 3.
   e. What number can I subtract from 10 to get 7? I can subtract 3 from 10 to get 7.
3. Allow students time to generate related facts using the Related Fact Triangles, counters, and plates with their partners. Check for understanding as partners work, and address any misconceptions.
4. Model for students how to complete the Recording Sheet.
   a. Read the directions out loud for students.
   b. Using the same triangle from above (10, 3, 7), model how to write the numbers in the triangle in the first box. Give the following explanation: The numbers on your triangle should look just like the ones on the related fact triangle.
   c. Point to the two addition facts and two subtraction facts on the Recording Sheet under the triangle. Give the following explanation: This is where you will record your related facts.
5. Instruct students to choose 4 triangles and complete the Recording Sheet independently. Encourage students to continue using the counters and plates if needed.
6. Ask the following questions:
   a. What does the number at the top of the triangle represent? The number at the top of the triangle represents the total or whole.
   b. Will you always have two addition and two subtraction-related facts? No. When you have a doubles fact, there will only be one addition and one subtraction fact.
   c. How do related facts help you add and subtract quickly? Answers will vary. I can use an addition fact to help me solve a related subtraction fact.
7. After completing this mini-lesson, have students move on to station activities and Fact Fluency games.

Fact Fluency

Addition Fact Round

Players: 2

Materials

- ★ 15 Two-colored counters (per player)
- ★ 1 Addition Fact Game Board
- ★ 1 Addition Fact Spinner

Directions

1. Player 1 spins the Addition Fact Spinner and performs the following tasks:
   a. Identifies the related subtraction fact
   b. Covers the fact with a counter
2. Player 2 takes his or her turn, repeating step 1.
3. Play continues until one of the players has placed four adjacent counters horizontally, diagonally, vertically, or in a square.
4. If the fact is already covered, the player loses his or her turn.

Fact Fluency

Fact Fluency: Related Facts within 10
Game 1

Addition Fact Game Board A

2 − 2 = 0	4 − 1 = 3	5 − 4 = 1	6 − 2 = 4	7 − 4 = 3
8 − 2 = 6	9 − 7 = 2	10 − 5 = 5	7 − 3 = 4	5 − 1 = 4
9 − 2 = 7	4 − 1 = 3	2 − 0 = 2	8 − 2 = 6	4 − 1 = 3
5 − 4 = 1	6 − 4 = 2	4 − 3 = 1	5 − 1 = 4	9 − 2 = 7
9 − 7 = 2	7 − 3 = 4	6 − 2 = 4	8 − 6 = 2	5 − 1 = 4
5 − 1 = 4	7 − 4 = 3	2 − 2 = 0	10 − 5 = 5	4 − 3 = 1

Fact Fluency

Addition Fact Game Board B

10 – 5 = 5	8 – 2 = 6	4 – 1 = 3	6 – 4 = 2	9 – 2 = 7
5 – 1 = 4	4 – 3 = 1	6 – 2 = 4	8 – 6 = 2	5 – 4 = 1
6 – 2 = 4	9 – 2 = 7	5 – 4 = 1	10 – 5 = 5	7 – 4 = 3
7 – 3 = 4	5 – 1 = 4	2 – 2 = 0	4 – 1 = 3	5 – 1 = 4
2 – 2 = 0	9 – 7 = 2	4 – 3 = 1	9 – 7 = 2	8 – 2 = 6
4 – 1 = 3	7 – 3 = 4	5 – 1 = 4	7 – 4 = 3	2 – 0 = 2

Fact Fluency

Subtraction Fact Round

Players: 2

Materials

- ★ 15 Two-colored counters (per player)
- ★ 1 Subtraction Fact Game Board
- ★ 1 Subtraction Fact Spinner

Directions

1. Player 1 spins the Subtraction Fact Spinner and performs the following tasks:
   a. Identifies the related addition fact
   b. Covers the fact with a counter
2. Player 2 takes his or her turn, repeating step 1.
3. Play continues until one of the players has placed four adjacent counters horizontally, diagonally, vertically, or in a square.
4. If the fact is already covered, the player loses his or her turn.

Fact Fluency

Subtraction Fact Game Board A

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

Fact Fluency: Related Facts within 10
Game 1

Fact Fluency

Subtraction Fact Game Board B

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

Fact Fluency: Related Facts within 10
Game 1

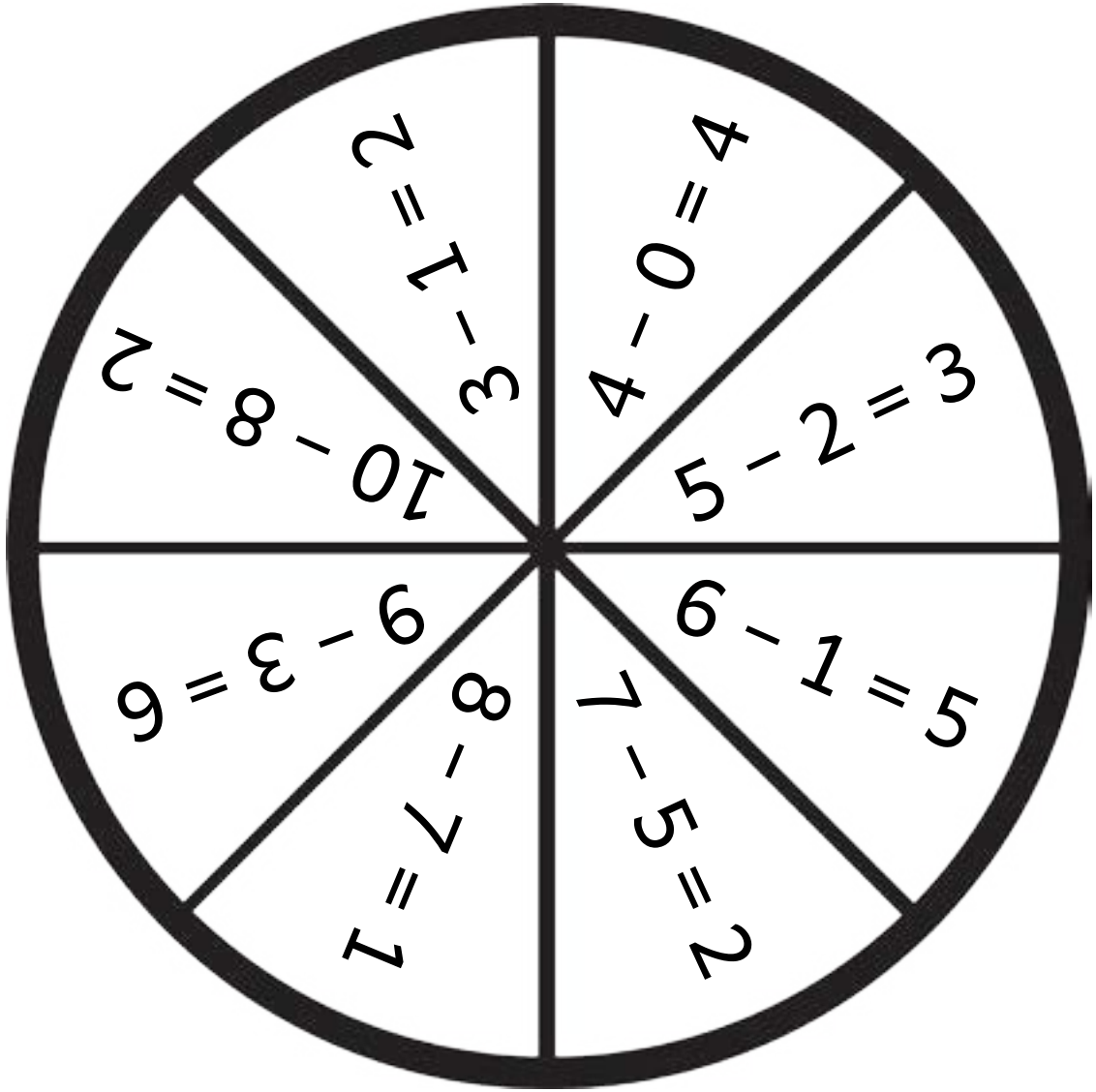
Addition Fact Spinner

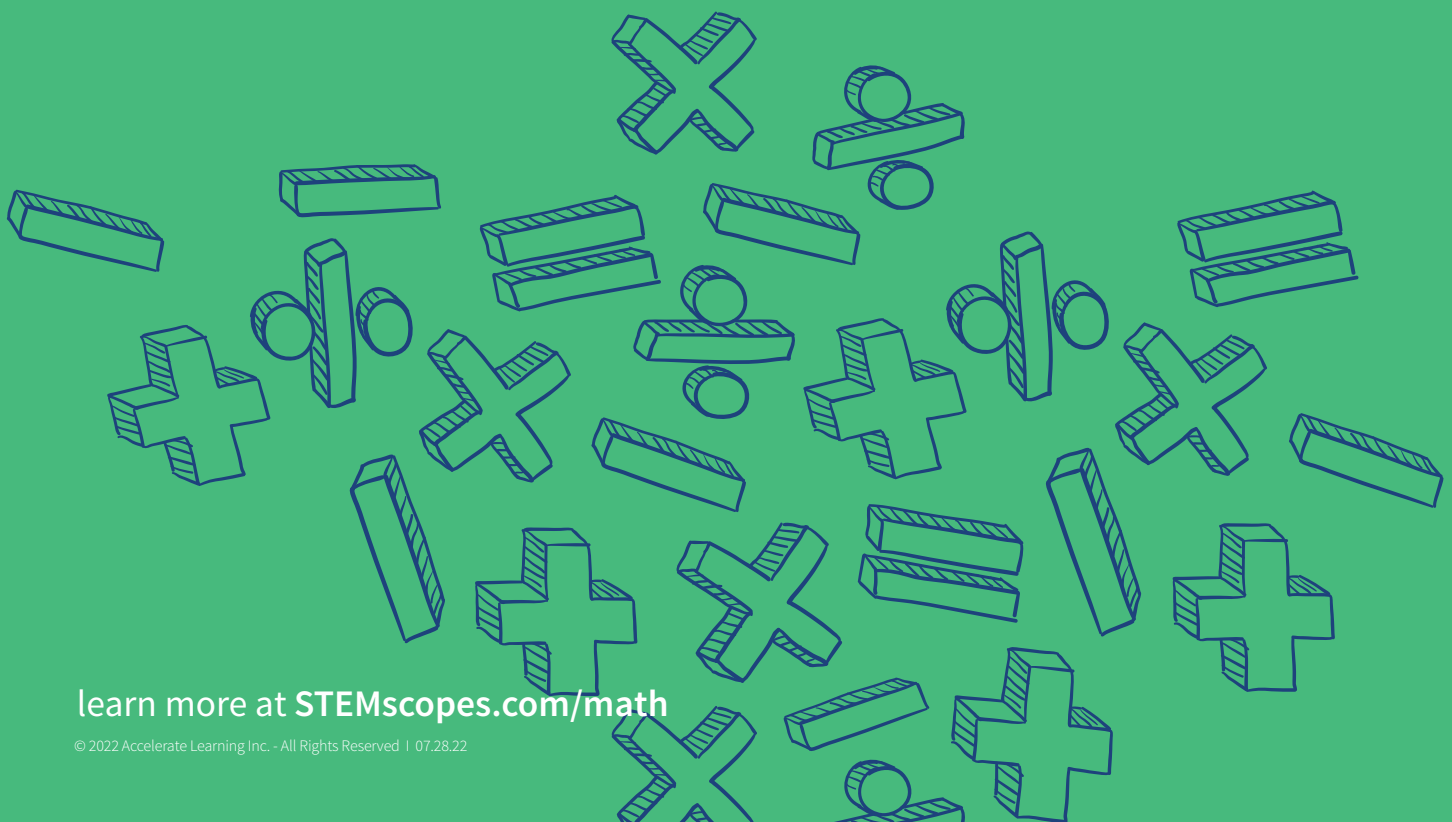
Fact Fluency

Fact Fluency: Related Facts within 10
Game 1

Fact Fluency

Subtraction Fact Spinner





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