



MISSISSIPPI
EXEMPLAR
Units & Lessons
MATHEMATICS

Grade 1

Grant funded by:



P.O. Box 771 | Jackson, MS | 39205-0771
Tel (601) 359-2586
www.mde.k12.ms.us
Twitter: @MissDeptEd

The Mississippi State Board of Education, the Mississippi Department of Education, the Mississippi School for the Arts, the Mississippi School for the Blind, the Mississippi School for the Deaf, and the Mississippi School for Mathematics and Science do not discriminate on the basis of race, sex, color, religion, national origin, age, or disability in the provision of educational programs and services or employment opportunities and benefits. The following office has been designated to handle inquiries and complaints regarding the non-discrimination policies of the above mentioned entities:

Director, Office of Human Resources

MISSISSIPPI DEPARTMENT OF EDUCATION

359 North West Street, Suite 203

Jackson, Mississippi 39201

(601) 359-3511

Acknowledgements

Mississippi Exemplar Units and Lessons Project Leads

The Mississippi Department of Education gratefully acknowledges the following individuals for their leadership in the development of the Mississippi Exemplar Units and Lessons.

Dr. Nathan Oakley
Chief Academic Officer

Devin Boone
Office of Professional Development Program Manager

Barbara Bowen
ELA Professional Development Coordinator

Elise Brown
Math Professional Development Coordinator

Wendy Clemons
Office of Professional Development Executive Director

Dana Danis
Office of Secondary Education ELA Curriculum Specialist

Dr. Marla Davis
Office of Secondary Education Bureau Director

Joyce Greer
Office of Early Childhood Instructional Specialist

Kristi Higginbotham
Special Education Professional Development Coordinator

Dr. Felicia Jackson-Stewart
ELA Professional Development Coordinator

Ashley Kazery
ELA Professional Development Coordinator

Kristina Livingston
Professional Development Coordinator Director

Celeste Maugh
Math Professional Development Coordinator

Tanjanikia McKinney
Science Professional Development Coordinator

Jennifer Nance
Office of Secondary Education Office Director II

Acknowledgements

Mississippi Exemplar Units and Lessons Developers and Contributors

The Mississippi Department of Education gratefully acknowledges the following individuals for their contributions to the development of the Mississippi Exemplar Units and Lessons: English Language Arts.

Kimberlee Alexander
Greenville Public School District

Teresa Amacker
Ocean Springs School District

Terwinda T. Banks
Canton Public School District

Ebony Bealer
Harrison County School District

Kate Boteler
Madison County School District

Lydia Boutwell
MDE Early Childhood Consultant

Jeannie Brock
Benton County School District

Elisa Bryant
Lafayette County School District

Melissa Buck
MDE Literacy Coach

Leigh Ann Cheeseman
MDE Literacy Coach

Cindy Christian
Rankin County School District

Nicole Cockrell
Madison County School District

Angela Davis
MDE Literacy Coach

Samantha Edwards
South Panola School District

Beverly Farr
DeSoto County School District

Lisa Hamrick
Pascagoula – Gautier School District

Acknowledgements

Mississippi Exemplar Units and Lessons Developers and Contributors

The Mississippi Department of Education gratefully acknowledges the following individuals for their contributions to the development of the Mississippi Exemplar Units and Lessons: English Language Arts.

Roxanne Harper

Brookhaven School District

Jessica Holyfield

Rankin County School District

Melanie Irby

Pearl Public School District

Lisa Lairy

West Point Consolidated School District

Shirley Massey

MDE Literacy Coach

Catrice Mitchell

Hinds County School District

Brenda Nelson

Gulfport School District

Cyndi Parker

Harrison County School District

Allison Ruhl

Madison County School District

Rebecca Russell

Rankin County School District

Kelly Smith

MDE Literacy Coach

Leigh Ann Smith

Lauderdale County School District

Nicole Smith

Jones County School District

Lori Stringer

MDE Literacy Coach

Katie Szabo

Lafayette County School District

Acknowledgements

Mississippi Exemplar Units and Lessons Developers and Contributors

The Mississippi Department of Education gratefully acknowledges the following individuals for their contributions to the development of the Mississippi Exemplar Units and Lessons: Mathematics.

Lydia Boutwell

MDE Early Childhood Consultant

Courtney D. Brown

Jackson Public School District

Ashley Boyd

DeSoto County School District

Toni Canizaro

Clinton Public School District

Tracy Catchings

Vicksburg-Warren School District

Susan Craddieth

Columbus Municipal School District

Alesheia Cunningham

DeSoto County School District

Savannah Evans

Lamar County School District

Fanchon Freeman

Clarksdale Municipal School District

Beth Fulmer

Math Curriculum Consultant

Jennifer Gaston

Coffeeville School District

Kathleen Hamilton

Marshall County School District

Rachael Hayes-Magee

Biloxi Public School District

Caroline Heblich

DeSoto County School District

Susan Jarvis

Ocean Springs School District

Veronica Jefferies

Vicksburg-Warren School District

Acknowledgements

Mississippi Exemplar Units and Lessons Developers and Contributors

The Mississippi Department of Education gratefully acknowledges the following individuals for their contributions to the development of the Mississippi Exemplar Units and Lessons: Mathematics.

Jeyakumar Jeyaraj

East Jasper Consolidated School District

Melissa Lowe

Lauderdale County School District

Lucy Ann Martin

Jackson Public School District

Lynda Mathieu

George County School District

Bonnie Maready

DeSoto County School District

Kimberly B. McKinney

West Point Consolidated School District

Hertensia V. Mixon

DeSoto County School District

Shalaan Oliver-Hendricks

Columbus Municipal School District

Amy Shelly

Special Education Professional Development Coordinator

TaShara Smith-Shoemaker

Hattiesburg Public School District

Mariella Simons

MDE Consultant

Ashleigh Syverson

Harrison County School District

David H. Taylor II

Laurel School District

Jennifer C. Wilson

Rankin County School District

Introduction

Mission Statement

The Mississippi Department of Education (MDE) is dedicated to student success, including the improvement of student achievement in English Language Arts (ELA) and mathematics in order to produce citizens who are capable of making complex decisions, solving complex problems, and communicating fluently in a global society. The Mississippi College- and Career-Readiness Standards (MS CCRS) provide a consistent, clear understanding of what students are expected to know and be able to do by the end of each grade level or course. The standards are designed to be robust and relevant to the real world, reflecting the knowledge and skills that students need for success in college and careers and to compete in the global economy. The goal of the MDE is to provide educators with the training and resources to understand and implement the MS CCRS effectively.

Purpose

In efforts to facilitate implementation and promote understanding of the MS CCRS for ELA and mathematics, the W. K. Kellogg Foundation generously awarded the MDE a grant to secure a cadre of effective educators to develop the MS CCRS Exemplar Units for teachers. Specifically, a group of highly-effective Mississippi educators developed exemplar instructional units and lessons aligned to the MS CCRS for ELA and mathematics. The MS CCRS Exemplar Units address difficult-to-teach standards as determined by teachers and are designed to serve as exemplar models for instructional units, lessons, and resources. The MS CCRS Exemplar Units have been vetted through nationally renowned vendors to ensure exemplar quality.

Design Overview

The MS CCRS Exemplar Units for ELA and mathematics address grade-level specific standards for Pre-Kindergarten-8th grade, as well as for Algebra, English I, and English II. The overall unit plan is described in the first section of the ELA and math units. This section includes the unit title, a suggested time frame, the grade level MS CCRS addressed and assessed, a unit overview with essential questions and a summary of lesson tasks, and the culminating/performance task description and rubric.

Though the math and ELA overall unit plan designs are very similar, some design aspects differ in order to accommodate the respective requirements of each content area. For mathematics, the first section also provides a segment designated for the Standards for Mathematical Practices (SMPs) addressed in the unit. For ELA, the first section also includes a text set with links to texts (if in the public domain) and a fresh/cold-read task.

The second section of each unit includes lesson plans. Within the lesson plans, provided are lesson-specific MS CCRS, suggested time frames, learning targets, guiding questions, required resources and materials, vocabulary terms and instructional strategies, teacher directions, instructional supports for students, enrichment activities, student handouts, assessments (formative, summative, pre-, and self-), and additional resources to aid in the implementation of the lessons.

Implementation

The intention of the MS CCRS Exemplar Units for ELA and mathematics is to provide educators with resources to understand and implement the MS CCRS effectively. The implementation of the MS CCRS Exemplar Units for ELA and mathematics is voluntary. Additionally, the MDE will provide ongoing support for implementation of the MS CCRS Exemplar Units with initial regional trainings followed by site-specific support through our regional service delivery model. For regional and site-specific training, please contact the MDE Office of Professional Development.

Grade Level	Unit Title	Duration
First	Add and Subtract Like a Pirate	10 days
Mississippi College- and Career-Readiness Standards for Mathematics		Standards for Mathematical Practice
<p>Focus:</p> <p>1.OA.1: Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem for the unknown number</p> <p>1.OA.2: Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.</p> <p>1.OA.6: Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g., $8 + 6 = 8 + 2 + 4 = 10 + 4 = 14$); decomposing a number leading to a 10 (e.g., $14 - 4 = 13 - 3 - 1 = 10 - 1 = 9$); using the relationship between addition and subtraction (e.g., knowing that $8 + 4 = 12$, one knows $12 - 8 = 4$); creating equivalent but easier</p>		<p>SMP.1 Make sense of problems and persevere in solving them.</p> <p>SMP.2 Reason abstractly and quantitatively.</p> <p>SMP.3 Construct viable arguments and critique the reasoning of others.</p> <p>SMP.4 Model with mathematics.</p> <p>SMP.5 Use appropriate tools strategically.</p> <p>SMP.6 Attend to precision.</p> <p>SMP.7 Look for and make use of structure.</p> <p>SMP.8 Look for and express regularity in regulated reasoning.</p>

or known sums (e.g., adding $6 + 7$ by creating the known equivalent $6 + 6 + 1 = 12 + 1 = 13$).

1.OA.8: Determine the unknown whole number in an addition or subtraction equation relating three whole numbers. *For example, determine the unknown number that makes the equation true in each of the equations $8 + ? = 11$, $5 = ? - 3$, $6 + 6 = ?$*

Additional:

1.OA.4: Understand subtraction as an unknown-addend problem. *For example, subtract $10 - 8$ by finding the number that makes 10 when added to 8.*

1.G.1: Distinguish between defining attributes (e.g., triangles are closed and three-sided) versus non-defining attributes (e.g. color, orientation, overall size); build and draw shapes to possess defining attributes.

Unit Overview

Students represent and solve problems involving addition and subtraction. During this unit, students will develop strategies for adding and subtracting whole numbers within 20 based on their prior work with numbers within 10. They will use a variety of models, including discrete objects, to model add-to, take-from, put-together, take-apart, and comparison situations to develop strategies to solve arithmetic problems with these operations. Students understand connections between counting and addition and subtraction. (e.g., adding two is the same as counting on two). They will use properties of addition to add whole numbers and to create and use increasingly sophisticated strategies based on these properties (e.g., making tens) to solve addition and subtraction problems within 20. By comparing a variety of solution strategies, children build their understanding of the relationship between addition and subtraction and using tools and manipulatives to model add-to, take-from, put-together, take-apart, and compare situations to develop strategies to solve arithmetic problems with these operations. Students understand connections between counting and addition and subtraction. (e.g., adding two is the same as counting on two). They will use properties of addition to add whole numbers and to create and use increasingly sophisticated strategies based on these properties (e.g., “making tens”) to solve addition and subtraction problems within 20. By comparing a variety of solution strategies, children build their understanding of the relationship between addition and subtraction.

Essential Questions:

- How do I know which mathematical operation (+, -) to use?
- Why is the ability to add and subtract useful?

Lesson Tasks

Lesson 1: A Day as a Pirate

Lesson 1 is intended to help students recall prior knowledge of adding and subtracting within 10. Students will represent and solve problems involving addition and subtraction. Students will model addition with pictures and manipulatives.

Lesson 2: Add with a Pirate (Sums to 10)

Students will learn and sing a song “Add with a Pirate.” Students will go on an addition treasure hunt to find models of addition facts within 10 and write and solve an equation for each of the facts recording their work on an individual recording sheet. Students will solve addition facts within 10 and color a corresponding pirate picture. Students will recall facts playing Around the World with the cards from the treasure hunt activity.

Lesson 3: The Treasure Chest

Students identify numbers on ten frames and learn to model addition within 20 using number bonds, rekenreks, Hide Zero Cards, ten frames, and equations. Students record work in math journal and complete a color by number page for addition within 20.

Lesson 4: Counting Me Treasure

Students will review differences within 20 by playing Around the World, practice using different strategies and manipulatives for adding 3 addends within 20.

Lesson 5: Find the Hidden Treasure

Students will practice adding sums within 20 by playing a game.

Lesson 6: Subtracting with a Pirate

Students will practice subtracting within 10 with a song video. Students will begin subtracting within 20 using two-color (chip) counters, ten frames, and rekenreks and see the relationship between addition and subtraction when there is a missing addend. They will show the relationship between 3 numbers in a number bond and an equation. Students will solve word problems requiring subtracting within 20.

Lesson 7: What Number is the Pirate Missing?

Students will follow teacher’s modeling to learn to use counters with a part-part-whole map, number lines, and their fingers to find missing addends. Students will practice using different methods to find missing addends and connect subtraction to addition when finding missing addends.

Lesson 8: Pirates Make Number Sentences

Students will follow teacher's modeling to learn how to use a number line to find missing addends and show the relationship of three numbers with a number bond. Students will practice with number lines and number bonds to find missing addends and connect subtraction to addition when finding missing addends.

Lesson 9: Pirates Solve Word Problems

Students will learn a strategy to increase precision when solving word problems. They will organize the information in the word problem, draw a model to show what they are looking for, and show their computation on a four-part map.

Lesson 10: Culminating Task – Get Captain Hook Home

Students will complete a culminating task to show mastery of standards taught.

Performance/Culminating Task**Get Captain Hook Home**

Students will solve problems to earn gold coins for Captain Bluebeard. The gold coins will help Captain Bluebeard get his crew safely home. Each correctly completed problem gets 4 coins. Students will demonstrate mastery by using appropriate tools and manipulatives to show their calculations. They will draw pictures to demonstrate conceptual understanding. A rubric will be used for scoring and assigning a grade.

Standards Assessed: 1.OA.1, 1.OA.2, 1.OA.6, 1.OA.8

Rubric for Culminating Task – Get Captain Hook Home

Performance Level	Mastery Level	Accuracy	Diagrams and Sketches	Manipulatives	Neatness and Organization
4	Exemplifying Mastery	All 5 of the problems are free of mathematical errors.	Diagrams and/or sketches are clear and greatly add to the reader's understanding of the procedure(s).	Student demonstrates full understanding of which manipulative or tool is appropriate for each situation.	The work is presented in a neat, clear, organized fashion that is very easy to read.
3	Approaching Mastery	4/5 of the problems are free of mathematical errors.	Diagrams and/or sketches are clear and mostly easy to understand.	Student demonstrates some understanding of which manipulative or tool is appropriate for each situation.	The work is presented in a neat and organized fashion that is somewhat easy to read.
2	Developing Mastery	3/5 of the problems are free of mathematical errors.	Diagrams and/or sketches are somewhat difficult to understand.	Student demonstrates little understanding of which manipulative or tool is appropriate for each situation.	The work is presented in an organized fashion but may be hard to read at times.
1	Not Representing Mastery	1-2 of the problems are free of mathematical errors.	Diagrams and/or sketches are difficult to understand or are not used.	Student demonstrates no understanding of which manipulative or tool is appropriate for each situation.	The work appears sloppy and unorganized. It is hard to know what information goes together.
0	No Understanding	All problems contained some mathematical errors.	Diagrams and/or sketches are missing.	Manipulatives and/or tools are not used.	No task submitted or task is illegible.

RAW SCORE: _____ / 16

FINAL SCORE: _____ / 100

Lesson 1: A Day as a Pirate

Focus Standard: 1.OA.6

Additional Standard: 1.G.1

Standards for Mathematical Practice: SMP.2, SMP.3, SMP.4

Estimated Time: 70 minutes

Resources and Materials:

- Baskets of tools on each table or for groups of students to share. These should include various problem solving manipulatives, such as gold coins and diamonds -jewels, beads, ten frames, number bonds, rekenreks, dominos, linking cubes, counters and/or number paths or number lines. (See task cards)
- Glue sticks
- Math journals or paper for recording solutions
- White board or interactive board
- Handout 1:1: Diamonds
- Handout 1:2: Gold Coins
- Handout 1.3: Pre-Assessment
- Handout 1.4: Homework
- Handout 1.5: Daily Mastery Tracker
- *Treasure Map* by Stuart J. Murphy
- Personal dictionary <http://www.readwritethink.org/classroom-resources/lesson-plans/using-word-journal-create-20.html?tab=4#tabs>
- Math games: Addition http://www.mathplayground.com/ASB_JetSkiAddtion.html
- Math games: Addition http://www.mathplayground.com/ASB_AlienAddition.html
- Math games: Matching http://www.mathplayground.com/ASB_KittenMatch.html

Lesson Targets:

- Students will use manipulatives to represent addition and subtraction to 10.
- Students will understand the solve addition and subtraction problems within ten, recognizing the operation to perform as indicated by the math symbols.

Guiding Questions:

- How many ways can we show sums of 10?
- What does the equal sign mean?

Vocabulary

Academic Vocabulary: Teacher creates a Word Wall to coincide with the unit. Introduce all vocabulary terms during Lesson 1 and frequently refer to the Word Wall while using the vocabulary throughout the duration of the unit.

- Addition
- Compare
- Difference
- Equation
- Minus
- Subtraction
- Sum
- Total

Instructional Strategies for Academic Vocabulary:

- Introduce words with student-friendly definitions and pictures
- Model how to use the words in discussion
- Discuss the meaning of word in a mathematical context
- Create pictures/symbols to represent words
- Write/discuss using the words
- Act out the words or attach movements to the words

Symbol	Type of Text and Interpretation of Symbol
	Instructional support and/or extension suggestions for students who are EL, have disabilities, or perform well below the grade level and/or for students who perform well above grade level
✓	Assessment (Pre-assessment, Formative, Self, or Summative)
Instructional Plan	
<p>Understanding Lesson Purpose and Student Outcomes: Students will explore various ways to show sums to 10 and will understand what the equal sign means.</p> <p>Anticipatory Set/Introduction to the Lesson: <i>Treasure Map</i> Because literature is the ideal vehicle to help students see the importance of numbers in their daily lives, read <i>Treasure Map</i> by Stuart J. Murphy to the class.</p> <p>Have students give examples of how to use addition and subtraction when making a treasure map. Write these examples on white board or chart paper. Some examples might be 3 steps to the right and 8 steps to the left in all.</p>	

For students who are EL, have disabilities, or perform well below grade level:

- Provide multiple media formats and activities to appeal to the diversity of learners present in the classroom.
- Provide students with disabilities the appropriate accommodations/modifications to enhance their ability to master the lesson's objective(s).
- Students are assigned to one of three groups tiered by difficulty; all students are working on the same task but with varying supports.
- Offer opportunities to work with tools and manipulatives.

Extensions for students with high interest or working above grade level:

- Students are assigned to one of three groups tiered by difficulty; all students are working on the same task but with varying supports.

Activity 1: Vocabulary

Introduce the vocabulary to the class. Spend some time going over the vocabulary terms and ensuring the students understand each term. Students will create a personal dictionary. They will use a Frayer model template for their dictionaries. Model the words *compare* and *equation* for the class on a large sheet of chart paper. Once the class has worked through the two modeled words, they will finish their personal dictionaries with the rest of the words.

Note 1: Read the [Read Write Think article](#) for more information on personal dictionaries.

Note 2: Keep the modeled words as anchor charts to refer to them throughout the unit.

Activity 2: Elbow Partner

Model by reading aloud *Treasure Map* by Stuart J. Murphy and ask questions about using addition and subtraction to bury treasure. Have students work with an elbow partner to describe how to use addition and subtraction to make a treasure map.

Activity 3: A Day as a Pirate (whole group)

Instruct students to restate a problem and work with a partner to evaluate reasoning. Introduce different manipulatives, showing students how to use them.

- Walk around and monitor students' progress, making note of any students who may need assistance.

Use a close reading strategy to read the following problem out loud: "Captain Dan and Sailor Bob found 10 gold coins on the beach. Some of them were shaped like circles. The rest of them were shaped like diamonds. How many were shaped like circles? How many were shaped like diamonds?"

Note: Provide models for the shapes discussed during the lesson for students to have a visual.

Read the problem again and tell the students to draw a picture to represent the problem.

Students can represent any different combination of 2 numbers whose sum is 10.

Introduce manipulatives and tools such as number bonds, ten frames, rekenreks, dominos, linking cubes, counters, and/or number paths for the students to use to model their work (SMP.4). Students can display their work on individual white boards.

Model how to use each of the tools to solve the problem.

Think-Pair-Share: Ask students to think about how they would explain the problem to someone else. After a minute, tell the students to turn to their elbow partner and restate the problem in their own words. This will give students an opportunity to check the work of their partner and critique their partner's reasoning (SMP 3).

Have several students share with the class how they restated the problem and allow time for comments from the other students when they disagree. If students disagree, they must explain the solution, and justify their responses. Reasoning can be justified with pictures, words, or manipulatives. (SMP.3)

Activity 4: Restating the Problem (Independent Work)

Students record their restated problem in their math journals and use pictures to model the work.

Distribute **Handout 1.1: Diamonds** and **Handout 1.2: Gold Coins**. Have students return to their workspace and glue a copy of the word problem in their math notebook (journal). They will use pictures of diamonds and gold coins to represent their work.

Tell students to add an equation to match their solution (SMP.2). Direct students to record their solution strategy and equation in their journal.

Write several equations for addition and subtraction within 10 on the board ($5 + 5 = 10$, $2 + 8 = 10$, $6 + 4 = 10$) and ask, “What do these equations represent?” (ways to make 10, adding, and subtracting.)

Review the equal sign using a number balance or equal pan balance showing that both sides of the equal sign have the exact same value.

Activity 5: Pre-Assessing

Distribute **Handout 1.3: Pre-Assessment**. Tell students to complete the pre-assessment. Tell students to begin at Start on the treasure map and find the sums and differences to get to the hidden treasure.

For students who are EL, have disabilities, or perform well below grade level:

- Students may use coins and diamonds to find sums and differences.
- Show how to add to ten using pennies, candies, students or other real-world objects

Extensions for students with high interest or working above grade level:

- Early finishers can play games giving practice for addition to 12:

[Jet Ski Addition](#)

[Alien Addition](#)

[Kitten Match](#)

- Teacher can create an alternate game for students to play. Repetition builds fluency.

Formative Assessment

- ✓ Use **Handout 1.5: Daily Mastery Tracker** throughout the week to record observations of students' understandings and abilities for each day. For Day 1, record a 0 if the student needs extensive help to model and solve addition and subtraction problems within 10, a + if the student can model and solve addition and subtraction within 10 with support, and a ✓ if the student can solve addition and subtraction within 10 using equations and models.

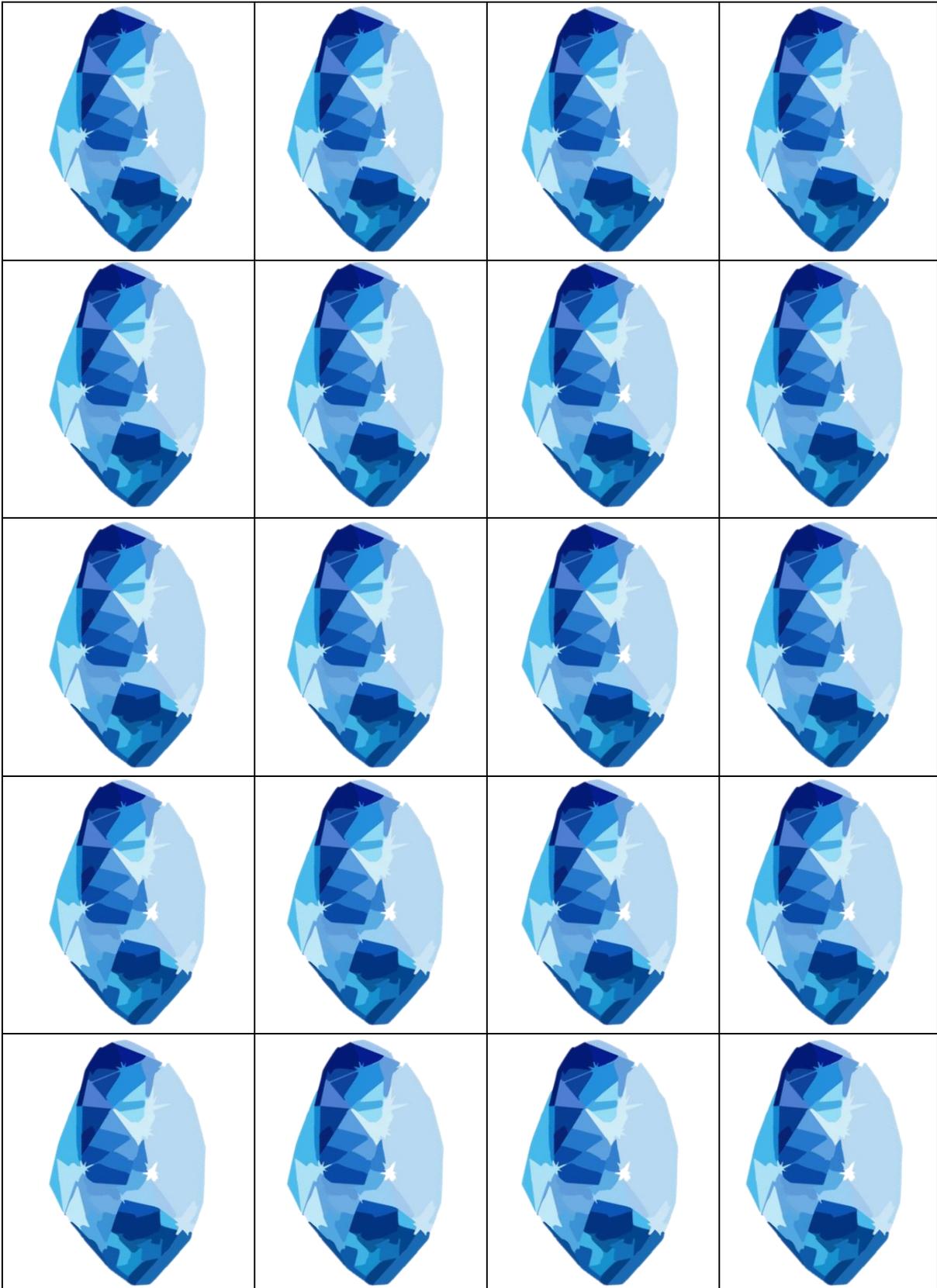
Reflection and Closing:

Close the lesson with a review. With a random name generator, choose students to share the lesson summary.

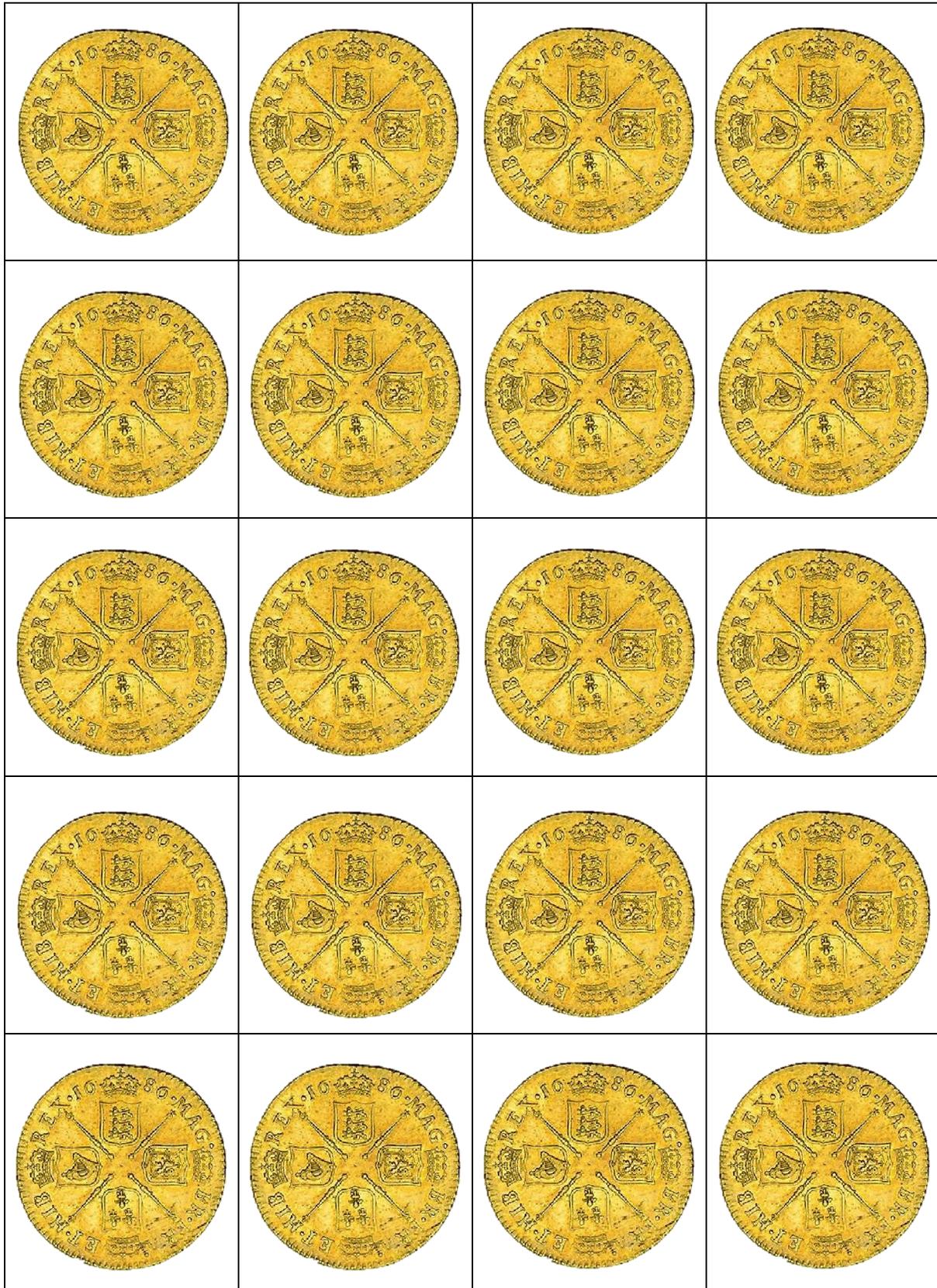
- Notice misconceptions such as adding instead of subtracting, student misuse of manipulatives to represent numbers, and student inability to add on accurately. Make note of these and use this data to pull students for extra assistance in the following lesson.

Distribute **Handout 1.4: Homework**. Tell students to solve the 2 problems, showing all their work on the paper.

Handout 1.1: Diamonds

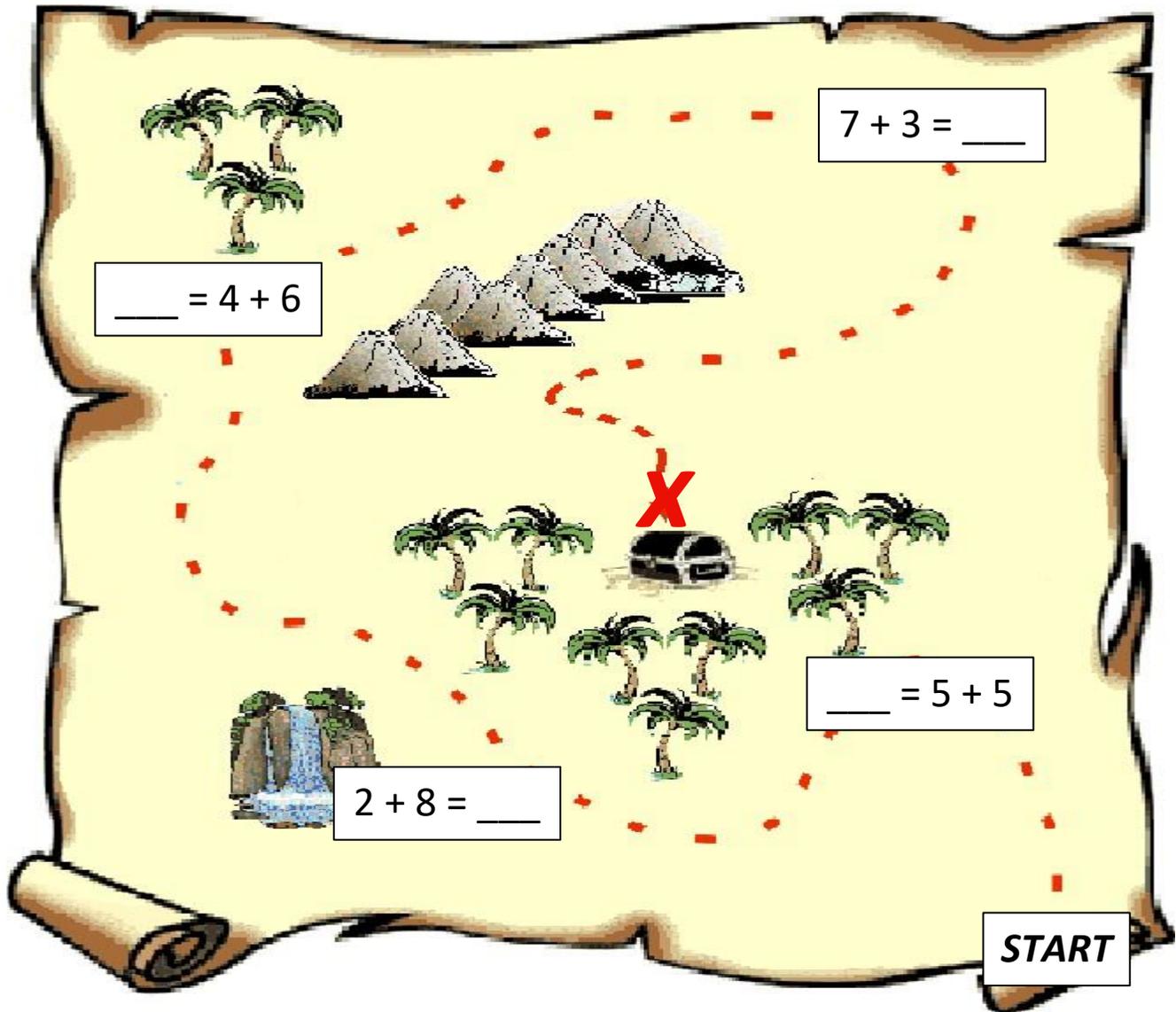


Handout 1.2: Gold Coins



Handout 1.3: Pre-Assessment

Name _____ Date _____ Score _____



Handout 1.4: Homework

Name _____ Date _____ Score _____

Read the question. Solve the equation in the space provided. Show your work.

1. 10 pirates are on the ship. 2 pirates are sleeping. The rest are swabbing the deck. How many pirates are swabbing the deck?

2. 3 pirates are eating fish. 4 pirates are eating crabs. How many pirates are eating altogether?



Lesson 2: Add and Subtract with a Pirate

Focus Standard: 1.OA.6

Standards for Mathematical Practice: SMP.3, SMP.4

Estimated Time: 70 minutes

Resources and Materials:

- Clipboards (or books/folders)
- Crayons
- Gold coin counters or other counters for remediation
- Gold Coin equation cards
- Pencils
- Handout 2.1: Addition Treasure Hunt Recording Sheet
- Handout 2.2: Gold Coin Cards
- Handout 2.3: Add with a Pirate
- Handout 2.4: Add with a Pirate Addition Homework
- Add with a Pirate https://www.youtube.com/watch?v=WT_wvvEvkw4

Lesson Targets:

- Students will use addition and subtraction to solve problems within 10.
- Students will determine the unknown whole number in addition and subtraction equations relating to three whole numbers.
- Students will justify the reasonableness of an answer and explain their strategies.

Guiding Questions:

- What different ways can we show sums of 10?
- What does the equal sign mean?

Vocabulary	
<p>Academic Vocabulary:</p> <ul style="list-style-type: none"> • Addition • Compare • Difference • Minus • Reasonable • Subtraction • Sum • Total 	<p>Instructional Strategies for Academic Vocabulary:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Introduce words with student-friendly definitions and pictures <input type="checkbox"/> Model how to use the words in discussion <input type="checkbox"/> Discuss the meaning of word in a mathematical context <input type="checkbox"/> Create pictures/symbols to represent words <input type="checkbox"/> Write/discuss using the words <input type="checkbox"/> Act out the words or attach movements to the words
Symbol	Type of Text and Interpretation of Symbol
	Instructional support and/or extension suggestions for students who are EL, have disabilities, or perform well below the grade level and/or for students who perform well above grade level
✓	Assessment (Pre-assessment, Formative, Self, or Summative)
Instructional Plan	
<p>Understanding Lesson Purpose and Student Outcomes: Students will practice solving addition and subtraction problems within 10, explain their strategies used, and justify the reasonableness of their answers.</p>	

Anticipatory Set/Introduction to the Lesson: Add and Subtract Like a Pirate

Have students sing along with Video "[Add with a Pirate.](#)"

Activity 1: Vocabulary

Students pull out their personal dictionaries completed from the previous lesson. Review the vocabulary terms with the students before the lesson. Place the words on the word wall for students to use later in the unit.

Activity 2: Addition Treasure Hunt

Print and cut out **Handout 2.2: Gold Coin Cards** and hang them around the room. Distribute **Handout 2.1: Addition Treasure Hunt Recording Sheet**, a clipboard, and a pencil to each student.

Tell the students, "You are going on a treasure hunt just like a pirate. You will walk around the room to search for addition treasure cards. Each card has a letter on it that matches a space on your recording page. When you find one, fill in the matching spot on your recording page. For example, (hold up one card) What letter does this have on it? (D) Now find the space on your recording page that has a 'D' on it. You will write this number sentence in that space. What number sentence will we write in the 'D' space on your recording page? ($6 + 4 = 10$) Don't forget to write the sum of your addends." Demonstrate with the D card for the class. Make sure all students understand.

Student will search the room for cards with gold coins. When students find a card, they write the equation and sum represented by the number of coins on the card in the correct space on the recording sheet.

Students add coins from cards hanging around the classroom, compare their answers with a partner and make any changes in their work. If an answer is different, they will work the problem together to find the correct answer. If students disagree on an answer, they must draw a picture to justify why their answer is correct (SMP.3).

Review each coin card and have students check their work.

For students who are EL, have disabilities, or perform well below grade level:

- Provide gold coins for the students to use (SMP.4).
- While students are working, work with students who need remediation. Use objects for students to create the number sentences and count to find the sum (SMP.4).

Extensions for students with high interest or working above grade level:

- Provide problems like: First Mate Penny has 4 jewels. If she puts her jewels with Peg Leg Sam and Captain Hook's jewels, will they have enough jewels to fill a treasure chest that holds 16 jewels? How do you know?
- Allow early finishers to work on illuminations.nctm.org/searchsums to practice addition skills or play the games listed in Lesson #1.

Activity 3: Independent Practice

Distribute **Handout 2.3: Add with a Pirate**. Tell students they will work independently to practice addition facts within 10 with a color-by-number picture of a pirate.

T: Find all the sums for the addition equations. When you get the sum, follow the directions to color the parts of the pirate that match that sum. For example, what is the sum of $1 + 1$? (2) So everywhere there is a 2 on the pirate, you will color it what color? (dark blue)."

For students who are EL, have disabilities, or perform well below grade level:

- Provide gold coins for the students to use (SMP.4).
- While students are working, work with students who need remediation. Use objects for students to create the number sentences and count to find the sum (SMP.4).

Extensions for students with high interest or working above grade level:

- Allow early finishers to work on illuminations.nctm.org/searchsums to practice addition skills or play the games listed in Lesson #1.

Reflection and Closing: Around the World

- Use the Coin Cards from the Addition Treasure Hunt and play “Around the World” with whole class. Choose a place to start. That student stands next to the next student who remains seated. Hold up one Coin Card. The first student who says the correct sum wins and moves to the next student. If the loser was the person standing, that person sits in the desk of the student who had been sitting. Continue until one student makes it all Around the World (room) back to the place they began.

Homework

Distribute **Handout 2.4: Add with a Pirate Addition Homework** and tell students to complete the addition homework practice.

Name _____ Date _____

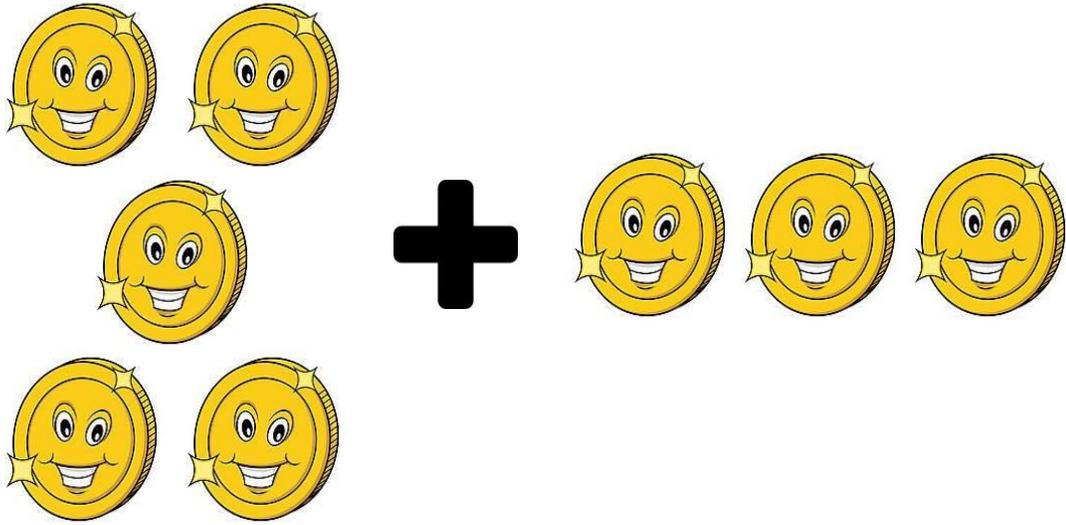
**Handout 2:1: Addition Treasure Hunt Recording Sheet**

Find the Gold Coin cards in our room. Match the letter on the Gold Coin card to the space on your recording sheet. Write the addition equations below in the correct space.

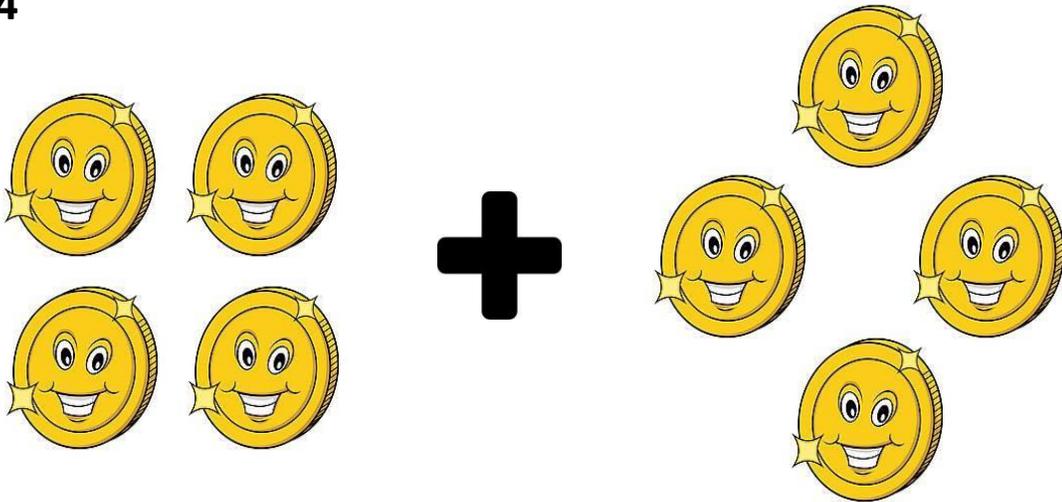
A 	B 
C 	D 
E 	F 
G 	H 
I 	J 

Handout 2:2: Gold Coin Cards

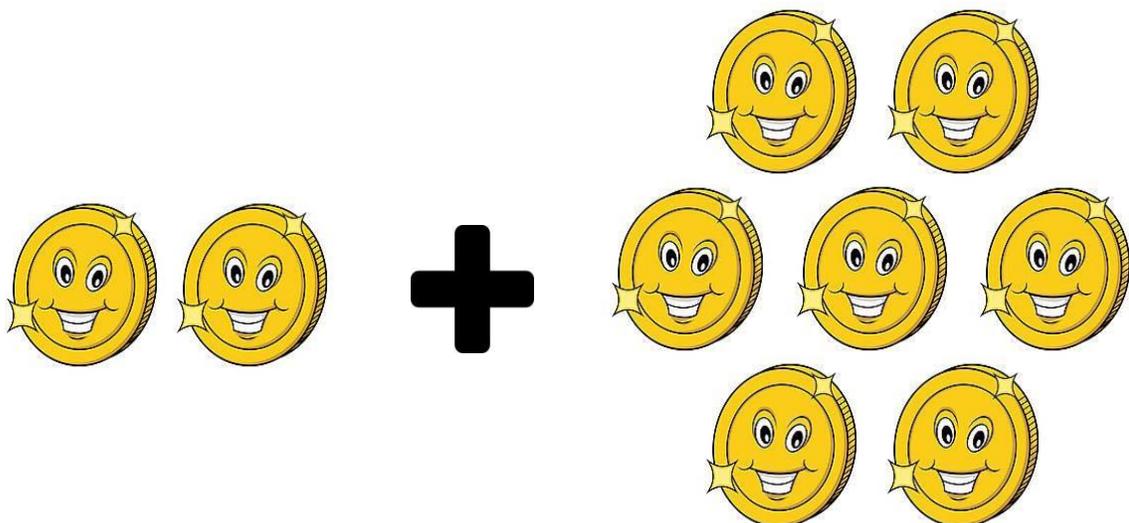
A



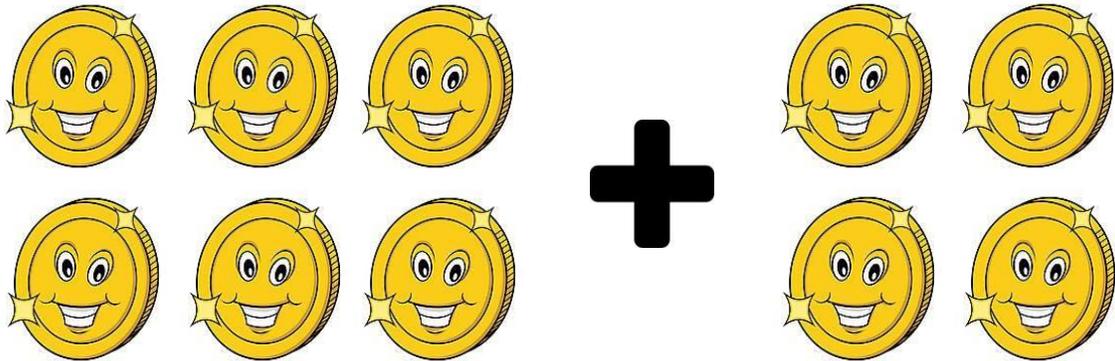
B 4+4



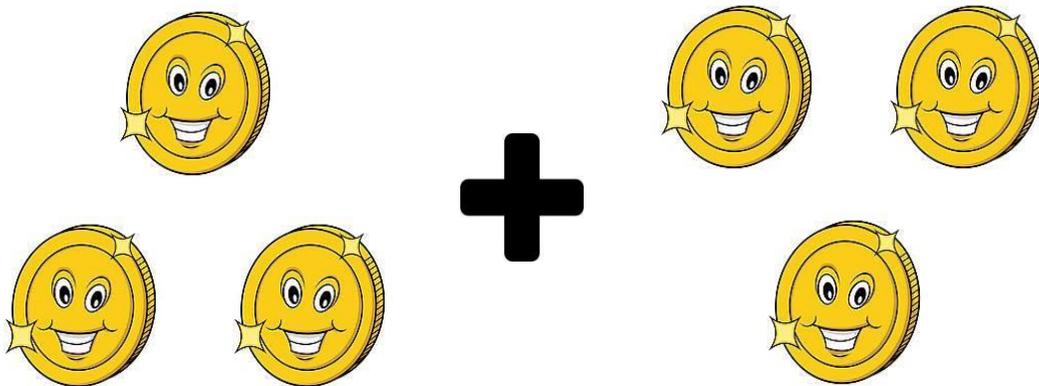
C



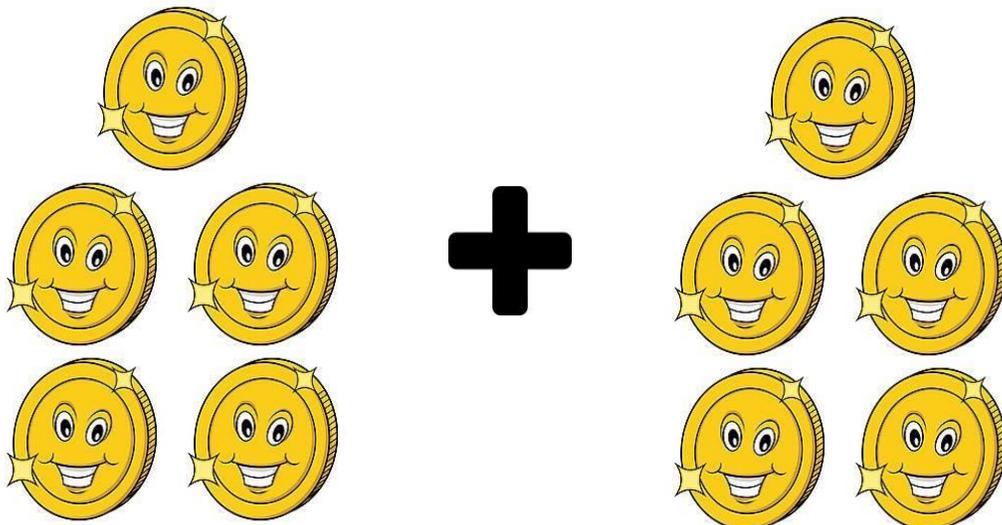
D



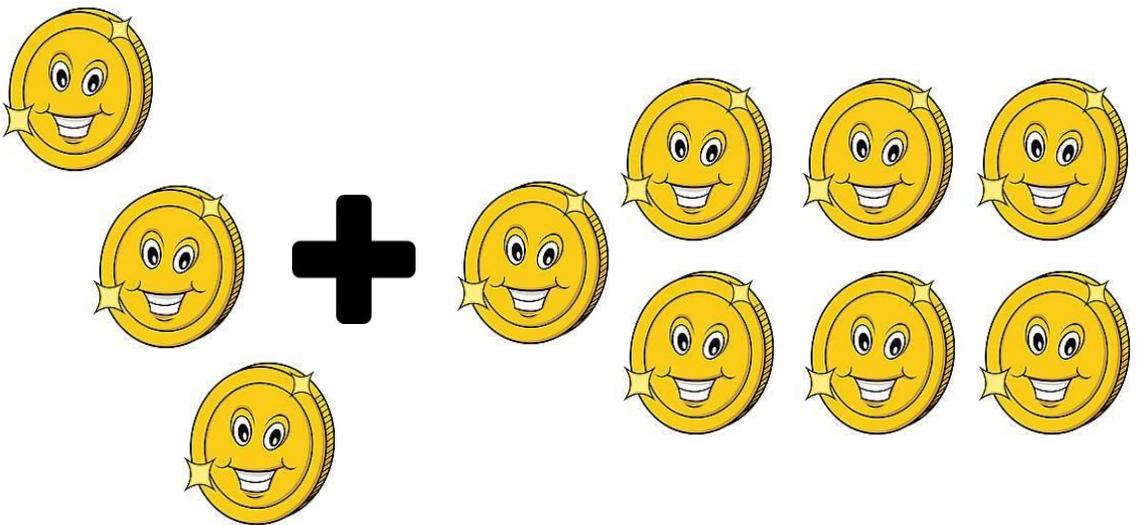
E



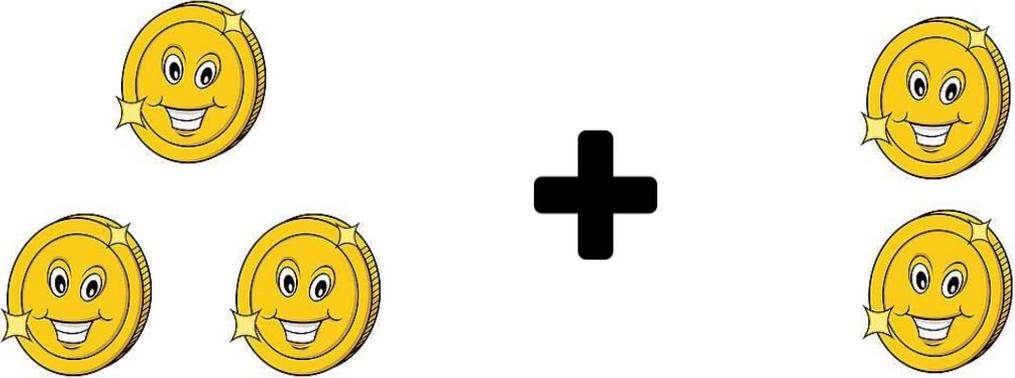
F



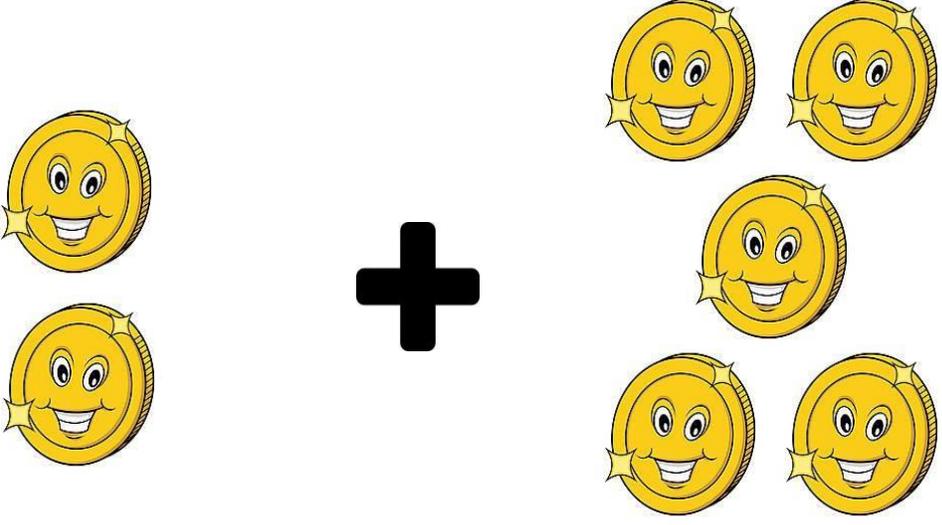
G

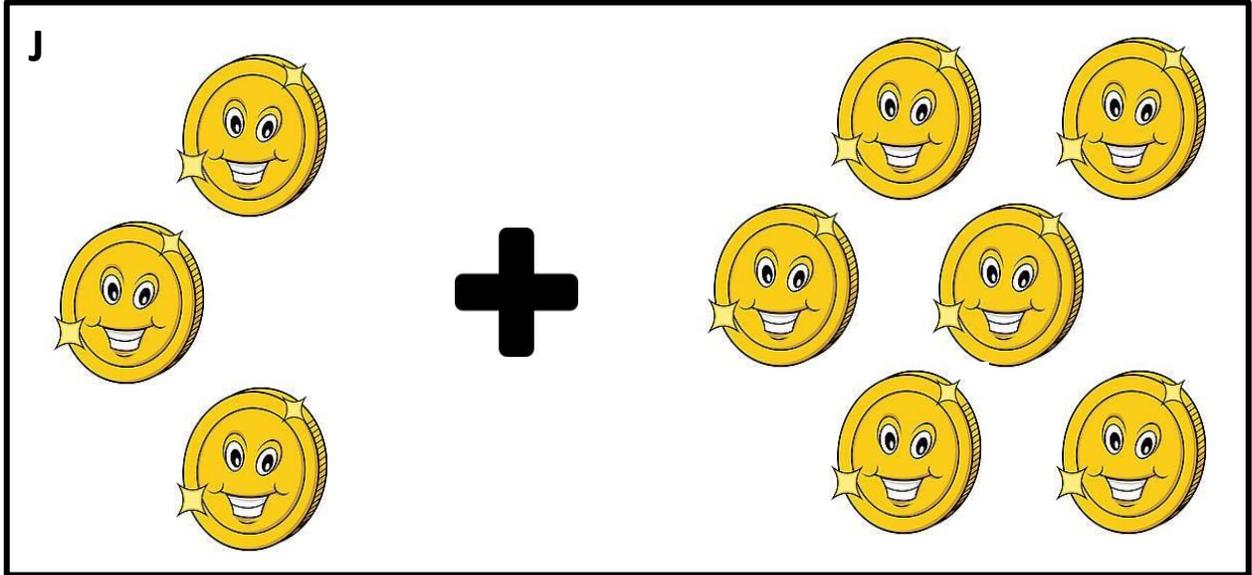


H

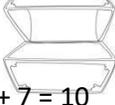
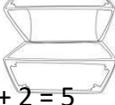


I



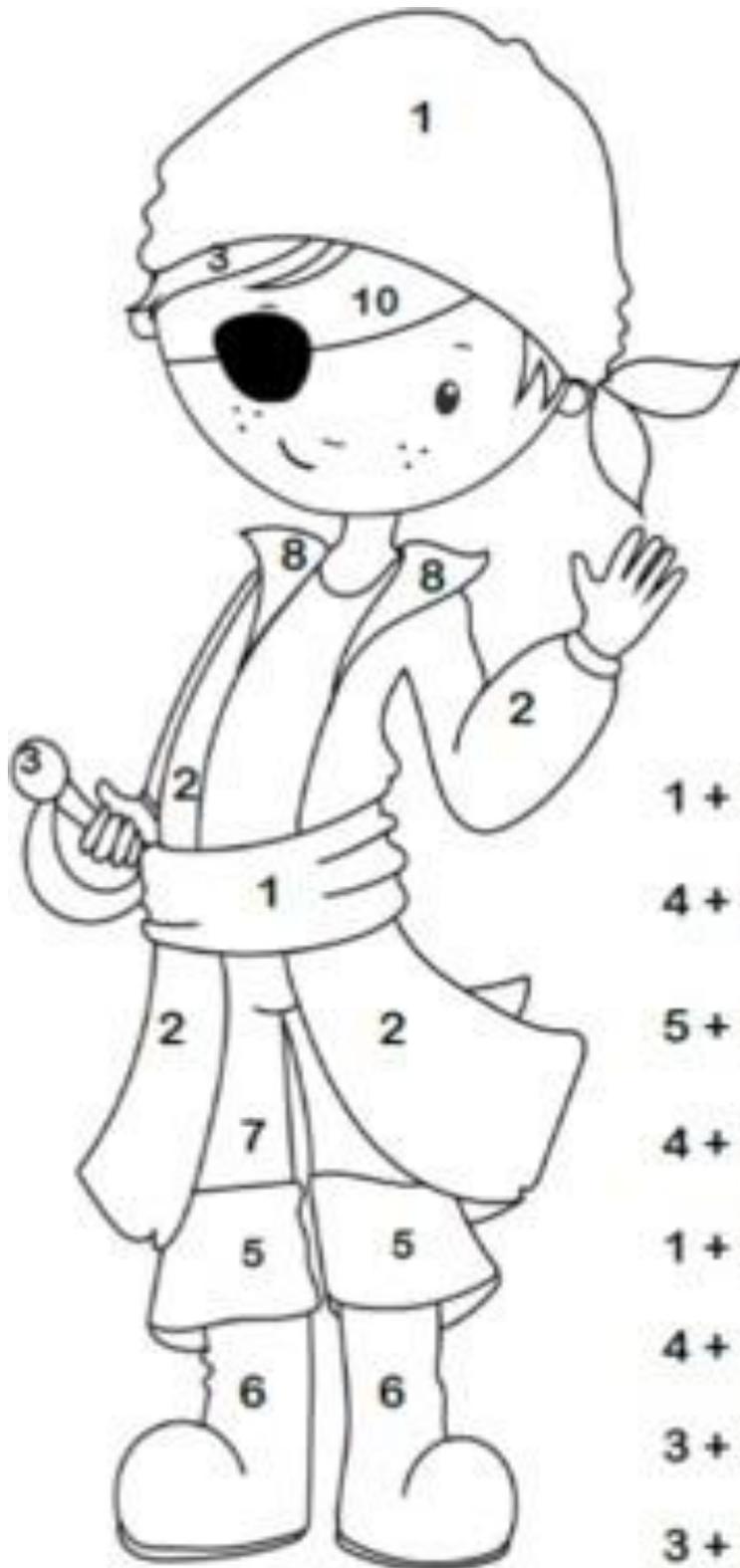


Handout 2:1: Addition Treasure Hunt – Answer Key

<p>A</p>  <p>$5 + 3 = 8$</p>	<p>B</p>  <p>$4 + 4 = 8$</p>
<p>C</p>  <p>$2 + 7 = 9$</p>	<p>D</p>  <p>$6 + 4 = 10$</p>
<p>E</p>  <p>$3 + 3 = 6$</p>	<p>F</p>  <p>$5 + 5 = 10$</p>
<p>G</p>  <p>$3 + 7 = 10$</p>	<p>H</p>  <p>$3 + 2 = 5$</p>
<p>I</p>  <p>$2 + 5 = 7$</p>	<p>J</p>  <p>$3 + 6 = 9$</p>

Handout 2.3: Add with a Pirate

Name _____ Date _____



$$1 + 1 = \underline{\quad} \text{ dark blue}$$

$$4 + 4 = \underline{\quad} \text{ light blue}$$

$$5 + 5 = \underline{\quad} \text{ flesh}$$

$$4 + 3 = \underline{\quad} \text{ black}$$

$$1 + 0 = \underline{\quad} \text{ red}$$

$$4 + 1 = \underline{\quad} \text{ dark brown}$$

$$3 + 3 = \underline{\quad} \text{ light brown}$$

$$3 + 0 = \underline{\quad} \text{ yellow}$$

Handout 2.4: - Add with a Pirate Addition Homework

Name _____ Date _____

Addition!

$$\begin{array}{r} 3 \\ +1 \\ \hline \end{array}$$

$$\begin{array}{r} 2 \\ +2 \\ \hline \end{array}$$

$$\begin{array}{r} 2 \\ +7 \\ \hline \end{array}$$

$$\begin{array}{r} 1 \\ +3 \\ \hline \end{array}$$

$$\begin{array}{r} 3 \\ +4 \\ \hline \end{array}$$

$$\begin{array}{r} 1 \\ +2 \\ \hline \end{array}$$

$$\begin{array}{r} 2 \\ +8 \\ \hline \end{array}$$

$$\begin{array}{r} 2 \\ +6 \\ \hline \end{array}$$

$$\begin{array}{r} 1 \\ +5 \\ \hline \end{array}$$

$$\begin{array}{r} 1 \\ +3 \\ \hline \end{array}$$

$$\begin{array}{r} 1 \\ +7 \\ \hline \end{array}$$

$$\begin{array}{r} 2 \\ +1 \\ \hline \end{array}$$

$$\begin{array}{r} 8 \\ +2 \\ \hline \end{array}$$

$$\begin{array}{r} 4 \\ +2 \\ \hline \end{array}$$

$$\begin{array}{r} 1 \\ +9 \\ \hline \end{array}$$

$$\begin{array}{r} 5 \\ +5 \\ \hline \end{array}$$

Lesson 3: The Treasure Chest

Focus Standard: 1.OA.1

Standards for Mathematical Practice: SMP.3, SMP.4, SMP.5, SMP.7

Estimated Time: 70 minutes

Resources and Materials:

- Counters
- Crayons
- Math journals
- Rekenreks or bead strings
- Ten frames
- Handout 3.1: Hide Zero Cards (laminated if possible)
- Handout 3.2: Number Bonds Template (laminated if possible)
- Handout 3.3: Ten Frames Template (laminated if possible)
- Handout 3.4: Addition Equation Template
- Handout 3.5: Addition to 20 Practice
- Handout 3.6: Addition to 20 Homework
- Handout 3.7: Word Wall Games
- “Boy Demonstrating How to Use Hide Zero Cards”: <https://www.youtube.com/watch?v=LhGEIKGf0Ok>
- “Ten Frame Flash Cards”: <https://www.youtube.com/watch?v=wRR9LK3zfho>
- “What are Hide Zero Cards?”: <https://vimeo.com/93275204>

Lesson Target:

- Students will add to 10 to make sums within 20 using tools and manipulatives.

Guiding Questions:

- What models show your equation is equal?
- What is the value of the digit 1 in the number 15?

Vocabulary	
<p>Academic Vocabulary:</p> <ul style="list-style-type: none"> • Addition • Compare • Difference • Minus • Reasonable • Subtraction • Sum • Total 	<p>Instructional Strategies for Academic Vocabulary:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Introduce words with student-friendly definitions and pictures <input type="checkbox"/> Model how to use the words in discussion <input type="checkbox"/> Discuss the meaning of word in a mathematical context <input type="checkbox"/> Create pictures/symbols to represent words <input type="checkbox"/> Write/discuss using the words <input type="checkbox"/> Act out the words or attach movements to the words
Symbol	Type of Text and Interpretation of Symbol
	Instructional support and/or extension suggestions for students who are EL, have disabilities, or perform well below the grade level and/or for students who perform well above grade level
✓	Assessment (Pre-assessment, Formative, Self, or Summative)
Instructional Plan	
<p>Understanding Lesson Purpose and Student Outcomes: Students will identify numbers on ten frames with a flash card video. Students will learn to model addition within 20 using number bonds, rekenreks, Hide Zero Cards (place value cards), ten frames, and equations.</p>	

Anticipatory Set/Introduction to the Lesson: What Am I?

Play [Ten Frames video](#). When a ten frame is shown, students call out the corresponding number. Do this as whole class or taking turns.

Activity 1: Vocabulary

Choose a game from **Handout 3.7: Word Wall Games** to review vocabulary.

Note: Take the class' readiness into consideration when choosing the word wall game to play.

For students who are EL, have disabilities, or perform well below grade level:

- Students will work with a partner for peer coaching or with the teachers in a small group, depending on the activity chosen.

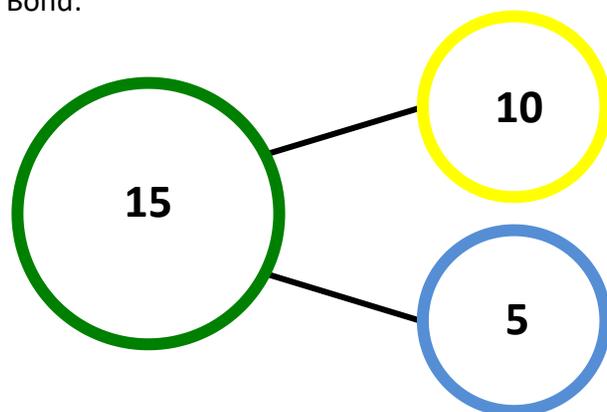
Activity 2: Pair Problem Solving

Gather students on the floor. Display the following problem on the board or chart paper and use a close reading strategy to read the problem: "Peg Leg Sam has five more jewels than Captain Hook. Captain Hook has 10 jewels. How many jewels does Peg Leg Sam have?" Have students get into partner groups to support each other as they discuss the problem.

Use **Handout 3.1: Hide Zero Cards** to demonstrate how to use Hide Zero cards to see that $10 + 5 = 15$. Show the video [Hide Zero](#) to see a boy using Hide the Zero cards to make 15 (SMP.4).

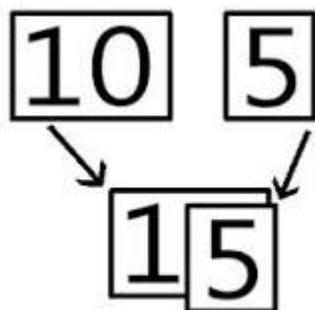
Model showing addition to 15 with a number bond, Hide Zero cards, a rekenrek, ten frames with counters, and an equation while students model with their own manipulatives and tools (SMP.5).

Number Bond:

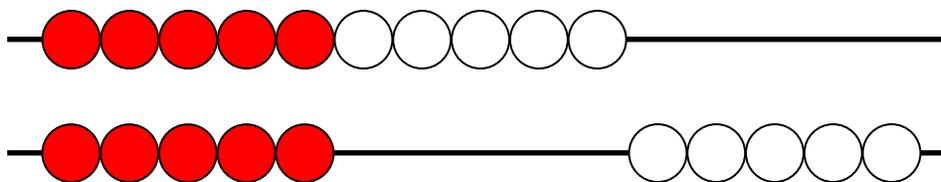


Note: The blue/yellow/green part-part-whole model can be visually assistive to students learning addition and subtraction. Students should understand that yellow and blue can be combined to make green. This can be taught as a separate art lesson or imbedded in math. Other color combinations may be used, but these three are visually more distinctive than red/orange or blue/purple in other arrangements.

Hide Zero (Place Value) Cards:



Rekenrek:



Note: If you do not have rekenreks, you can create them by using strips of leather, string, rubber band, or pipe cleaner with 10 beads (5 red beads and 5 white beads) on each one. Each student or pair will need 2 rows of 10 for this activity.

Ten Frames:

●	●	●	●	●
●	●	●	●	●

●	●	●	●	●

Equation:

$$10 + 5 = 15$$

Have students return to their work area to work with a partner. Display the following expressions: $10 + 4 = \underline{\quad}$, $12 + 6 = \underline{\quad}$, $9 + 4 = \underline{\quad}$, and $11 + 9 = \underline{\quad}$.

Distribute to each pair

- a set of Hide Zero cards. Instruct students to model addition expressions using the Hide Zero cards (SMP.7).
- a rekenrek to each pair and model the same addition expressions using the rekenrek (SMP.5).
- **Handout 3.2: Number Bond Template** to each pair and model the same addition expressions using the number bond template (SMP.5).
- **Handout 3.3: Ten Frames** and counters to each pair and model the same addition expressions using the ten frames (SMP.5).
- **Handout 3.4: Addition Equation Template** to each pair and tell them to write an equation for each of the addition expressions they practiced (SMP.7).

Activity 3: Sums to 20

Model $8 + 6$ using rekenreks, ten frames, number bonds and an equation. Tell students to model other numbers whose sum is equal to 14 on their rekenrek. (not $8 + 6$) Have students demonstrate all the different ways they can model 14: $10 + 4$, $9 + 5$, $8 + 6$, $7 + 7$, $6 + 8$, $5 + 9$, and $4 + 10$. Probe students about $10 + 4$ and $4 + 10$ (Commutative Property). Have students practice for the numbers 12, 13, 16, 17, 18, 19, and 20 using a rekenrek and ten frames and making number bonds and writing equations. Have students to record their work in their math journals.

Activity 4: Independent Practice

Distribute **Handout 3.5: Addition to 20 Practice** and tell students to work independently to complete the worksheet for adding within 20. Tell Students, “Find all the sums for the addition equations. When you get the sum, follow the directions to color the parts of the pirate that match that sum. For example, what is the sum of $6 + 5$? (11) So everywhere there is an 11 on the pirate, you will color it what color? (red).”

For students who are EL, have disabilities, or perform well below grade level:

- Students can choose to use any of the manipulative used in the lesson.

Extensions for students with high interest or working above grade level:

- Have students write equations with a missing addend and model on rekenreks and number bonds.

Reflection and Closing:

- Display the following problem on the board and tell students to find the sum in this equation:

$$6 + 7 = \underline{\quad} (13)$$

Homework

Distribute **Handout 3.6: Homework** and tell students to complete the worksheet.

Handout 3.1: Hide Zero Cards

1	2	3	1 0
4	5	6	2 0
7	8	9	3 0

4 0

5 0

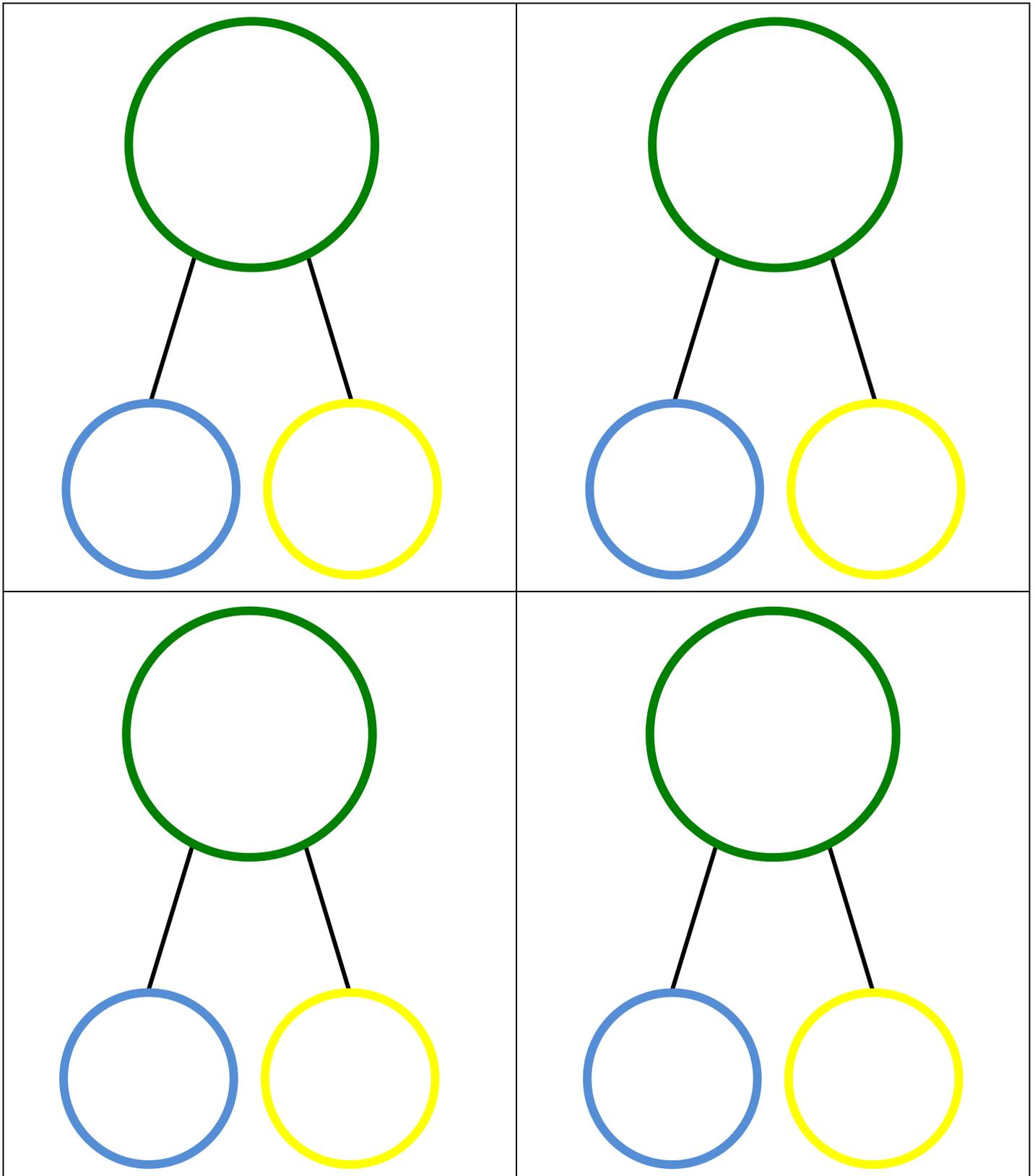
6 0

7 0

8 0

9 0

Handout 3.2: Number Bond Template



Handout 3.3: Ten Frames

Handout 3.4: Addition Equation Template

$$\underline{\quad\quad} + \underline{\quad\quad} = \underline{\quad\quad}$$

$$\underline{\quad\quad} = \underline{\quad\quad} + \underline{\quad\quad}$$

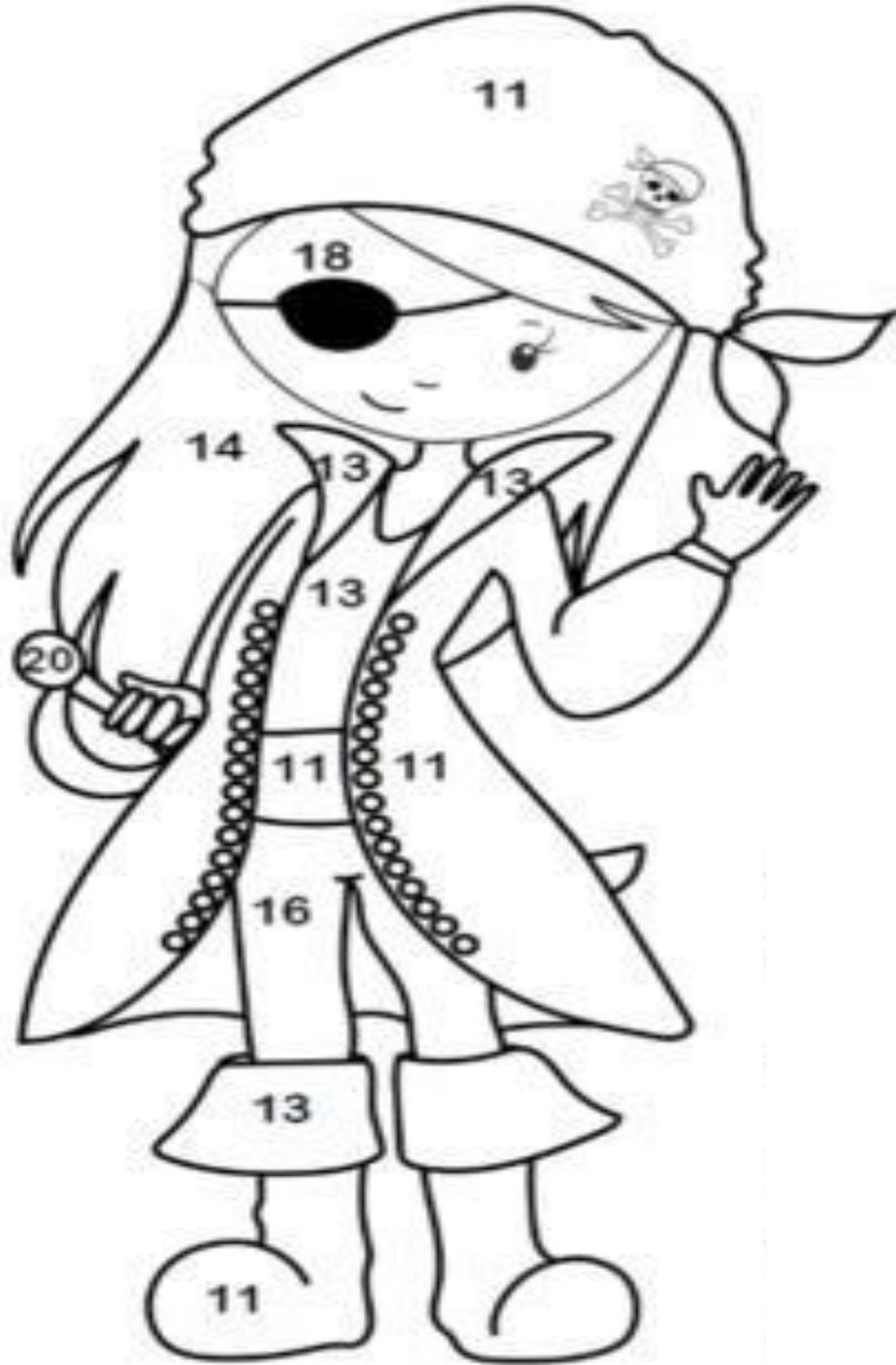
$$\underline{\quad\quad} + \underline{\quad\quad} = \underline{\quad\quad}$$

$$\underline{\quad\quad} = \underline{\quad\quad} + \underline{\quad\quad}$$

$$\underline{\quad\quad} + \underline{\quad\quad} = \underline{\quad\quad}$$

Handout 3.5: Addition to 20 Practice

- $6 + 5 = \underline{\quad}$ red
- $9 + 4 = \underline{\quad}$ pink
- $7 + 7 = \underline{\quad}$ orange
- $10 + 6 = \underline{\quad}$ black
- $9 + 9 = \underline{\quad}$ brown
- $10 + 10 = \underline{\quad}$ yellow



Handout 3:6: Addition to 20 Homework

Name _____

Date _____

Direction: Find sum.

1. $8 + 7 = \underline{\hspace{2cm}}$

2. $\underline{\hspace{2cm}} = 6 + 9$

3. $7 + 5 = \underline{\hspace{2cm}}$

4. $\underline{\hspace{2cm}} = 5 + 6$

5. $\underline{\hspace{2cm}} = 9 + 2$



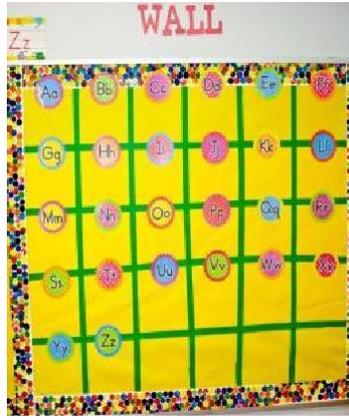
6. $\underline{\hspace{2cm}} = 3 + 10$

7. $10 + 8 = \underline{\hspace{2cm}}$

8. $\underline{\hspace{2cm}} = 9 + 8$

Handout 3.7: Word Wall Games

Place vocabulary alphabetically on word walls-play interactive games during the unit



Guess Who Game

Each day before your students enter the classroom, choose a few words on the wall and flip the card over so the definition is showing. At the beginning of class, ask the students to identify which words are flipped over by using the definition. You could also substitute a synonym or antonym for the definition in this game.

Alphabetizing

Before the students enter the classroom, mix up some of the words on the word wall and ask the students to put them in the correct order again.

Picture This

Create a picture that relates to some of the words on the Word Wall. Show your students the picture, and ask them to identify words that can be used to describe the picture or relate to the picture.

Compare and Contrast

Choose two words from the Word Wall and have your students compare and contrast the words.

Point, Clap, Chant, Read

The teacher states the word, one student points to the word on the word wall and then all students chant the letters of the word and clap for each letter, or syllable then read the word.

Rhymes

The teacher states that the word begins with a letter and rhymes with a word on the word wall. The student will write the word on their word wall sheet. The teacher will repeat it 5 times with 5 different words.

Kid Friendly Definitions

Students create definitions in their own words for better understanding/ownership.

Guess My Word

The teacher will choose one word from the word wall. The teacher will give one clue each time to see how long it will take the students to guess the word.

Word Sort Activities

Sort words that match the current phonics skill or pattern (e.g., short vowel sounds, long vowel sounds, magic e, r-controlled vowels, etc.)

Sort words that are similar or opposite in meaning.

Sort nouns, verbs, adjectives, adverbs.

Open sort – give a group of words and let the students decide how they should be sorted.

Find and Erase

Write 5 to 10-word wall words on a lap-size dry erase board with dry erase markers. Say a word's definition at random and have the students find the word in their list and then erase it. Continue until all words are gone.

Tall Tower

When you make the word wall words, write a number 1, 2, or 3 on the back of the cards in a corner. (For this activity, you will need blocks, snap cubes, Legos or any type of manipulative that students can build a tower with.) Collect between 6-12-word wall word cards. Shuffle the cards and place face down. Have the students to pull a card from the stack reading the word on the face of the card. If they are successful with the knowing the definition, they turn the card over and find the number on the back. They then take that number of blocks and begin building a tower. They continue by adding blocks with every successful definition. Students will take turns and continue until all words are gone. (This can be done as an intervention activity.)

Word Wall, Beach Ball

Stand or sit in a circle. Teacher holds beach ball (or a ball or bean bag). The teacher tosses the ball to a child and asks the child to define the word "_____." (name a word off the word wall at random). The student must find the word on the word wall and define it. Then that child throws the ball to another child and asks the child who caught the ball to define another word on the word wall. Repeat as desired.

Word Wall Hot Potato

Play hot potato with a bean bag or small ball. Play music and when the music stops, ask the child who is holding the ball or bag, to tell you the definition of a word from the word wall. Repeat.

Word Wall Bingo

Give each student a filled in or blank bingo card. If it is blank, have students to randomly select words from the word wall cards and write them in the blanks on their card. Collect cards and shuffle. Randomly, select word card and call out a definition. If the child has that word on his/her card, then they must cover it with the marker. Continue until someone bingos or has a complete line across, diagonally, or up and down.

Word Wall Tic-Tac-Toe

Laminate blank tic-tac-toe grids large enough for students to write word wall words in the spaces. At the beginning of the game have them write word wall words of their choice in each space. When they are done have them gather those words from the word wall. Shuffle the cards. As you give a definition of a word tell them if it is an **O** or **X**. If they have the word, they can put an **O** or **X** over the word. The first person to get a tic-tac-toe wins. Return word wall words to wall.

Word wall Fill in the Blanks

Have the students choose 1-3 words from the word wall to form a guessing pool. Bring the words to the teacher at the teacher table. The teacher makes up a sentence with one of the words from the guessing pool and says it out loud omitting the targeted word. The students must figure out the missing word. Return word wall words to word wall.

Lesson 4: Counting Me Treasure

Focus Standard: 1.OA.2

Standards for Mathematical Practice: SMP.3, SMP.5, SMP.6

Estimated Time: 70 minutes

Resources and Materials:

- Counters
- Pencils
- Personal dry erase boards and markers
- Handout 3.1: Hide Zero Cards
- Handout 4.1: Addition/Subtraction Pirate Flash Cards
- Handout 4.2: Group Dot Cards
- Handout 4.3: Counting Me Treasure Activity
- Handout 4.4: Counting Me Treasure Homework
- *Dirty Joe the Pirate* by Bill Harley
- *Dirty Joe* read aloud <https://www.youtube.com/watch?v=yB0Wm7CsDv0>

Lesson Target:

- Students will add 3 addends with sums within 20.

Guiding Questions:

- How can you find the sum of 3 addends?
- How is adding with 3 numbers the same as or different from adding with 2 numbers?

Vocabulary	
<p>Academic Vocabulary:</p> <ul style="list-style-type: none"> • Addition • Compare • Difference • Minus • Reasonable • Subtraction • Sum • Total 	<p>Instructional Strategies for Academic Vocabulary:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Introduce words with student-friendly definitions and pictures <input type="checkbox"/> Model how to use the words in discussion <input type="checkbox"/> Discuss the meaning of word in a mathematical context <input type="checkbox"/> Create pictures/symbols to represent words <input type="checkbox"/> Write/discuss using the words <input type="checkbox"/> Act out the words or attach movements to the words
Symbol	Type of Text and Interpretation of Symbol
	Instructional support and/or extension suggestions for students who are EL, have disabilities, or perform well below the grade level and/or for students who perform well above grade level
✓	Assessment (Pre-assessment, Formative, Self, or Summative)
Instructional Plan	
<p>Understanding Lesson Purpose and Student Outcomes: Students will watch a video to see ways to add three addends with sums within 20 then practice the skill using 10-Group cards.</p>	

Anticipatory Set/Introduction to the Lesson: Around the World

Print and cut out the cards from **Handout 4.1: Addition/Subtraction Flash Cards** and play Around the World with Pirate Flash Cards to find differences within 10.

Activity 1: Vocabulary

Display the unit vocabulary words around the room. Tell students to listen for the vocabulary words as you read *Dirty Joe the Pirate*. Tell students when they hear a vocabulary term, find the term on the wall and stand by it. Explain that they will share with the class what the words means, how it is used during math, and use the term in a sentence. Read *Dirty Joe the Pirate* and have students take turns finding the terms and sharing what it means, how it is used in math and use the term in a sentence.

For students who are EL, have disabilities, or perform well below grade level:

- Partner with a student who will give the definition and how it is used and this student will use the word in a sentence.

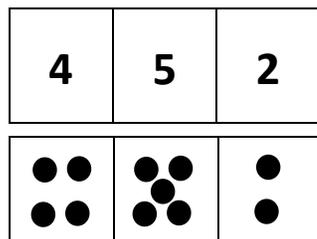
Activity 2: Counting Me Treasure

Show the video of Bill Harley reading [Dirty Joe the Pirate](#).

Distribute individual white boards and markers to students. Show 2 bunches of socks: one bunch has 4 socks and the other has 5 socks. Have students count the number of socks in each bunch and write an equation on their white board adding them together $4 + 5 = 9$. Have students make a number bond on their white board to represent the addition. Add another bunch of socks with 2 socks and tell students to count (2). Ask, "Now how can we find out how many socks we have all together?" (Add all the socks together.

Add 2 socks to 9 socks.) Demonstrate how to write an equation showing how to add 3 addends: $4 + 5 + 2 = 11$.

Distribute **Handout 4.2: Group Dot Cards** and **Handout 3.1: Hide Zero Cards**. Demonstrate how to use Hide Zero Cards and Group Dot Cards to show the addition above.



Note: Students will need multiple sets of both cards since they are adding 3 numbers, and addends may be repeated.

Display the following expression $2 + 3 + 8 = \underline{\quad}$ and tell students to model each expression with Group Dot Cards and Hide Zero Cards and write the equations with the sum on their white board (SMP.5). Tell students turn to their elbow buddy and compare their work. If they do not have the same answers, justify their answer and correct their partner (SMP.3). Repeat the steps with the following equations:

- $10 + 0 + 8 = \underline{\quad}$
- $\underline{\quad} = 0 + 7 + 1$
- $\underline{\quad} = 2 + 6 + 3$
- $9 + 2 + 4 + = \underline{\quad}$
- $\underline{\quad} = 3 + 4 + 1$
- $9 + 1 + 3 = \underline{\quad}$

Walk around and monitor who may need extra assistance before individual practice.

For students who are EL, have disabilities, or perform well below grade level:

- Partner with a student who will give the definition and how it is used and this student will use the word in a sentence.
- Students may use counters to represent the numbers and count them.

Extensions for students with high interest or working above grade level:

- Have students write a story to match a 3-digit expression.

Activity 3: Individual Practice

Have students move to their work area. Distribute **Handout 4.3: Counting Me Treasure Activity** sheet. Tell students to use Group Dot Cards Hide Zero Cards to find sums of 3 numbers (SMP.6).

Reflection and Closing:

- Hold up 3 numeral cards and have students take turns saying the equation with the sum.

Homework

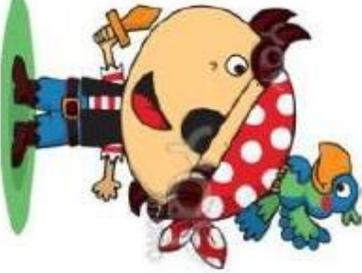
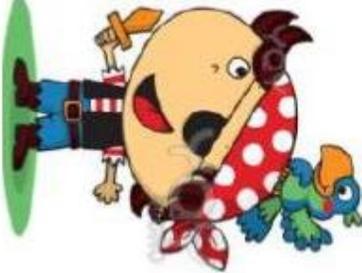
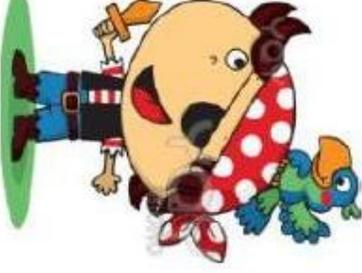
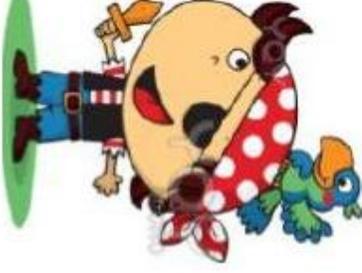
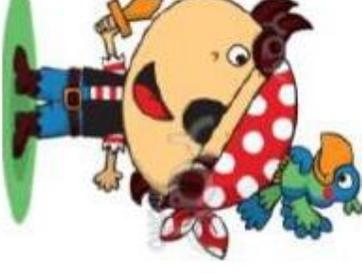
Distribute **Handout 4.4: Counting Me Treasure Homework** and tell students to find the sums to complete homework. sheet.

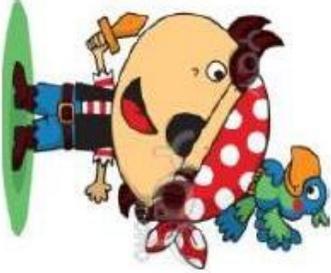
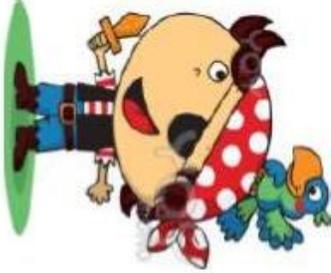
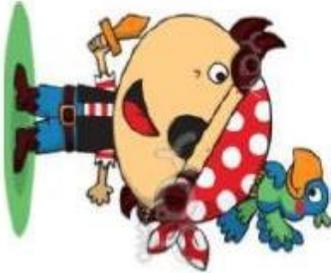
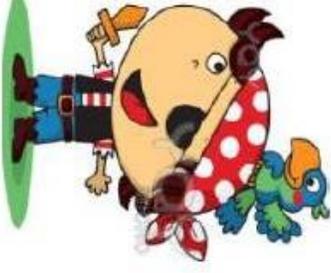
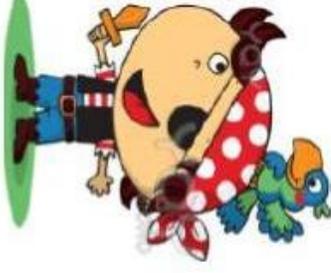
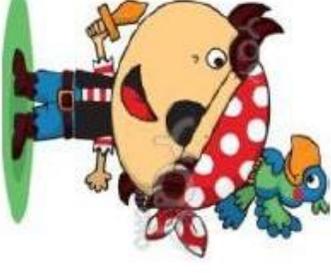
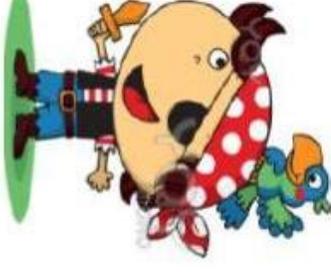
For students who are EL, have disabilities, or perform well below grade level:

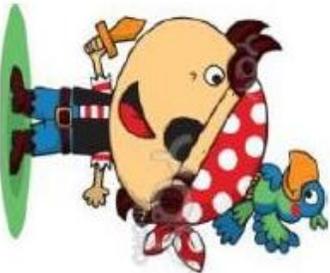
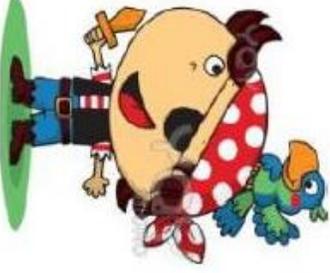
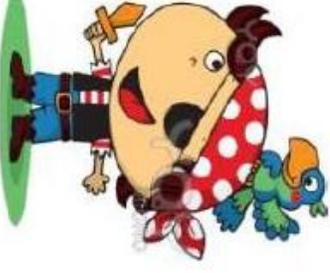
- Reduce the number of problems.
- Have students use counters to represent the 3 numbers and count the counters.

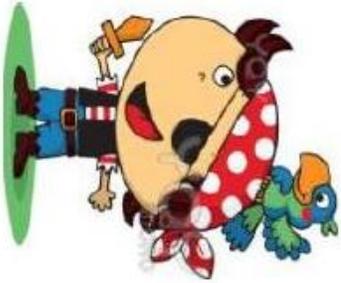
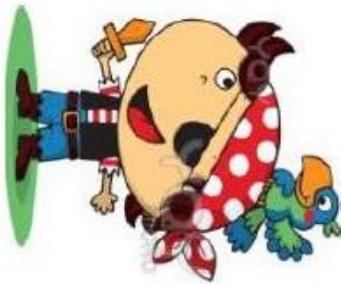
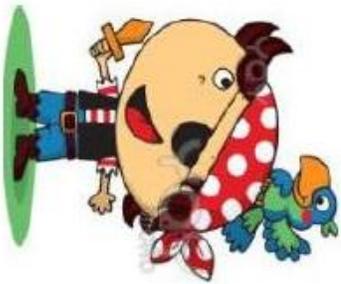
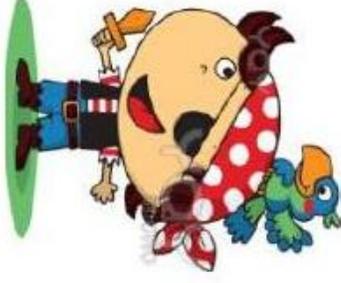
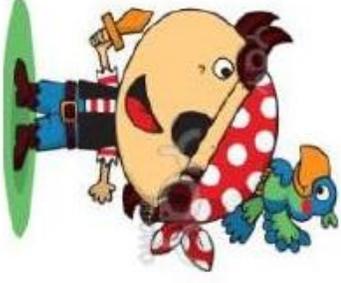
Handout 4.1: Addition/Subtraction Flash Cards

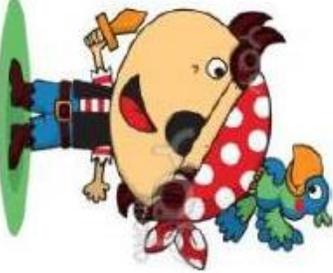
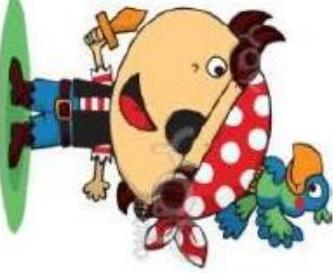
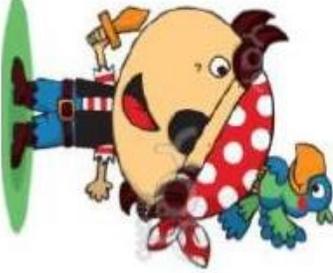
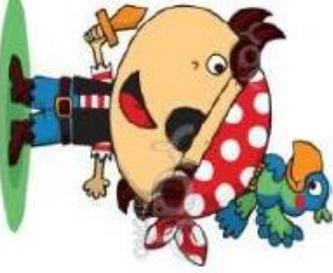
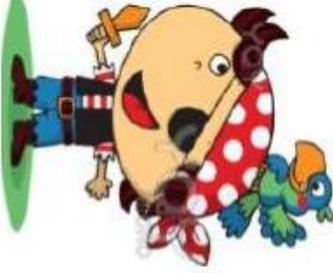
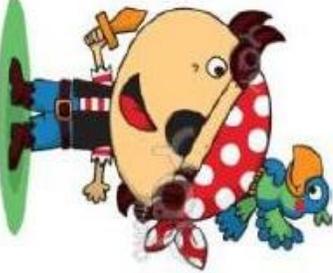
 _ = 5 - 1	 1 - 1 =
 6 - 1 =	 _ = 2 - 1
 _ = 7 - 1	 3 - 1 =
 8 - 1 =	 _ = 4 - 1

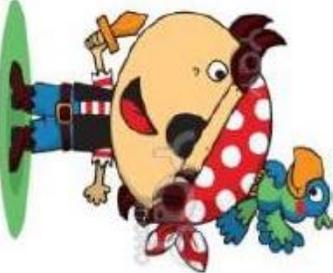
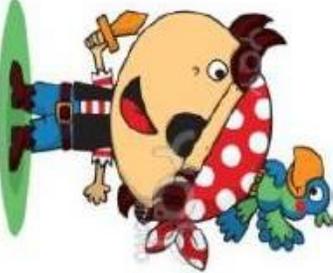
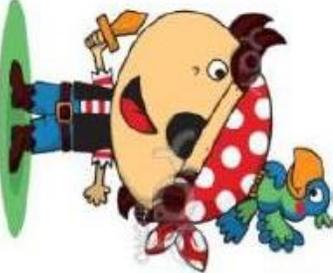
 $\underline{\quad} = 5 - 2$	 $\underline{\quad} = 9 - 1$
 $6 - 2 =$	 $2 - 1 =$
 $7 - 2 =$	 $\underline{\quad} = 3 - 2$
 $\underline{\quad} = 8 - 2$	 $4 - 2 =$

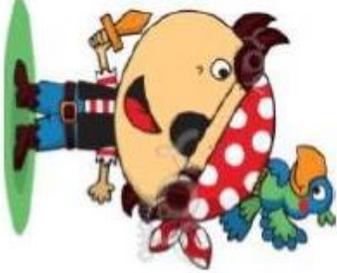
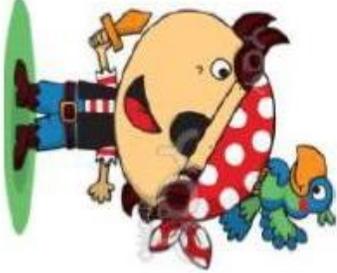
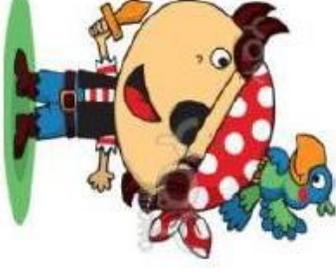
 $5 - 3 =$	 $_ = 9 - 2$
 $_ = 6 - 3$	 $3 - 2 =$
 $_ 7 - 3$	 $3 - 3 =$
 $8 - 3 =$	 $_ = 4 - 3$

 $_ = 7 - 4$	 $4 - 2 =$
 $8 - 4 =$	 $_ = 4 - 4$
 $9 - 4 =$	 $5 - 4 =$
 $_ = 10 - 4$	 $_ = 6 - 4$

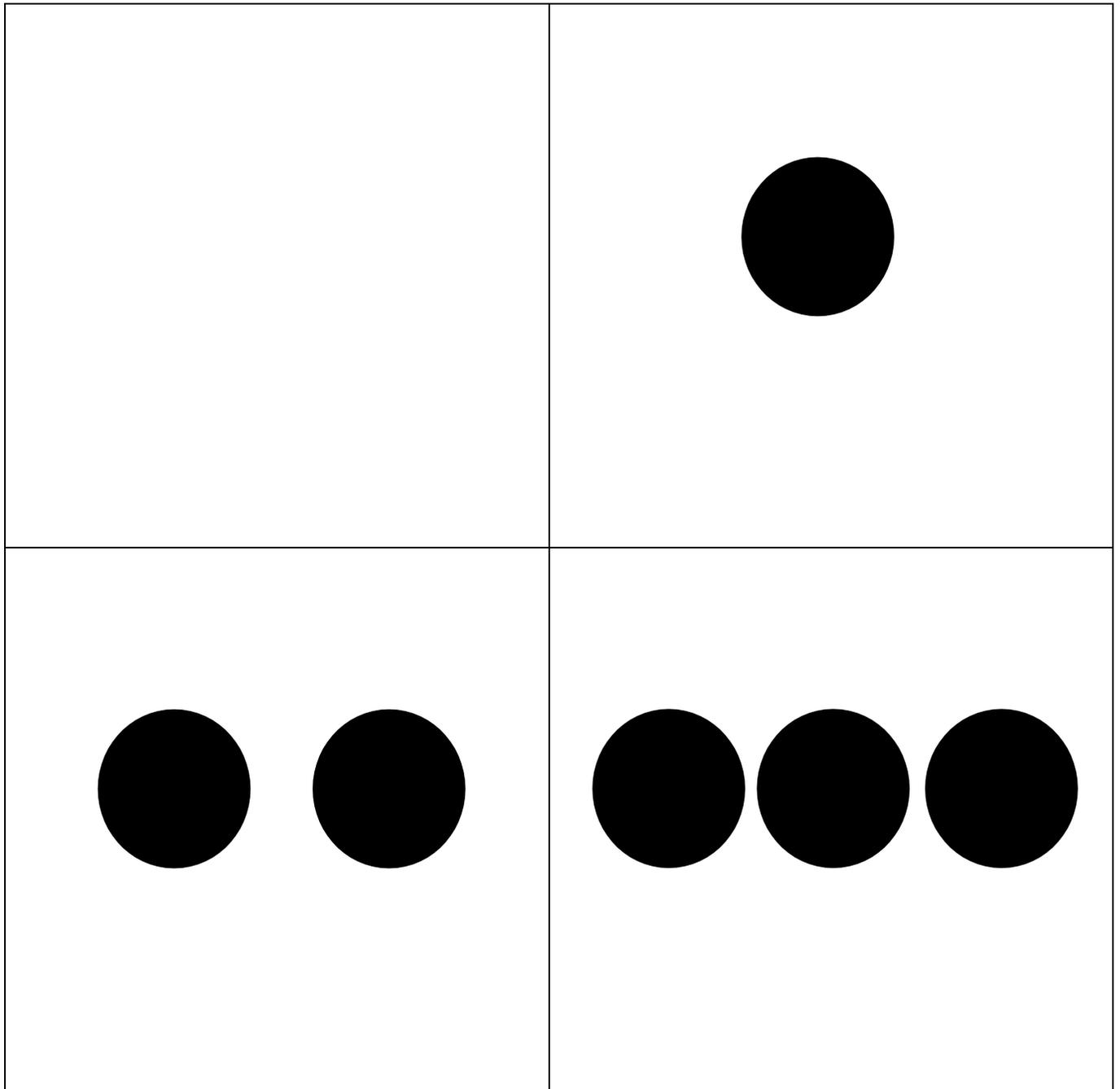
 $_ = 1 + 5$	 $1 + 1 = _$
 $1 + 6 = _$	 $_ = 1 + 2$
 $_ = 1 + 7$	 $1 + 3 = _$
 $1 + 8 = _$	 $_ = 1 + 4$

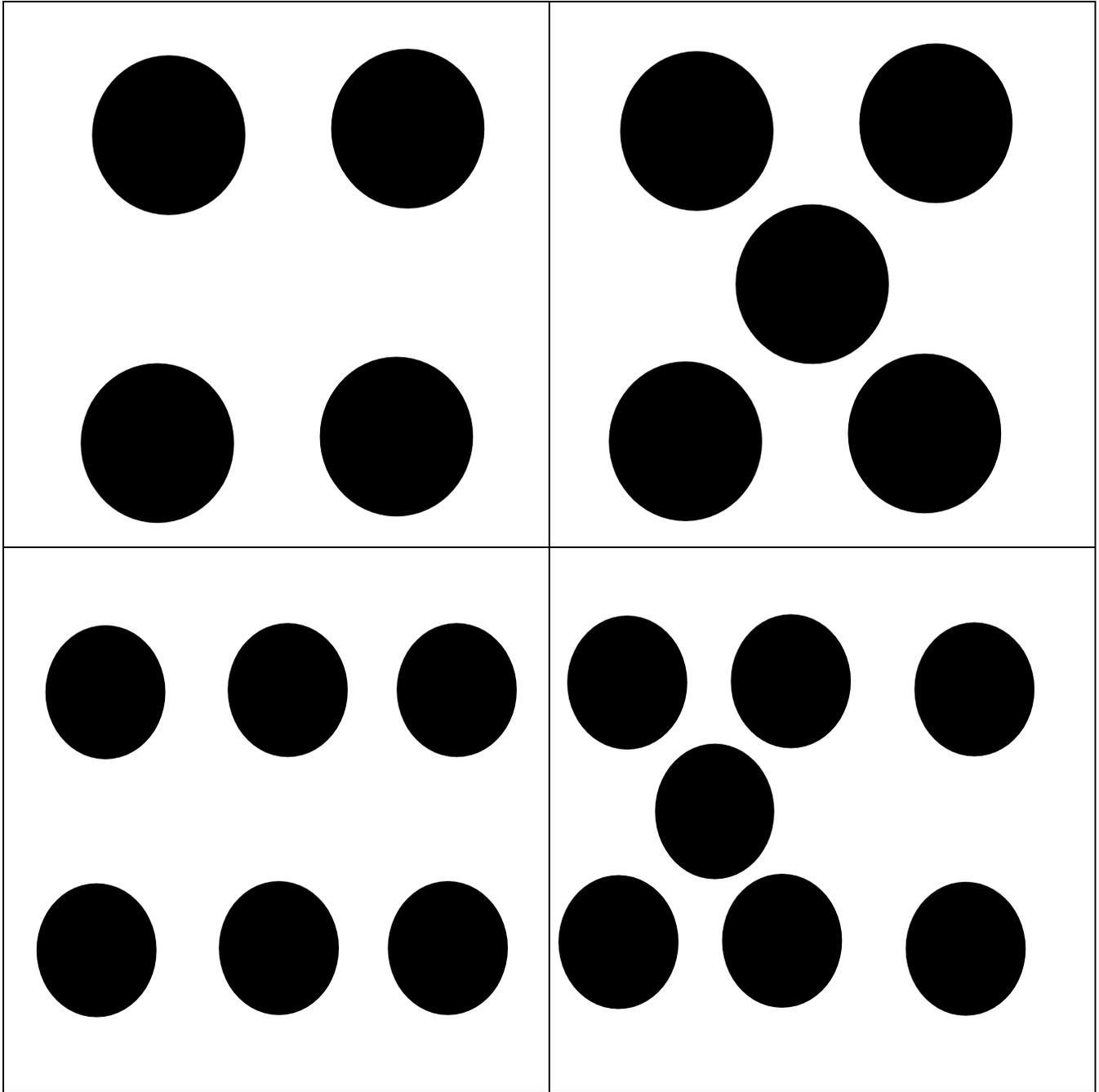
 $\underline{\quad} = 2 + 5$	 $\underline{\quad} = 1 + 9$
 $2 + 6 =$	 $2 + 1 =$
 $2 + 7 =$	 $\underline{\quad} = 2 + 3$
 $\underline{\quad} = 2 + 8$	 $2 + 4 =$

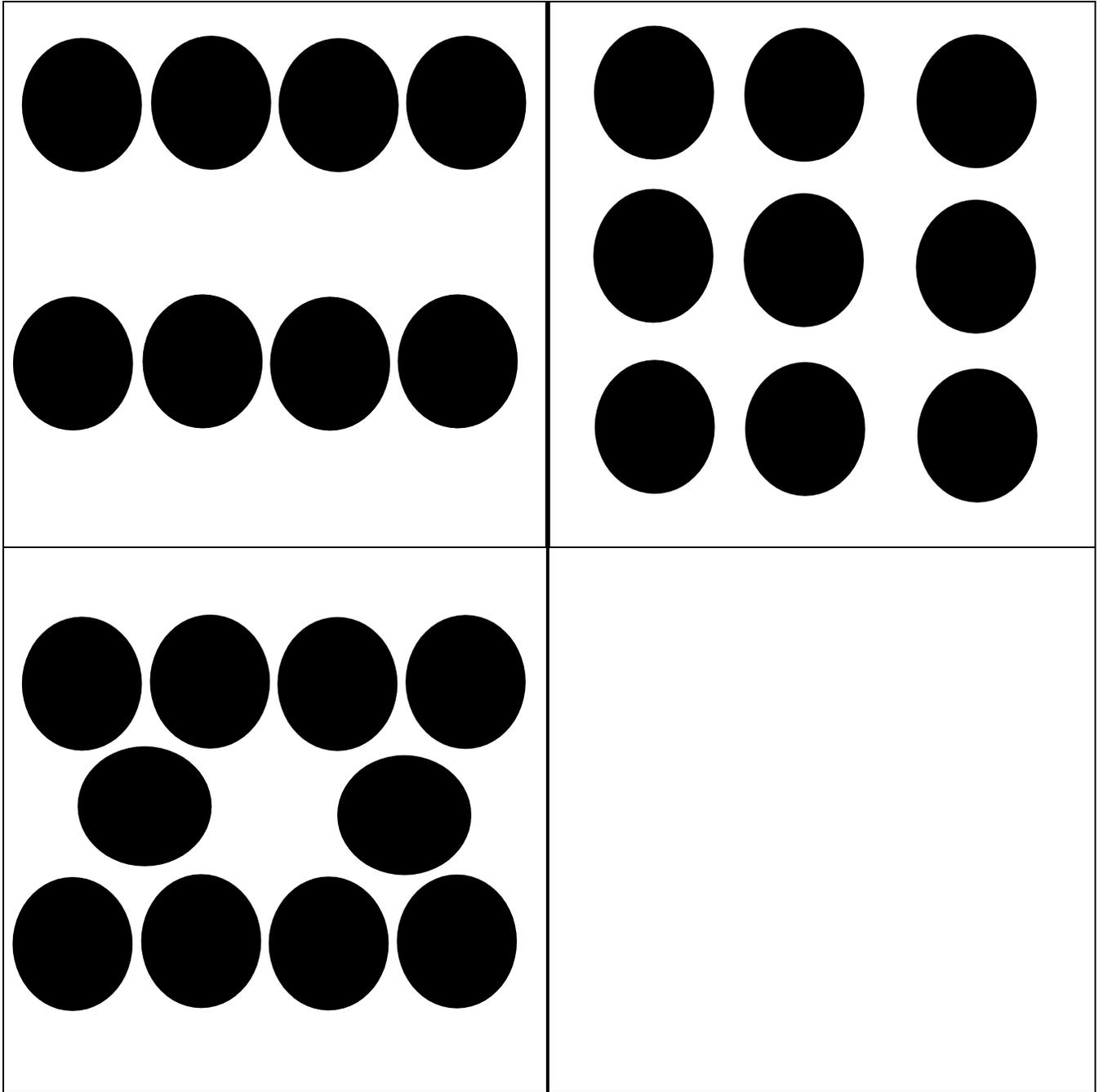
 $3 + 5 =$	 $\underline{\quad} = 3 + 1$
 $\underline{\quad} = 3 + 6$	 $3 + 2 =$
 $\underline{\quad} 3 + 7$	 $3 + 3 =$
 $4 + 1 =$	 $\underline{\quad} = 3 + 4$

 $\underline{\quad} = 5 + 1$	 $4 + 2 =$
 $5 + 2 =$	 $\underline{\quad} = 4 + 4$
 $5 + 3 =$	 $4 + 5 =$
 $\underline{\quad} = 5 + 4$	 $\underline{\quad} = 4 + 6$

Handout 4.2: Group Dot Cards



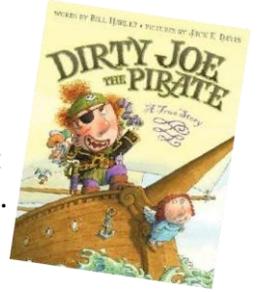




Handout 4.3: Counting Me Treasure Activity

Counting Me Treasure

After many days at sea, Dirty Joe's crew were counting their socks. Pirates Jack, Nicholas and Sophie played a game. Below are all the different ways they added socks. Use the numbers after their name to add their socks. Fill in the equation to get your answers. For the last part, draw a picture of any problem and fill in the equation. You may use your 10- Group cards to help with the counting. The first one has been done for you.



- 1) $\frac{\text{Jack } 1 \quad \text{Sophie } 1 \quad \text{Nicholas } 7}{\quad} = \frac{1}{\quad} + \frac{1}{\quad} + \frac{7}{\quad} = \frac{9}{\quad}$
- 2) $\frac{\text{Jack } 4 \quad \text{Sophie } 5 \quad \text{Nicholas } 3}{\quad} = \frac{\quad}{\quad} + \frac{\quad}{\quad} + \frac{\quad}{\quad} = \frac{\quad}{\quad}$
- 3) $\frac{\text{Jack } 3 \quad \text{Sophie } 2 \quad \text{Nicholas } 8}{\quad} = \frac{\quad}{\quad} + \frac{\quad}{\quad} + \frac{\quad}{\quad} = \frac{\quad}{\quad}$
- 4) $\frac{\text{Jack } 7 \quad \text{Sophie } 7 \quad \text{Nicholas } 2}{\quad} = \frac{\quad}{\quad} + \frac{\quad}{\quad} + \frac{\quad}{\quad} = \frac{\quad}{\quad}$
- 5) $\frac{\text{Jack } 6 \quad \text{Sophie } 9 \quad \text{Nicholas } 4}{\quad} = \frac{\quad}{\quad} + \frac{\quad}{\quad} + \frac{\quad}{\quad} = \frac{\quad}{\quad}$
- 6) $\frac{\text{Jack } 8 \quad \text{Sophie } 3 \quad \text{Nicholas } 6}{\quad} = \frac{\quad}{\quad} + \frac{\quad}{\quad} + \frac{\quad}{\quad} = \frac{\quad}{\quad}$

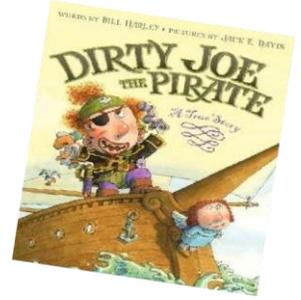
In the space below, draw socks to illustrate any of the equations above. Write an equation to show your work.

$$\underline{\quad\quad\quad} + \underline{\quad\quad\quad} + \underline{\quad\quad\quad} + \underline{\quad\quad\quad} = \underline{\quad\quad\quad}$$

Handout 4.4: Counting Me Treasure Homework

Solve each of the equations for Dirty Joe. Use your 10-Group cards to help you.

Name _____ Date _____



$$5 + 2 + 5 = \underline{\hspace{2cm}}$$

$$6 + 2 + 6 = \underline{\hspace{2cm}}$$

$$\underline{\hspace{2cm}} = 8 + 3 + 5$$

$$\underline{\hspace{2cm}} = 7 + 2 + 6$$

$$\underline{\hspace{2cm}} = 3 + 6 + 8$$

$$9 + 3 + 6 = \underline{\hspace{2cm}}$$

$$9 + 2 + 1 = \underline{\hspace{2cm}}$$

$$\underline{\hspace{2cm}} = 8 + 1 + 8$$

Lesson 5: Talk Like a Pirate

Focus Standard: 1.OA.1

Standards for Mathematical Practice: SMP.1, SMP.2, SMP.3, SMP.5

Estimated Time: 70 minutes

Resources and Materials:

Materials:

- 12" squares of material to make bandanas – 1 per student
- Elastic thread – about 12" for each eye patch
- Handout 3.7: Word Wall Games
- Handout 5.1: Find the Hidden Treasure Game Board
- Handout 5.2: Find the Hidden Treasure Game Pieces
- Handout 5.3: Find the Hidden Treasure Game Cards
- Handout 5.4: Pirate Eye Patch
- Handout 5.5: Hidden Treasure Homework
- *Pirate Pete's Talk Like a Pirate* by Kim Kennedy

Lesson Targets:

- Students will use addition to solve problems within 20.
- Students will justify the reasonableness of their answers and explain their strategies.

Guiding Questions:

- How can you tell from a word problem when to add or subtract (how many spaces to move)?
- How do you go about deciding if an answer is reasonable?

Vocabulary	
<p>Academic Vocabulary: Refer to the word wall frequently.</p> <ul style="list-style-type: none"> • Addition • Compare • Difference • Minus • Reasonable • Subtraction • Sum • Total 	<p>Instructional Strategies for Academic Vocabulary:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Introduce words with student-friendly definitions and pictures <input type="checkbox"/> Model how to use the words in discussion <input type="checkbox"/> Discuss the meaning of word in a mathematical context <input type="checkbox"/> Create pictures/symbols to represent words <input type="checkbox"/> Write/discuss using the words <input type="checkbox"/> Act out the words or attach movements to the words
Symbol	Type of Text and Interpretation of Symbol
	Instructional support and/or extension suggestions for students who are EL, have disabilities, or perform well below the grade level and/or for students who perform well above grade level
✓	Assessment (Pre-assessment, Formative, Self, or Summative)
Instructional Plan	
<p>Understanding Lesson Purpose and Student Outcomes: Students will add to solve problems to 20.</p> <p>Anticipatory Set/Introduction to the Lesson: Talk Like a Pirate Dress like a pirate and read <i>Pirate Pete's Talk Like a Pirate</i> by Kim Kennedy to the class as they are gathered on the carpet. Tell students it's Pirate Day and they will dress like a pirate, too. Print and cut out Handout 5.4: Pirate Eye Patch. Assemble the eye patches with elastic thread, put them on the students, and tie a pirate bandana on each student. Tell students they will be pirates for a day.</p>	

Activity 1: Practice Makes Perfect

- Hold up 3 numeral cards and have students state an addition equation of 2 addends and the sum using the 3 numbers. For example, hold up 15, 12 and 3. Students will say $3 + 12 = 15$. Do several of these (SMP.2).

For students who are EL, have disabilities, or perform well below grade level:

- Students to use manipulatives to find sums, such as rekenreks, ten frames, counters and number bonds.

Extensions for students with high interest or working above grade level:

- Have students roll 3 number cubes and add 3 numbers instead of 2.

Activity 2: Vocabulary

Use **Handout 3.: Word Wall Games** to play a game to review vocabulary terms.

Activity 3: Find the Hidden Treasure Game

Prior to the lesson, print, cut out and assemble **Handout 5.2: Find the Hidden Treasure Game Pieces** and print and cut out **Handout 5.3: Find the Hidden Treasure Game Cards**. Explain to students that they will play a game with a partner to find Pirate Pete's hidden treasure. Distribute **Handout 5.1: Find the Hidden Treasure Game Board**. Allow each student to choose a game piece. Explain that they will move along the game board as they solve equations listed on the game cards and the first pirate to reach the hidden treasure is the winner. Tell them to check each other's work for accuracy (SMP.3).

Direct students to place the game board between them, put their game markers on the Start mark, place the game cards face down between the 2 players, and the tallest player will go first. On a player's turn, the player draws the top card from the game card stack and turns it over. The player will calculate the answer to the equation and the other player will check the work (SMP.6). The player will move ahead that many spaces. If a player draws a "Go Back" or "Move Ahead" card, the player moves back or forward the number of spaces indicated. If a player lands on a "Lose a Turn" space, they lose their next turn. The next player will choose the top card in the stack and complete the calculation as the first player did. Play continues until one player reaches the treasure. If a student gets the wrong answer, they lose their turn (SMP.1).

Students may opt to use manipulatives, but they must choose the manipulative for themselves. Do not give them out (SMP.5).

Activity 4: Exit Ticket

Students will complete the following exit ticket:

- _____ = 8 + 9
- 6 + 7 = _____
- _____ = 3 + 14
- 5 + 15 = _____

For students who are EL, have disabilities, or perform well below grade level:

- Students can use manipulatives to find sums, such as rekenreks, ten frames, counters and number bonds.

Extensions for students with high interest or working above grade level:

- Solve $8 + \underline{\hspace{2cm}} = 18$ and $\underline{\hspace{1cm}} + 12 = 19$

Reflection and Closing: Writing

- ✓ Review lesson with students. Students can work with a partner to summarize the lesson in two to three sentences. Students will detail the process of adding or the game for the summary. Students will share summaries with the class

Homework

Distribute **Handout 5.5: Hidden Treasure Homework** and tell students to complete the equations.

Handout 5.1 – Find the Hidden Treasure Game Board

START

Take the Shortcut Me Matey!

Take the Shortcut Me Matey!

ARRGH! Lose A Turn!

ARRGH! Lose A Turn!

Shiver me Timbers! Go Forward 3 Paces!

ARRGH! Go Back 3 Paces!

Treasure Hunt

Help the pirates find their treasure!

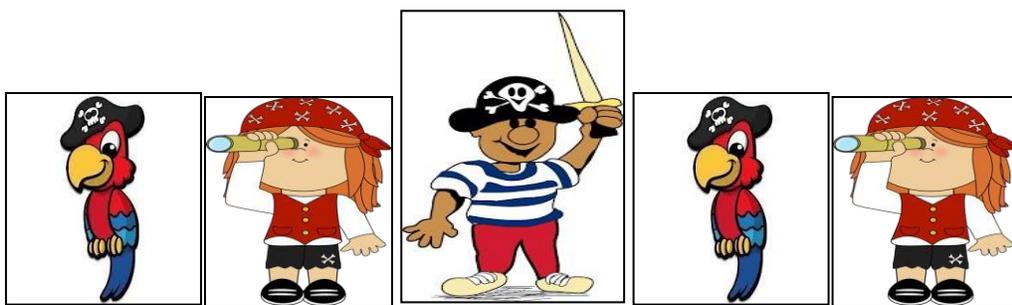
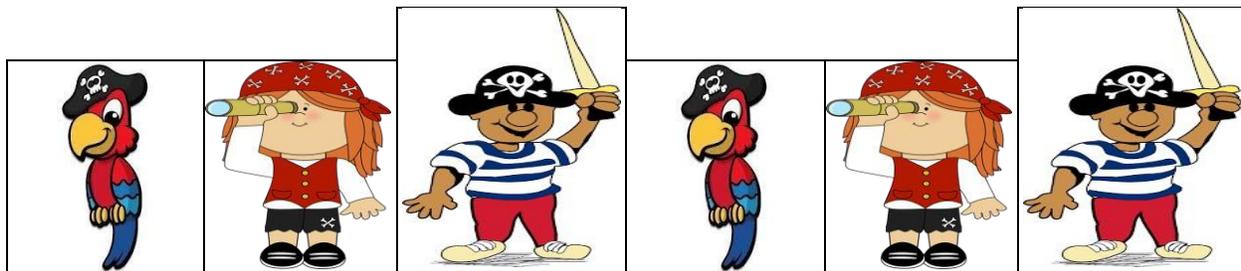
Treasure Hunt

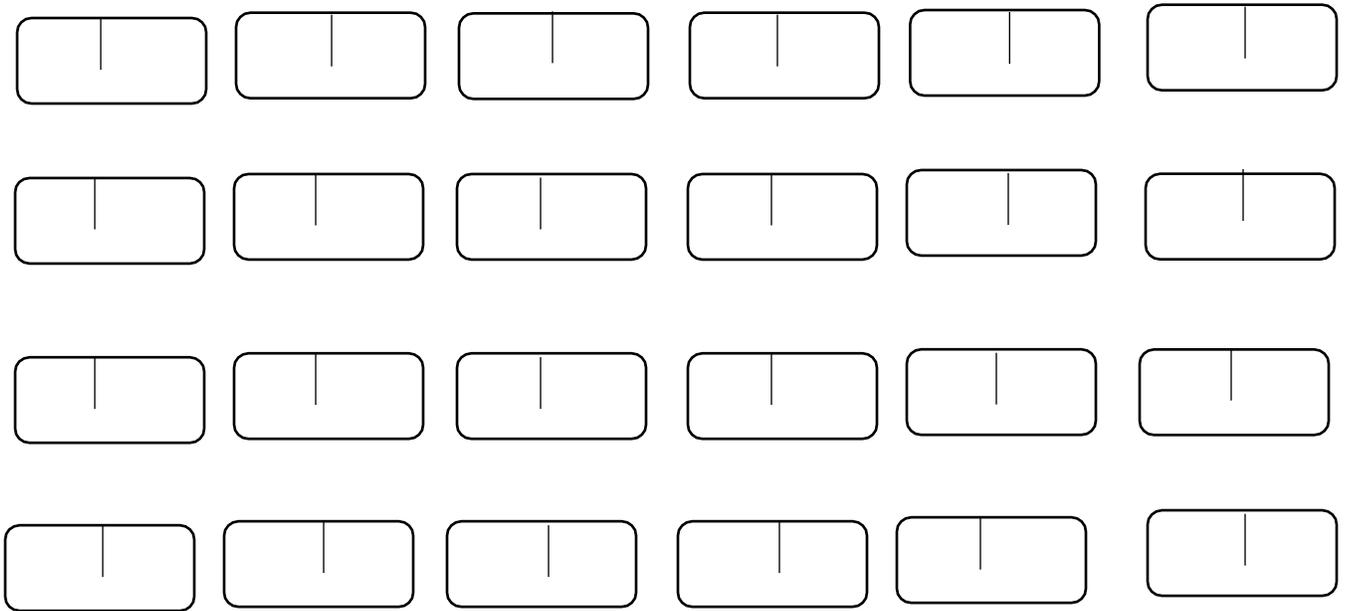
Help the pirates find their treasure!

FINISH

Graphics from Pigi Web Studio www.digitwebstudio.com. Activity by Jewell Alcorn www.warazspeechworld.blogspot.com

Handout 5:2 Find the Hidden Treasure Game Pieces





Directions for game marker stands:

- Print both pages on card stock
- Cut out rectangular game markers (see previous page)
- Cut out rectangular game marker stands
- Cut a slit on the line of each stand
- Cut a corresponding slit on each game marker – make sure both slits are the same length)
- Slide the stand slit into the game marker slit so they form right angles
- Adjust the stand so the game marker stands alone

Handout 5.3: Find the Hidden Treasure Game Cards

<p>Pirate Pete ate 8 fish and his parrot ate 3 fish. How many fish did they eat all together?</p>	<p>Pirate Sam walked 12 steps North and 5 steps East. How many steps did he walk?</p>	<p>Cookie gave Pirate Tyrone 9 pears and Pirate Joe 6 pears. How many pears did Cookie give the pirates?</p>
<p>Pirate Stinky has 12 gold coins and 6 silver coins. How many coins does Pirate Stinky have?</p>	<p>Pirate Sara has 4 smelly socks and 9 clean socks. How many socks does she have?</p>	<p>Pirate Angel buried 10 treasure chests. Pirate Zack buried 1 treasure chest. How many treasure chests did they bury?</p>
<p>Pirate Kaylin caught 11 sharks on Monday and 7 sharks on Tuesday. How many sharks did she catch?</p>	<p>Pirate Carlos found 5 diamonds and Pirate Javerius found 8 diamonds. How many diamonds do they have all together?</p>	<p>On his treasure map, Pirate Ra'shad marked 6 paces to the South and 7 paces to the East. How many paces did he mark on his map?</p>
<p>Captain Johmaya had 7 pirates in her crew. Today 4 more pirates joined her crew. How many pirates are in Captain Johmaya's crew?</p>	<p>Pirate Robbie and Pirate Makaiah each have 6 treasure maps. How many treasure maps do they have all together?</p>	<p>Pirate Akeelah caught 5 king crabs and 7 blue crabs. How many crabs did she catch?</p>
<p>Go back 4 spaces.</p>	<p>Jump ahead 3 spaces.</p>	<p>Go back 5 spaces.</p>

Handout 5.4: Pirate Eye Patch



**Handout 5.5: Hidden Treasure Homework**

Name _____

Date _____

Find the sums.

1) $2 + 4 =$ _____

2) _____ $= 7 + 5$

3) $4 + 6 =$ _____

4) $12 + 5 =$ _____

5) _____ $= 13 + 7$

6) _____ $= 16 + 1$

7) $9 + 8 =$ _____

8) _____ $= 10 + 10$



Lesson 6: Disappearing Pirate Ship

Focus Standard: 1.OA.1

Standards for Mathematical Practice: SMP.3, SMP.5, SMP.8

Estimated Time: 70 minutes

Resources and Materials:

- Counters
- Rekenreks
- Handout 3.2: Number Bonds Template
- Handout 3.3: Ten Frames Template
- Handout 6.1: Pirate Ship Counters
- Handout 6.2: Pirate Story Cards
- Handout 6.3: Homework
- Subtract Like a Pirate: <https://www.youtube.com/watch?v=QkPa9V2wtZs>

Lesson Target:

- Students will subtract numbers within 20.

Guiding Question:

- How is subtraction like addition?

Vocabulary

Academic Vocabulary: Refer to the word wall frequently.

- Addition
- Compare
- Difference
- Minus

Instructional Strategies for Academic Vocabulary:

- Introduce words with student-friendly definitions and pictures
- Model how to use the words in discussion
- Discuss the meaning of word in a mathematical context

<ul style="list-style-type: none"> • Reasonable • Subtraction • Sum • Total 	<ul style="list-style-type: none"> <input type="checkbox"/> Create pictures/symbols to represent words <input type="checkbox"/> Write/discuss using the words <input type="checkbox"/> Act out the words or attach movements to the words
Symbol	Type of Text and Interpretation of Symbol
	Instructional support and/or extension suggestions for students who are EL, have disabilities, or perform well below the grade level and/or for students who perform well above grade level
✓	Assessment (Pre-assessment, Formative, Self, or Summative)
Instructional Plan	
<p>Understanding Lesson Purpose and Student Outcomes: Students will solve word problems involving subtraction within 20. Procedural fluency will be built by using manipulatives to solve basic addition and subtraction problems.</p> <p>Anticipatory Set/Introduction to the Lesson: Subtract with a Pirate</p> <ul style="list-style-type: none"> • Show the video When you Subtract with a Pirate. Encourage students to sing along. Tell students to work at their work station using their individual white boards. Pause the video for students to write the equations shown on the video. Have students calculate the differences, all of which are within 10. <p>Note: This should be tried without manipulatives. (All the examples are within 10, so students should be able to do them.) After the video is over, ask the following:</p> <ul style="list-style-type: none"> • What does it mean to subtract? (take away) • When we subtract, what do we call the answer? (difference) • When we subtract, do we end up with more than or less than we began with? (less than) 	

Activity 1: Vocabulary

Review vocabulary terms with a Cloze activity. Write 2-3 sentences and leave blank spaces for students to fill in with appropriate math vocabulary from the word wall. Alternatively, call out a word from the math wall and have students write a sentence that expresses a relationship or connection between the term and another math term, concept, situation, or real-world application. These are both good warm up activities for the start of a lesson.

Activity 2: Subtraction within 20

Distribute number bonds and ten frames from Lesson 3. Distribute rekenreks. Print, cut out, and distribute **Handout 6.1: Pirate Ship Counters**.

Note: Each student will need 20 counters.

Model subtraction within 20 using pirate ship counters, 2 ten frames, and rekenreks for the equation $14 - 6 = \underline{\quad}$

Pirate Ship Counters:

- Count out 14 pirate ship counters.
- Remove 6 pirate ship counters.
- Count how many pirate ship counters are left. (8 pirate ship counters)

Ten Frames:

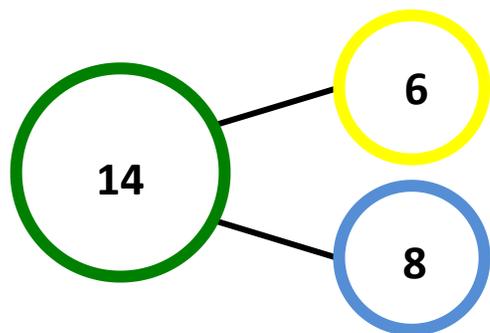
- Fill one ten frame with counters.
- Put 4 counters on a second ten frame.
- Remove 6 counters (4 from one and 2 from the other)
- Count how many counters are left. (8 counters)

Rekenreks:

- Slide all 10 beads to the left on the top bar.
- Slide 4 beads to the left on the bottom bar counting on from 10 to 14.
- Slide 6 beads to the right. (4 on bottom, 2 on top)
- Count the number of beads on the left. (8)

Write the equation $14 - 6 = 8$.

Make a number bond for the 3 numbers:



Ask, “If $14 - 6 = 8$, what other subtraction equation can we write about the 3 numbers?” ($14 - 8 = 6$). Tell students to use pirate ship counters, ten frames and rekenreks to show $14 - 8 = 6$.

Ask, “Does our number bond look any different for $14 - 6 = 8$ than $14 - 8 = 6$? (No)

“What would our number bond look like for $8 + 6$?” (The same as for $14 - 6 = 8$)

“Do you see a connection between these subtracting and adding equations? (You can make addition and subtraction equations using the same 3 numbers (SMP.8).)

Repeat with $15 - 4$, $13 - 9$, and $18 - 7$. Look for students’ ability to use Pirate Ship Counters, ten frames, and rekenreks accurately when making number bonds.

Show students the following problem on the board or on chart paper:

Captain Blackbeard has 7 pirate ships. Captain Hook has 16 pirate ships. How many more ships does Captain Hook have than Captain Blackbeard?

Have students identify what the question is in the story, what the numbers represent, and how to find the answer to the question. Instruct students to write an equation, use the manipulatives to solve it, and write a number bond.

Activity 3: Partner Work

Assign students to partner pairs. Print and cut out **Handout 6.2: Pirate Story Cards** and give one card to each pair. Tell students they will work with their partner to solve the problem. Tell students to write the question, show their work, make a number bond and write an equation. Allow students to choose manipulatives to model their work (SMP.5). Tell students compare their work with their partner's work and find differences and, if they do not have the same answer, each partner must justify their answer (SMP.3).

Ask for volunteers to present their problem to the class and show their work. As students are presenting, other students can critique the work and question the reasoning. (SMP.3)

Reflection and Closing:

- Students will solve the following problem, draw a number bond, and write an equation: Peg Leg the parrot has 11 colorful tail feathers. 4 of them are orange and the rest are yellow. How many tail feathers are yellow? Draw a picture to show your work, draw a number bond, and write an equation.

For students who are EL, have disabilities, or perform well below grade level:

- Students use orange and yellow counters to model the story.

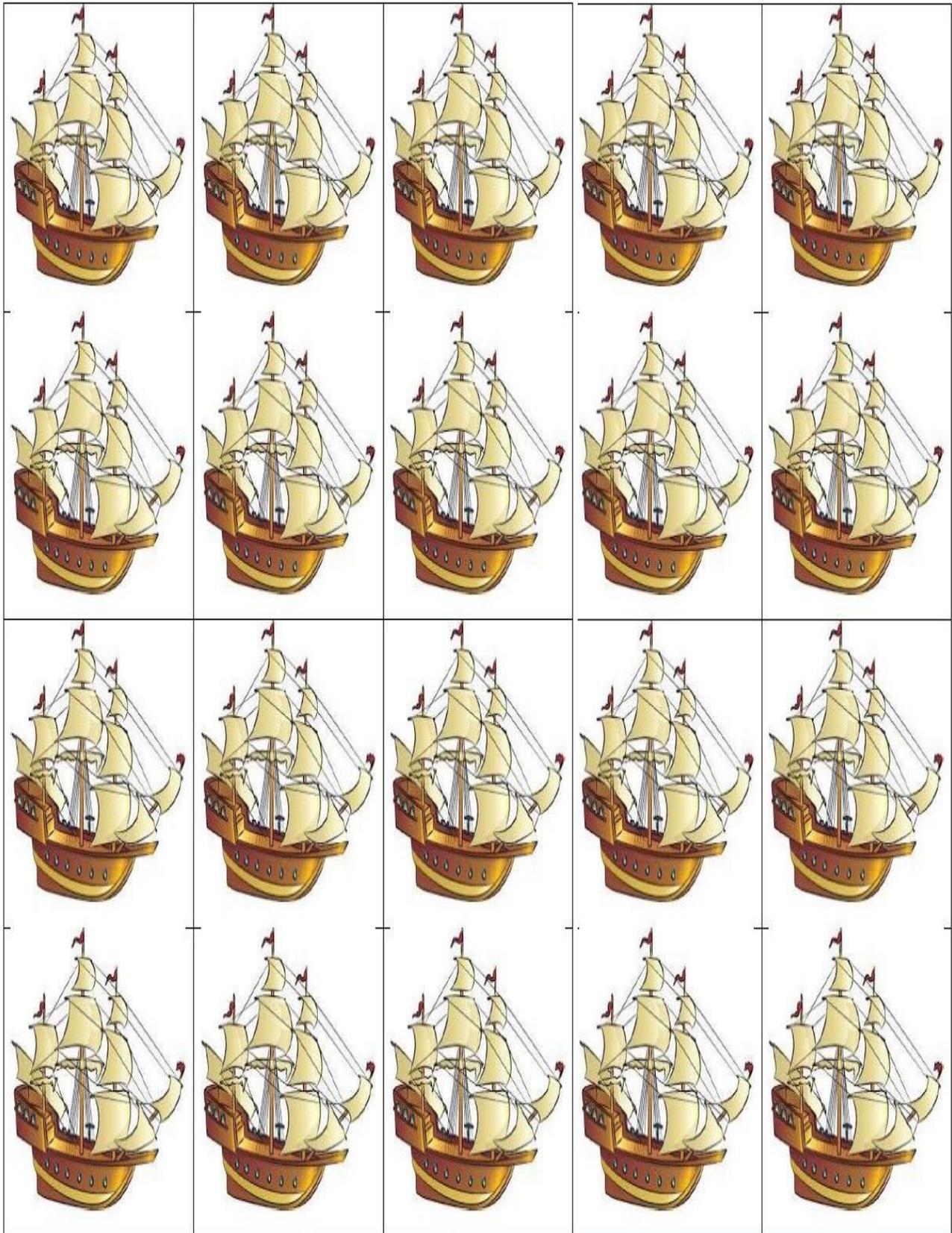
Extensions for students with high interest or working above grade level:

- Write a pirate story for $20 - 7 = \underline{\quad}$ and solve.

Homework

Distribute **Handout 6.3: Homework** and tell students to solve the two problems drawing a picture, creating a number bond, and writing an equation.

Handout 6.1: Pirate Ship Counters



Handout 6.2: Pirate Story Cards

<p>Captain Bly has 20 crew members. Of his crew, 12 have beards. How many of Captain Bly's crew members do not have beards?</p>	<p>Captain Hook has 13 cannons on his ship. Captain Roger has 7 cannons on his ship. How many fewer cannons does Captain Roger have than Captain Hook?</p>	<p>Pete the Pirate has 8 dirty socks. Bethany the Pirate has 11 dirty socks. How many more dirty socks does Bethany the Pirate have than Pete the Pirate?</p>
<p>The pirate ship, the Jolly Roger, has 3 fewer anchors than the pirate ship, Blow Me Down. The Blow Me Down has 18 anchors. How many anchors does the Jolly Roger have?</p>	<p>There are 19 ships on the sea. 5 of them are pirate ships. How many of the ships are not pirate ships?</p>	<p>There were 15 pirates on Captain Hook's ship. Captain Hook made 7 pirates walk the plank. How many pirates are left on the ship?</p>
<p>Captain Bly found a treasure chest of gold and silver coins. There were 16 gold coins in the treasure chest. How many silver coins were in the treasure chest?</p>	<p>Peg Leg, the ship's cook, fixed a plate of cookies. There were 14 cookies on the plate. Captain Hook ate 9 of the cookies. How many cookies were left?</p>	<p>Pete the Pirate buried 17 treasure chests. Polly the Pirate buried 12 treasure chests. How many fewer treasure chests did Polly bury than Pete buried?</p>
<p>Pinky the whale had 17 barnacles stuck to her back. Pirate Elmo washed 6 of them off. How many barnacles does Pinky have now?</p>	<p>Big Tooth the shark, swam close to the pirate ship. He ate 13 fish while he was swimming. Five of the fish were salmon and the rest were cat fish. How many were cat fish?</p>	<p>Penny Pirate captured 20 scallywags, and made some of them walk the plank because they could not talk like a pirate. Seven scallywags did not walk the plank. How many scallywags walked the plank?</p>

Handout 6.3: Homework

Name _____ Date _____

Solve. Draw a picture to show your work. Draw a number bond and write an equation.

1. Jen has 8 apples. Pat has 19 apples. How many more apples does Pat have than Jen?

2. Chico had 20 problems to solve. Joyce has 11 problems to solve. How many fewer problems does Joyce have to solve than Chico?

Lesson 7: What Number is the Pirate Missing?

Focus Standard: 1.OA.8

Additional Standard: 1.OA.4

Standards for Mathematical Practice: SMP. 3, SMP.4, SMP.5

Estimated Time: 70 minutes

Resources and Materials:

- Counters
- Handout 7.1: Part-Part-Whole Map
- Handout 7.2: Number Lines
- Handout 7.3: Individual Practice Page
- Handout 7.4: Missing Addend Homework
- Barnacle Subtraction Song: <https://www.youtube.com/watch?v=yXlOvH-HHk>
- Missing Addends: https://www.youtube.com/watch?v=Mvm0y1Qr_JQ

Lesson Targets:

- Students will use mental strategies to add and subtract numbers within 20 with ease.
- Students will use the equal sign appropriately.

Guiding Questions:

- What do we know about the relationship between addition and subtraction fact families?
- How does that relationship help us know more facts?

Vocabulary

Academic Vocabulary: Refer to the word wall frequently.

- Addition
- Compare
- Difference
- Minus
- Reasonable
- Subtraction
- Sum
- Total

Instructional Strategies for Academic Vocabulary:

- Introduce words with student-friendly definitions and pictures
- Model how to use the words in discussion
- Discuss the meaning of word in a mathematical context
- Create pictures/symbols to represent words
- Write/discuss using the words
- Act out the words or attach movements to the words

Symbol

Type of Text and Interpretation of Symbol



Instructional support and/or extension suggestions for students who are EL, have disabilities, or perform well below the grade level and/or for students who perform well above grade level



Assessment (Pre-assessment, Formative, Self, or Summative)

Instructional Plan

Understanding Lesson Purpose and Student Outcomes:

Students will watch a video using a Part-Part-Whole map to subtract to find missing addends and practice using counters and the part-part-whole map.

Anticipatory Set/Introduction to the Lesson/Activity #1: Barnacle Subtraction Song

Play Sesame Street: Elmo the Musical [“Barnacle Subtraction Song”](#) and have 3 students act out each of the subtraction equations and have the rest of the students do it with their fingers.

Activity 2: Problem Solving Pirates

Show the video, [Missing Addends](#). Distribute **Handout 7.1: Part-Part-Whole Map**. Have students use counters with a part-part-whole map to find missing addends (SMP.4, SMP.5). Stop the video to allow time for students to practice the skill. Distribute **Handout 7.2: Number Lines** and demonstrate how to find missing addends on the number line. Display $8 - \underline{\quad} = 3$. Practice using fingers, Part-Part-Whole map, and a number line. Repeat using other equations with missing addends. Display $14 - \underline{\quad} = 9$. Tell students to find the missing addend using only their fingers.

Help students to see that they cannot use fingers for numbers greater than 10 because they only have 10 fingers.

Prompting questions:

- Why can't you use your fingers to find the missing addend? (The whole is greater than 10 and we only have 10 fingers.)
- Do you have enough fingers to do an addition with 9 and some more to make 14?
- What is the greatest number we can make with our fingers?
- Is there a better way to find the missing addend? (Part-Part-Whole map or Number Line)

Have one half of the class use a Part-Part-Whole map to solve and the other half use a number line to solve. Have each group choose one member to demonstrate for the class how they did their work. After presenting, the other team can critique the work (SMP3).

Activity 3: Vocabulary

Review vocabulary terms with math doodles. Call out a math word and have the students sketch or doodle a picture of the word for 15-20 seconds, until the next word is called. Students connect each of their doodles with a line, making a simple link. After you've called out 5-7 words, have students label their doodles without looking at the math word wall. Next, ask students to call out the words in their chain before checking the spelling of their words against the math word wall to make sure they are accurate.

Activity 4: Partner Work

- Distribute **Handout 7.3: Individual Practice Page** and tell students to work individually how to find the missing addend using the 3 different methods.

Reflection and Closing:

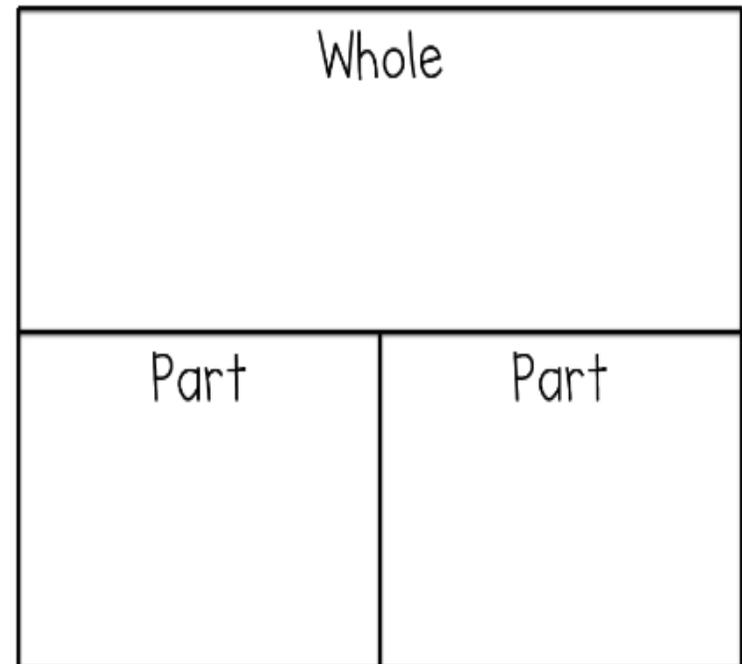
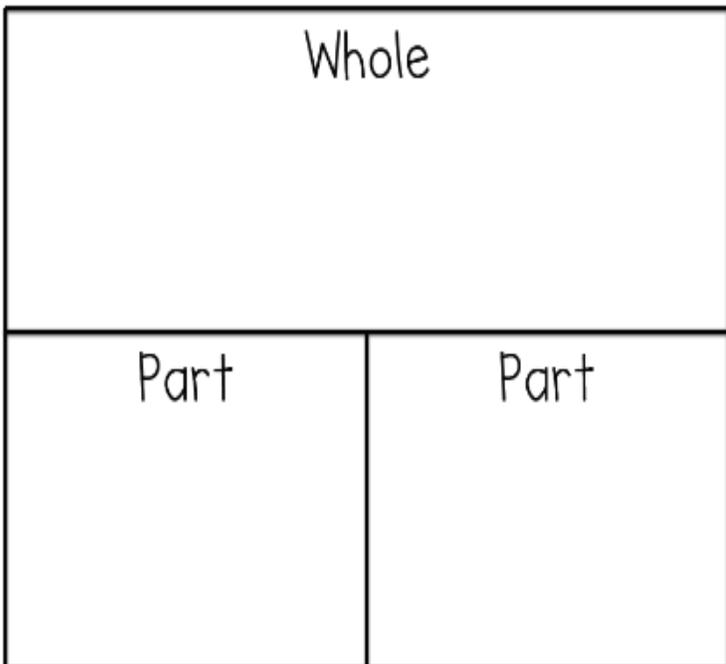
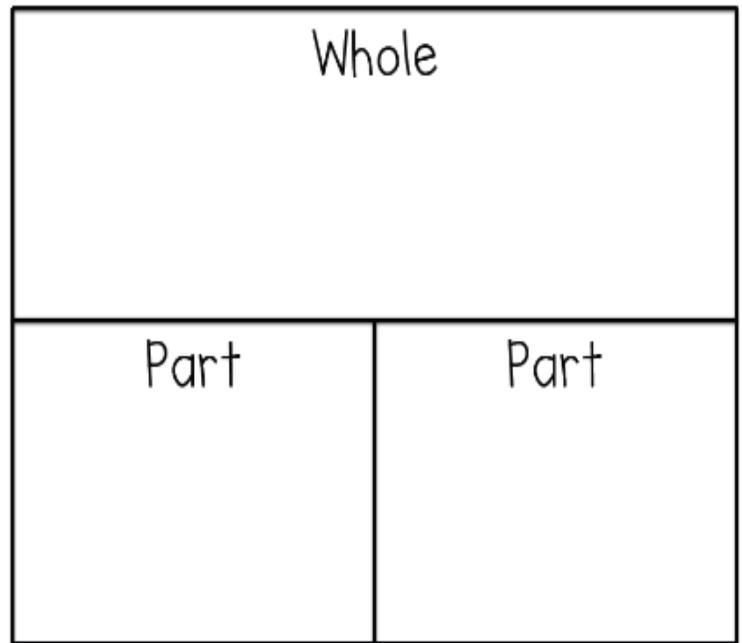
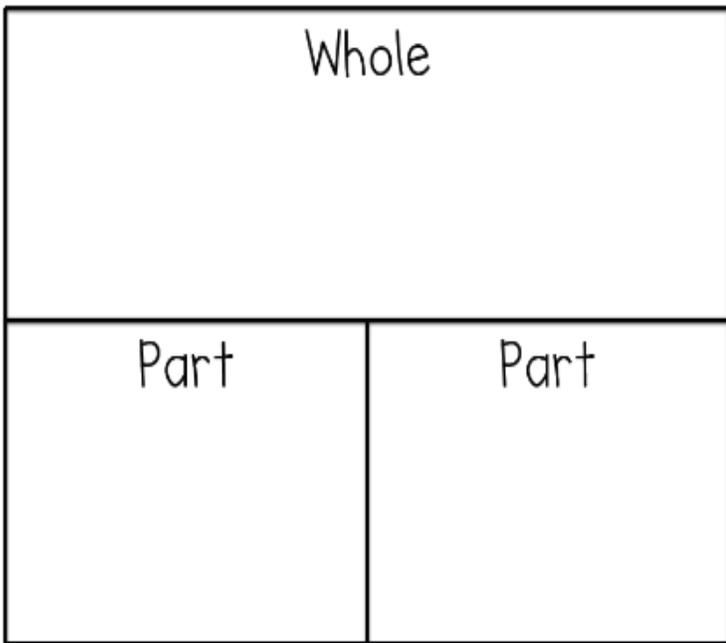
- Exit Ticket: Students will find the missing addend in the following story and show how they found their answer.

Brandon the pirate has 12 hats. Some of the hats are orange and 4 of them are yellow. How many of the hats are orange?

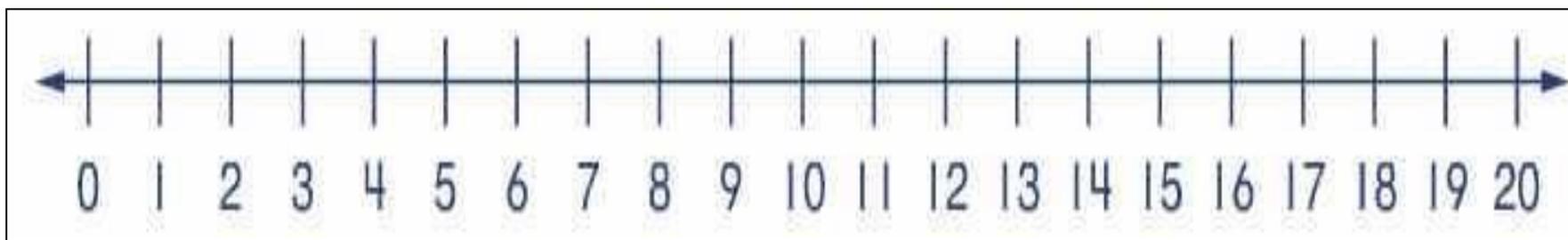
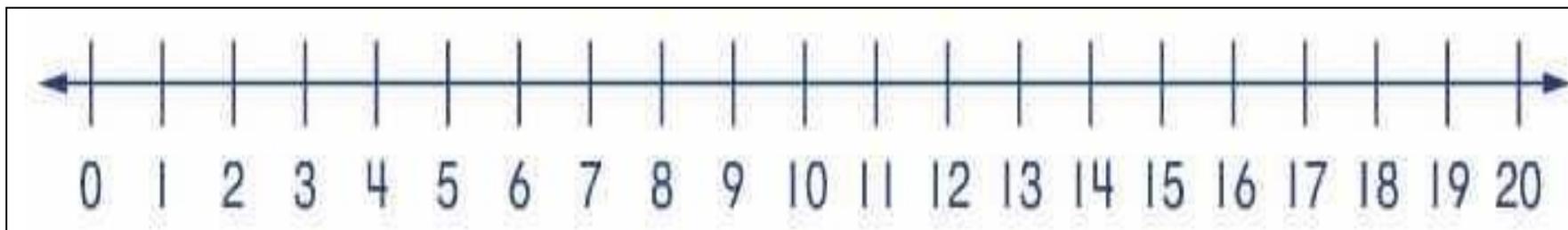
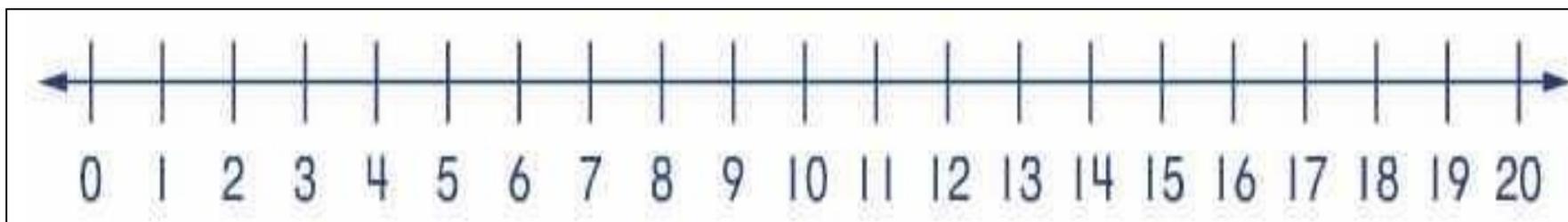
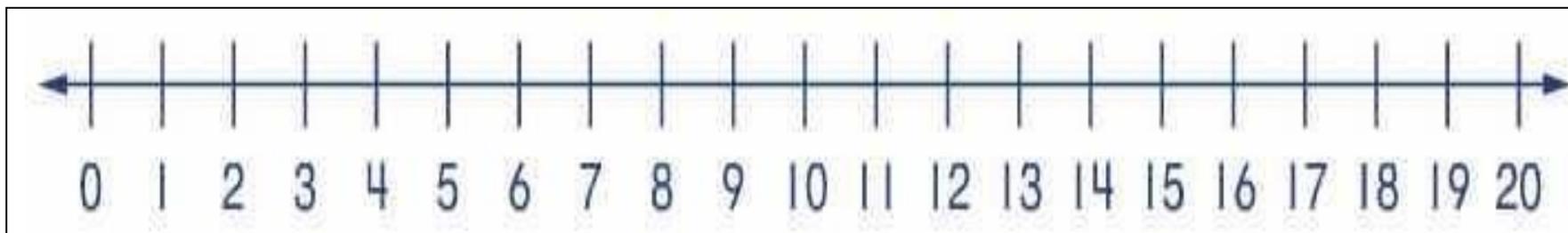
Homework

Distribute Handout 7.4: Missing Addend Homework and tell students to complete the Part-Part-Whole maps to find the missing addends.

Handout 7.1: Part-Part-Whole Maps



Handout 7.2: Number Lines



Handout 7.3: Individual Practice Page

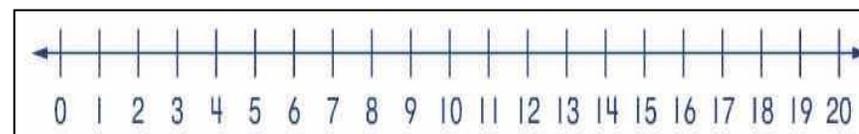
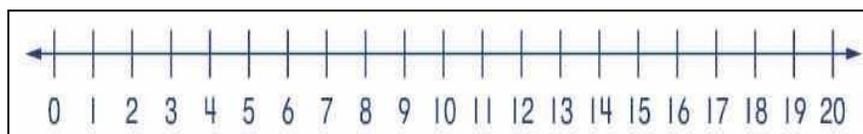
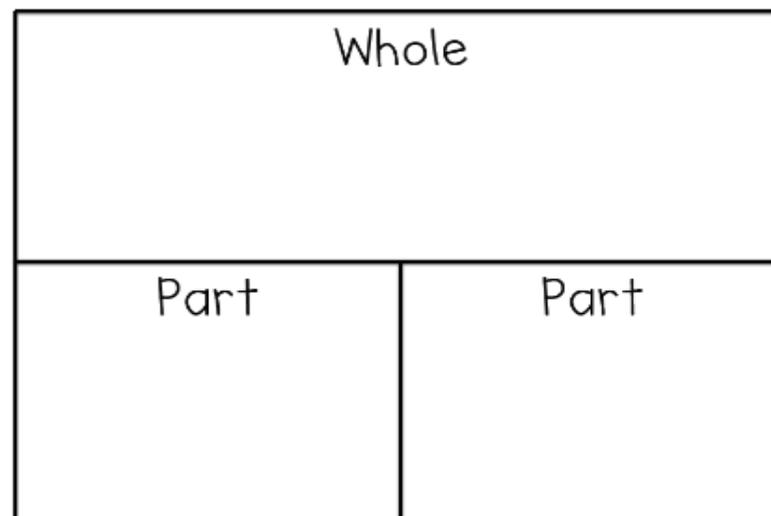
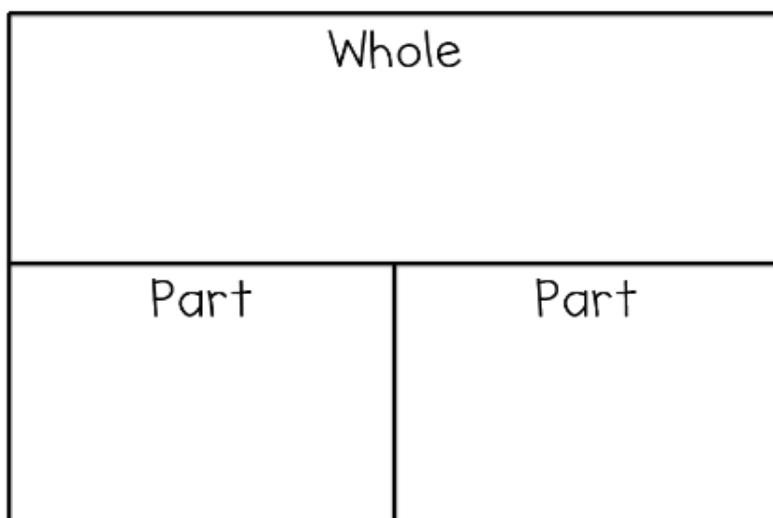
Name _____ Date _____

Find the missing addend for each of these number sentences. Label a part-part-whole map for each sentence to show your work.

Draw the counters in the map. Show your work on a number line.

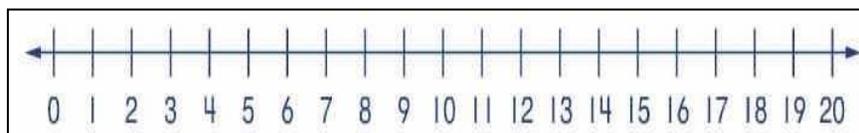
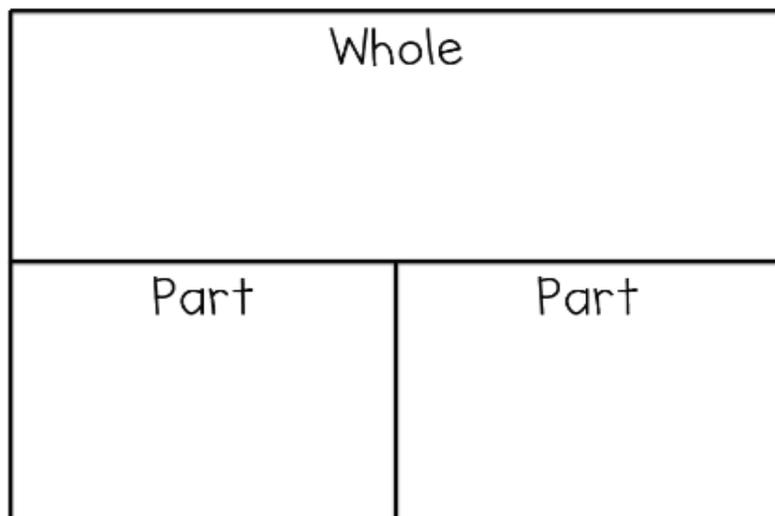
$1 + \underline{\quad} = 7$

$\underline{\quad} + 6 = 8$

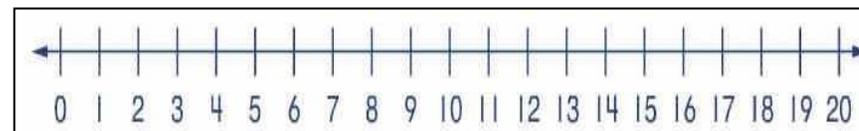
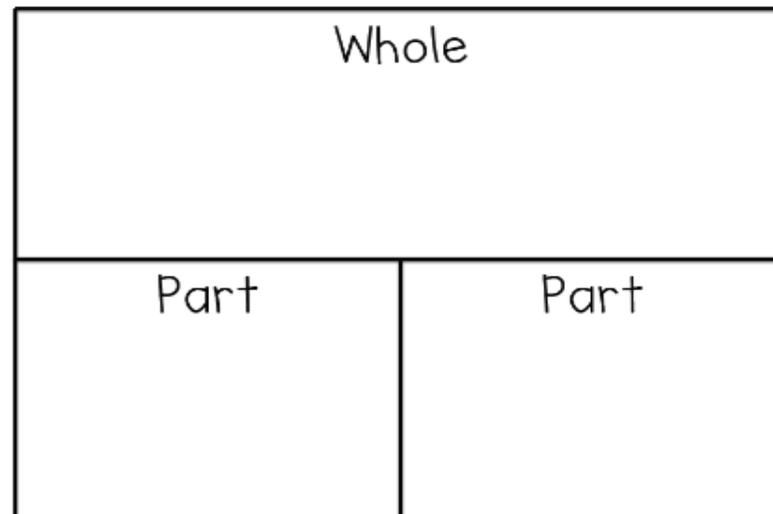


Handout 7.3: Individual Practice Page (pg. 2)

$9 + \underline{\quad} = 14$



$\underline{\quad} + 7 = 11$



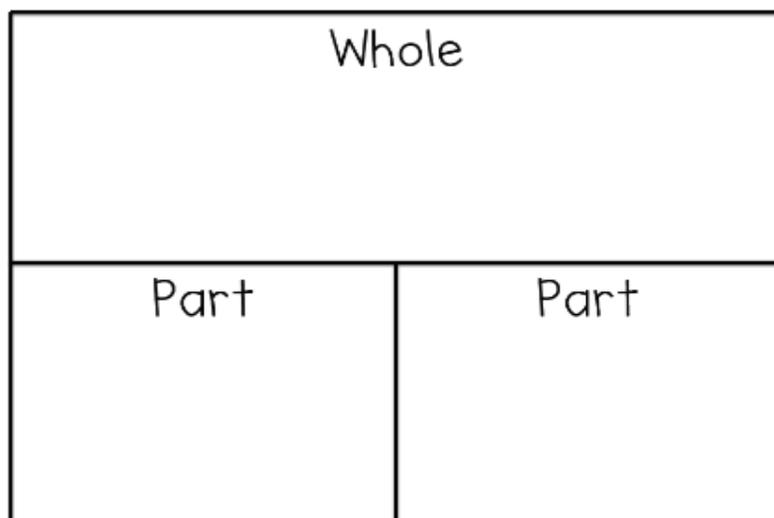
Handout 7.4: Missing Addend Homework

Name _____ Date _____

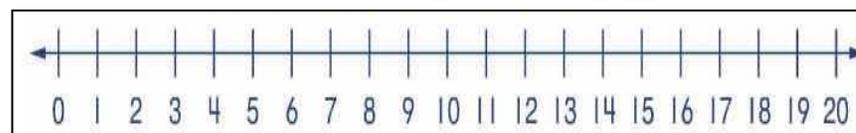
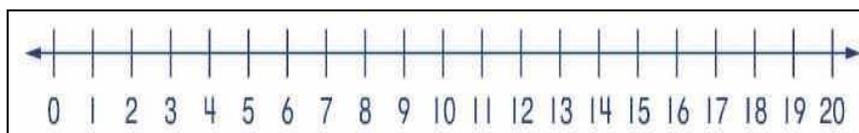
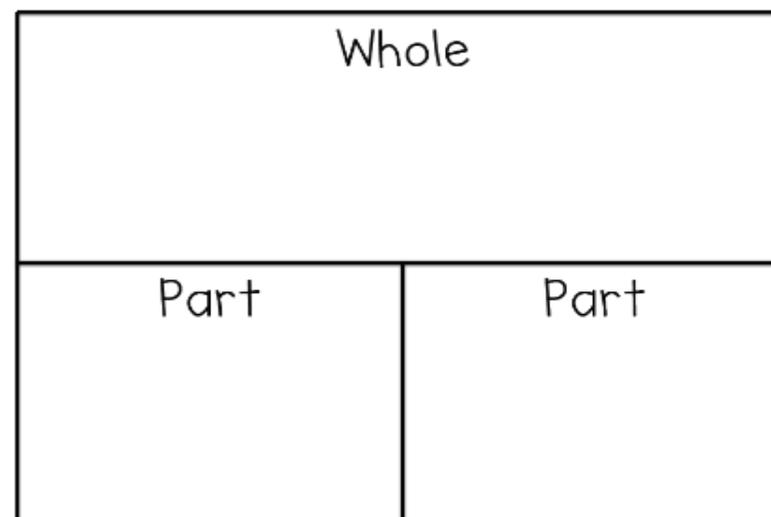
Find the missing addend for each of these number sentences. Label a part, part, whole map for each sentence to show your work.

Draw the counters in the map. Show your work on a number line.

$$8 + \underline{\quad} = 16$$

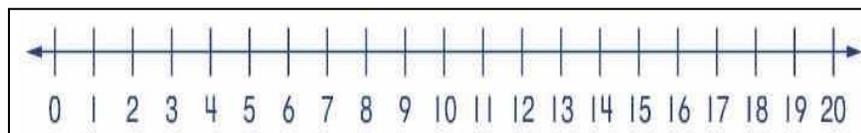
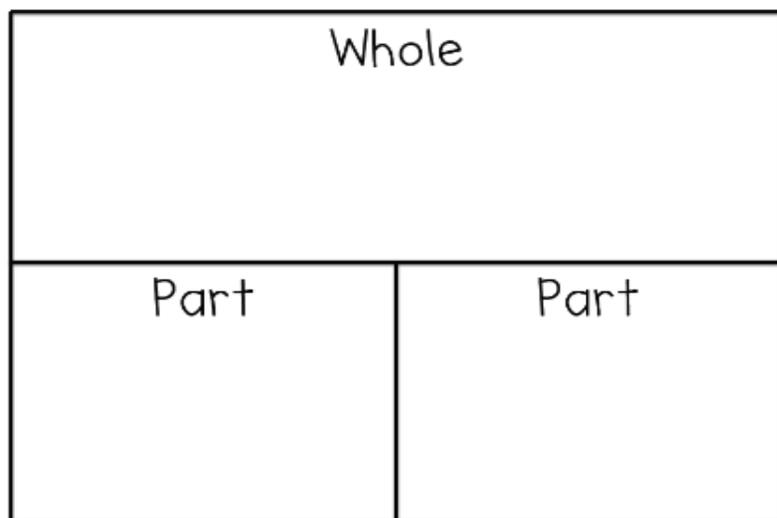


$$\underline{\quad} + 5 = 14$$

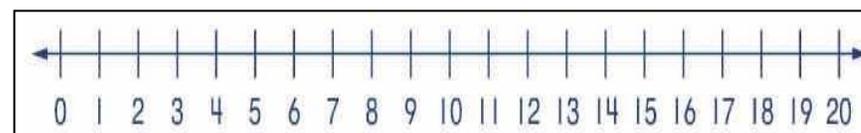
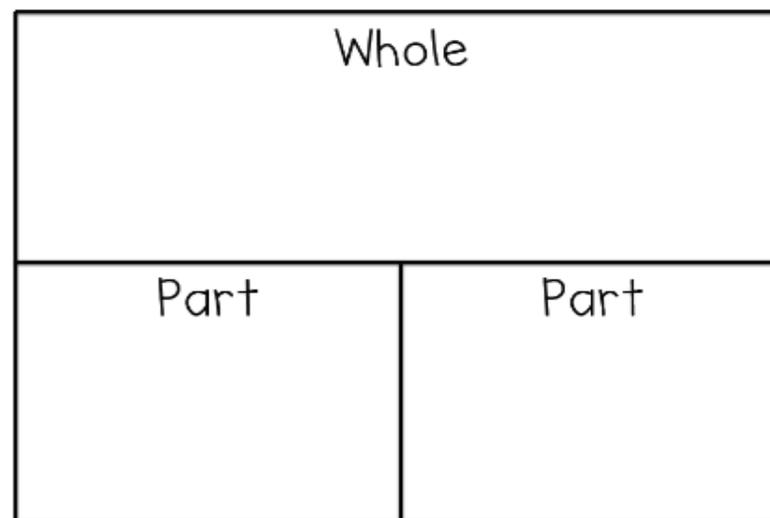


Handout 7.4: Missing Addend Homework (pg. 2)

$$10 + \underline{\quad} = 19$$



$$\underline{\quad} + 7 = 18$$



Lesson 8: Pirates Make Number Sentences

Focus Standard: 1.OA.8

Additional Standard: 1.OA.4

Standards for Mathematical Practice: SMP.2, SMP.3, SMP.7

Estimated Time: 70 minutes

Resources and Materials:

- Game boards for 'What is the Missing Number?' game – one per each pair of students
- Number balance
- Number Bonds
- Number Cards 0-20
- Number cards/tiles (0-9) for each pair of students
- Handout 3.2: Number Bonds
- Handout 7.2: Number Lines
- Handout 8.1: Missing Numbers Practice Page
- Handout 8.2: Missing Numbers Homework
- You tube education video: Sesame Street: Elmo The Musical - "Heave Ho Addition Song"
<https://www.youtube.com/watch?v=dw7YxxQmgIM>

Lesson Targets:

- Students will determine the unknown whole number in addition or subtraction equations.
- Students will use mental strategies to add and subtract numbers within 10 with ease.
- Students will use the equal sign appropriately.

Guiding Questions:

- How does the relationship between addition and subtraction help us know more facts?
- How will knowing facts help you in other areas of math?

Vocabulary

Academic Vocabulary: Refer to the word wall frequently.

- Addition
- Compare
- Difference
- Minus
- Reasonable
- Subtraction
- Sum
- Total

Instructional Strategies for Academic Vocabulary:

- Introduce words with student-friendly definitions and pictures
- Model how to use the words in discussion
- Discuss the meaning of word in a mathematical context
- Create pictures/symbols to represent words
- Write/discuss using the words
- Act out the words or attach movements to the words

Symbol

Type of Text and Interpretation of Symbol



Instructional support and/or extension suggestions for students who are EL, have disabilities, or perform well below the grade level and/or for students who perform well above grade level

✓

Assessment (Pre-assessment, Formative, Self, or Summative)

Instructional Plan

Understanding Lesson Purpose and Student Outcomes:

Students will write a number sentences after watching a video and talking about using subtraction to help find missing addends. Various strategies will be used (number lines, number bonds).

Anticipatory Set/Introduction to the Lesson/Activity #1: Make a Number Sentence

Hold up 3 number cards that have a relationship (3, 5, 8). Ask students if they can make a number sentence with the 3 cards? ($3 + 5 = 8$, $5 + 3 = 8$, $8 - 3 = 5$, and $8 - 5 = 3$)

Write all responses on the board and let students challenge, critique, and/or correct the work of other students (SMP.3).

For students who are EL, have disabilities, or perform well below grade level:

- Students use counters and Part-Part-Whole templates to calculate

Extensions for students with high interest or working above grade level:

- Students can write a subtraction story to match the 3 numbers.

Activity 2: Vocabulary Tic-Tac-Toe

Draw a large grid on chart paper and tape a vocabulary card in each square. Divide students into two teams and designate one team as X and the other as O. Teams take turns choosing a word and defining it. If the team defines the word correctly, remove the card and place an X or an O in the square. Leave the card on the board if the team answers incorrectly. Continue until a team has three in a row.

Activity 3: Heave Ho, Pirates!

Have students sing along with Sesame Street: Elmo The Musical [Heave Ho Addition Song](#). Use questions to encourage discussion and recall of facts.

Prompting Questions:

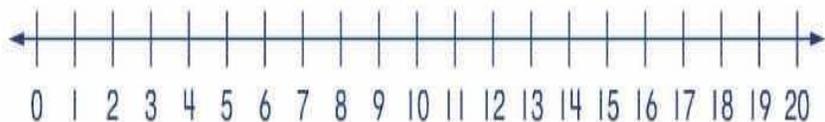
- How many chicken sailors did Elmo have at first? (4 chicken sailors)
- How many more sailors joined them? (4 more chicken sailors)
- How many chicken sailors did Elmo have then? (8 chicken sailors)
- What if Elmo started with 4 chicken sailors and ended up with 9 chicken sailors. How many chicken sailors came on board?

Write the expression $4 + _ = 9$ and ask: "How do we know that the missing addend is 5?" ($4 + 5 = 9$) "Can we use subtraction to help us find the missing addend?"

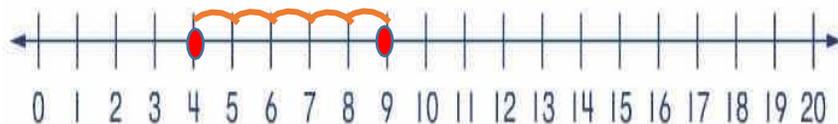
Write the expression $9 - 4 = 5$.

Activity 4: Partner Work

Use a number line to show how to use subtraction to find the missing whole number in an addition expression. Distribute **Handout 7.2: Number Lines** and markers to students. Display $4 + \underline{\quad} = 9$ and a number line.



T: Place a mark on 4 and a mark on 9.



How many spaces are between 4 and 9? (5)

So, 4 and 5 more equals 9 and we can write an addition sentence for the 3 numbers: 9, 4, 5

Write $4 + 5 = 9$

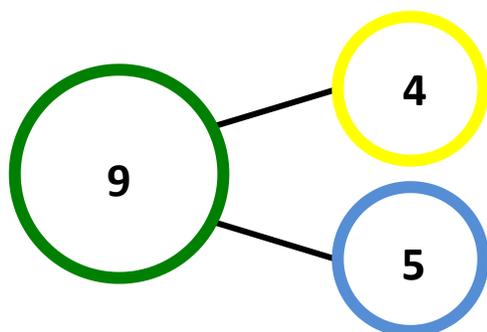
T: Can we write a subtraction sentence

too? Write $9 - 4 = 5$

T: When we put our 3 numbers in a number bond, it shows the relationship between the 3 numbers.

Draw a number bond and place the 3 numbers in the number bond. Ask students to tell you where the numbers go.

T: Remember, the number with the greatest value goes in the green and the other 2 numbers go in the yellow and blue circles.



Practice finding missing addends with these missing addend expressions:

$$3 + \underline{\quad} = 14 \quad \underline{\quad} + 7 = 15 \quad 2 + \underline{\quad} = 11$$

Using number bonds and number lines, students develop strategies for finding structure in addition and subtraction. (SMP.7)

Have students use their number line and markers to determine the missing addends and draw number bonds in their math journals. Display and do a close reading of the following story problem with students:

6 parrots were in the tree. 4 of the parrots flew away. How many parrots were left on the tree?

Model using a number line and number bond to write an addition expression and a subtraction expression while students model with their own number line and number bonds.

Show and do a close reading of the following story problem with students:

Wendy the pirate woke up in the night and saw some whales swimming around the boat. After a while, she saw 8 more whales.

Now there are 17 whales. How many whales did Wendy see the first time?

Model using a number line and number bond to write an addition expression and a subtraction expression while students model with their own number line and number bonds.

Activity 5: Pirates Practice

Distribute **Handout 8.1: Missing Number Practice** and tell students to practice individually to find missing addends and write addition and subtraction expressions. Instruct students to use addition and subtraction and the relationship between 3 numbers to draw a number bond to show their work (SMP.2).

Reflection and Closing: Exit Ticket

- ✓ Have students find the missing addends for the following expression and write a subtraction expression with the

numbers: $12 + \underline{\quad} = 20$

Homework

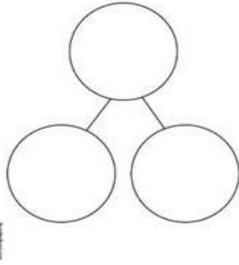
Distribute **Handout 8.2: Missing Numbers Homework** and tell students they will solve 2 story problems finding all 3 numbers and drawing a number bond.

Handout 8.1: Missing Number Practice Page

Name _____ Date _____

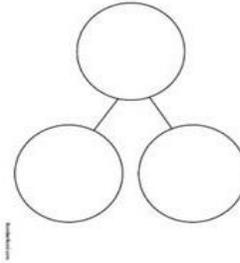
$7 + \underline{\quad} = 19$

$\underline{\quad} - \underline{\quad} = \underline{\quad}$



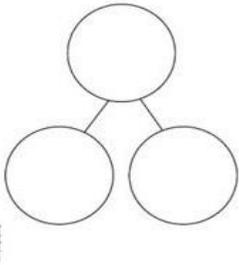
$2 + \underline{\quad} = 11$

$\underline{\quad} - \underline{\quad} = \underline{\quad}$

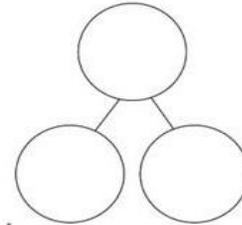


$\underline{\quad} + 7 = 10$

$\underline{\quad} - \underline{\quad} = \underline{\quad}$



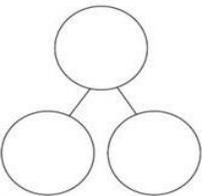
Peg Leg Pete had 20 ropes to coil. He coiled 9 ropes. How many more does he have to coil?



$\underline{\quad} + \underline{\quad} = \underline{\quad}$

$\underline{\quad} - \underline{\quad} = \underline{\quad}$

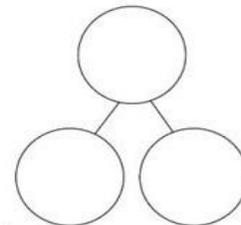
Blackbeard has 12 crew members. Some more pirates joined his crew. Now he has 18 crew members. How many pirates joined his crew?



$\underline{\quad} + \underline{\quad} = \underline{\quad}$

$\underline{\quad} - \underline{\quad} = \underline{\quad}$

Captain Hook captured 14 of Peter Pan's boys. Some of the boys escaped. There are 5 boys still being held by Captain Hook. How many boys escaped?



$\underline{\quad} + \underline{\quad} = \underline{\quad}$

$\underline{\quad} - \underline{\quad} = \underline{\quad}$

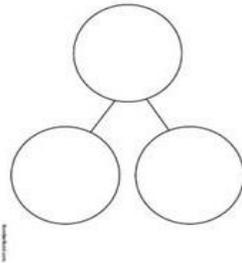
Handout 8.3: Missing Number Homework

Name _____ Date _____

Directions: Read the story. Write a number sentence for addition and subtraction. Fill in the number bond to show your numbers.

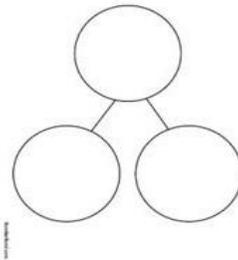
Captain Patch has 13 parrots. 5 of the parrots are boys and the others are girls.
How many parrots are girls

$$\underline{\quad} + \underline{\quad} = \underline{\quad} \qquad \underline{\quad} - \underline{\quad} = \underline{\quad}$$



Blackbeard's crew found 17 coins on the island. 9 of the coins were silver and the others were gold. How many gold coins did Blackbeard's crew find on the island?

$$\underline{\quad} + \underline{\quad} = \underline{\quad} \qquad \underline{\quad} - \underline{\quad} = \underline{\quad}$$



Lesson 9: Pirates Solve Word Problems

Focus Standard: 1.OA.8

Additional Standard: 1.OA.4

Standards for Mathematical Practice: SMP.3, SMP.6

Estimated Time: 70 minutes

Resources and Materials:

- Handout 9.1: Pirates Solve Story Problems Cards
- Handout 9.2: Pirates Solve Story Problems Homework
- Pirates Go to School- <https://www.youtube.com/watch?v=xSgFV-QAPIA>

Lesson Targets:

- Students will use addition and subtraction to solve problems.
- Students will use strategies to solve problems (ex. counting on, counting back, making ten).
- Students will identify relationships between addition and subtraction when solving problems. (Ex. Knowing that if $4 + 3 = 7$, I also know that $7 - 4 = 3$).
- Students will be able to justify their answers.
- Students will be able to explain the strategy used to solve the problem and their reason for selecting it.

Guiding Questions:

- What does the word 'organize' mean?
- What should be organized?

Vocabulary	
<p>Academic Vocabulary: Refer to the word wall frequently.</p> <ul style="list-style-type: none"> • Addition • Compare • Difference • Minus • Reasonable • Subtraction • Sum • Total 	<p>Instructional Strategies for Academic Vocabulary:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Introduce words with student-friendly definitions and pictures <input type="checkbox"/> Model how to use the words in discussion <input type="checkbox"/> Discuss the meaning of word in a mathematical context <input type="checkbox"/> Create pictures/symbols to represent words <input type="checkbox"/> Write/discuss using the words <input type="checkbox"/> Act out the words or attach movements to the words
Symbol	Type of Text and Interpretation of Symbol
	Instructional support and/or extension suggestions for students who are EL, have disabilities, or perform well below the grade level and/or for students who perform well above grade level
✓	Assessment (Pre-assessment, Formative, Self, or Summative)
Instructional Plan	
<p>Understanding Lesson Purpose and Student Outcomes: Students will use the adapted 4-part organizer to structure their work for word problems, first working with a partner then independently.</p> <p>Anticipatory Set/Introduction to the Lesson: Pirates Go to School Have students in a circle group and read, <i>Pirates Go to School</i> by Corinne Demas and illustrated by John Manders. Or play the video of the book being read: Pirates Go to School.</p>	

Activity 1: Pirate Flat Skull's Parrots

Show the following word problem on the board and do a close read with the students:

Pirate Jack had 7 parrots. Pirate Flat Skull had some parrots, too. All together they had 12 parrots. How many parrots does Pirate Flat Skull have?

Draw the following 4-part organizer on the board:

?	#s
Number Sentences	Model

Ask students what they are looking for in this story problem. In the top left hand box write “Flat Skull’s Parrots”. Ask students to find the numbers in the story and tell what they mean. Write the numbers in the top right hand box: (7 – Pirate Jack’s parrots, 12 – parrots all together). Ask students what kind of model could be used for this story (number line, number bond, part, part, whole). Draw the model in the bottom right hand box. Tell students to use their model to find the missing addend. Ask students what 2 number sentences they can write with the 3 numbers? ($7 + 5 = 12$, $5 + 7 = 12$, $12 - 5 = 7$, $12 - 7 = 5$) Write the number sentences in the bottom left hand box. Tell students to turn to an elbow buddy and explain how this way of solving a story problem is helpful (SMP.6).

For students who are EL, have disabilities, or perform well below grade level:

- Provide a labeled 4-part organizer and a copy of the word problem with question and numbers highlighted.

Extensions for students with high interest or working above grade level:

- Give students a 4-part organizer already completed and have them write a story problem to match.

Activity 2: Partner Work

Show students how to make the 4-part organizer by folding a piece of paper in fourths. Distribute one word problem from **Handout 9.1: Pirates Solve Story Problems Cards** to each pair of students. Instruct students to work together using the 4-part organizer to illustrate and solve the story problem. When student pairs are finished with their problem, give each student their own problem to work independently. After they have finished their individual problem, tell students to check their partner's work, communicate any problems, and justify solutions (SMP.3).

For students who are EL, have disabilities, or perform well below grade level:

- Work with students who have difficulty reading.
- Students will be given a 4-part organizer and teacher guide through the process of solving.

Reflection and Closing: Writing to Understand

- ✓ Have students work with a partner to write a pirate story problem with a missing addend for the numbers 2 and 13.

Homework

Distribute **Handout 9.2: Pirates Solve Story Problems Homework** and tell students they will complete the homework worksheet.

Homework 9.1: Pirates Solve Story Problems Cards

<p>Captain Hook is angry with his crew. There were 14 crew members in the morning but only 7 in the evening. How many crew members walked the plank?</p>	<p>Captain Patch has 9 parrots. Blackbeard has 7 parrots. However, Captain Kidd has as many parrots as Captain Patch and Captain Blackbeard. How many parrots does Captain Kidd have?</p>
<p>Polly the parrot found 11 crackers. She ate one for lunch and one for dinner. How many crackers does she have left for tomorrow?</p>	<p>Today, Captain Jack's parrot ate 8 crackers for lunch and 9 for dinner. How many crackers did Captain Jack's parrot eat today?</p>
<p>Blackbeard followed the treasure map to find the hidden treasure. He took 5 steps North, 6 steps West, and then some steps South. If he took 20 steps in all, how many steps did Blackbeard take South?</p>	<p>Captain Nick found 7 gold coins on the beach. Pirate Pete found 9 gold coins. How many gold coins did they have altogether?</p>
<p>The pirate ship, Jolly Roger, has 13 sails. Five of the sails are main sails and the rest are jib sails. How many are jib sails?</p>	<p>Peg Leg, the ship's cook, cooked 19 hamburgers for the crew's supper. He put mustard and ketchup on 11 of them and only mustard on the rest. How many hamburgers only had mustard?</p>
<p>Big Tooth the shark, has 20 new friends. Seven of them are Great White Sharks, 6 of them are Hammerhead Sharks, and the rest are Sand Sharks. How many of Big Tooth's friends are Sand Sharks?</p>	<p>Pirate Pete's treasure chest contains 15 rings. Three of the rings have diamonds, 7 of them have emeralds, and the rest have rubies. How many rings have rubies?</p>

Handout 9.2: Pirates Solve Story Problems Homework (side 1)

Name _____ Date _____

Use the Four-Part method on the back of this sheet to solve this problem:

Pirate Wanda sailed the seas for 13 days in August. She sailed the seas in September. Altogether, in August and September she sailed 20 days. How many days did she sail in September?

Handout 9.2: Pirates Solve Story Problems Homework (side 2)

?

#s

Number Sentences

Model

Lesson 10: Pirates Perform Wrap-Up Tasks

Focus Standards: 1.OA.1, 1.OA.2, 1.OA.6, 1.OA.8

Additional Standard: 1.OA.4

Standards for Mathematical Practice: SMP.1, SMP.2, SMP.4, SMP.5, SMP.6, SMP.7, SMP.8

Estimated Time: 70 minutes

Resources and Materials:

- Chart Paper
- Colored pencils
- Counters
- Crayons
- Markers
- Number Bonds
- Number Lines
- Part-Part-Whole Models
- Rekenreks
- Ten Frames
- Handout 10.1: Culminating Task – Get Captain Hook Home
- Handout 10.2: Culminating Task Rubric – Get Captain Hook Home

Lesson Target:

- Students will complete a culminating task to determine the unknown whole number in addition and subtraction equations, solve word problems for addition and subtraction including unknown-addends, and add and subtraction within 20 demonstrating fluency.

Guiding Questions: <ul style="list-style-type: none"> • What strategy are you using to recall addition and subtraction facts? • Which strategies are most helpful to you in recalling facts? 	
Vocabulary	
Academic Vocabulary: <ul style="list-style-type: none"> • Addition • Compare • Difference • Minus • Reasonable • Subtraction • Sum • Total 	Instructional Strategies for Academic Vocabulary: <ul style="list-style-type: none"> <input type="checkbox"/> Introduce words with student-friendly definitions and pictures <input type="checkbox"/> Model how to use the words in discussion <input type="checkbox"/> Discuss the meaning of word in a mathematical context <input type="checkbox"/> Create pictures/symbols to represent words <input type="checkbox"/> Write/discuss using the words <input type="checkbox"/> Act out the words or attach movements to the words
Symbol	Type of Text and Interpretation of Symbol
	Instructional support and/or extension suggestions for students who are EL, have disabilities, or perform well below the grade level and/or for students who perform well above grade level
✓	Assessment (Pre-assessment, Formative, Self, or Summative)
Instructional Plan	
Understanding Lesson Purpose and Student Outcomes: Students will demonstrate mastery level for adding and subtracting.	
Anticipatory Set: Tools and Manipulatives Match <ul style="list-style-type: none"> ✓ Review tools and manipulatives used in this unit. Hold up a tool or manipulative and ask students the name and how it is used. 	

Activity 2: Culminating Task – Get Captain Hook Home

- ✓ Explain to students that they will show evidence of their mastery of skill by completing a Culminating Task. Explain that Captain Bluebeard needs their help to get his crew safely home. To reach his island, Captain Bluebeard needs to collect 20 gold coins. Every time you complete a problem, Captain Bluebeard gets 4 coins. You must get 5 problems correct to earn 20 coins. You may choose any manipulative or tool to solve the problems. You must show your work and tell which tool and/or manipulative you used.

Distribute **Handout 10.1: Culminating Task** and make manipulatives used this week available to students (SMP.5).

Encourage students to use strategies to make sense of the problems and not to give up if it seems too difficult (SMP.1).

Remind students that tools include models such as number bonds and models (SMP.4 & SMP.5). Distribute **Handout 10.2: Culminating Task Rubric**, review each level of the rubric, and explain how students will earn the points (SMP.2, SMP.6, SMP.7, SMP.8).

For students who are EL, have disabilities, or perform well below grade level:

- Work with students who have difficulty reading.
- Students will be given a 4-part organizer and teacher guide through the process of solving.

Reflection and Closing: +, -, Interesting Poster

Students will write on the posters for +, -, and Interesting. Tell students that after they complete the Culminating Task they can write on the + poster something they feel very comfortable doing, on the – poster write something they still are not sure about, and on the Interesting poster write something they find they would like to work with more or something they can use for other activities.

Homework

No homework.

Handout 10.1: Culminating Task – Get Captain Hook Home

Name: _____ Date: _____

Captain Bluebeard has been sailing the seas for 20 months. He and his crew are ready to get home to their treasure island. Captain Bluebeard needs 20 coins to pay for the trip. Help Captain Bluebeard and his crew get home! Earn 4 coins for each problem. Don't forget to show your work and tell which tool you used!

1. Captain Hook is sailing the ocean looking for treasure. There were 11 pirates on the deck of his ship and 7 pirates below the deck. How many pirates were on the ship?

Show your thinking here:

Coins Earned: 

List or draw tools/manipulatives here: _____

2. There were 12 pirates on the ship and 5 of them got in trouble and had to walk the plank! After they walked the plank, how many pirates were left on the ship?

Show your thinking here:

Coins Earned: 

List or draw tools/manipulatives here: _____

3. Captain Bluebeard's parrot, Polly, has colorful feathers. She has 7 blue feathers, 5 red feathers, and 4 yellow feathers. How many feathers does Polly have?

Show your thinking here:

Coins Earned: 

List or draw the tools/manipulatives you used here: _____

4. First Mate Sid had 9 packs of crackers. He gave some of his friends a pack of his crackers. He only has 2 packs of crackers now. How many packs of Goldfish crackers did he give to his friends?

Show your thinking here:

Coins Earned: 

List or draw the tools/manipulatives you used here: _____

5. While he was at sea, Captain Bluebeard's son, Little Bluebeard, collected a seashell for every year his father was away at sea. He has 20 seashells. 13 of them are conch shells and the rest are clam shells. How many of the shells are clam shells?

Show your thinking here:

Coins Earned: 

List or draw the tools/manipulatives you used here: _____

Rubric for Culminating Task – Get Captain Hook Home

Performance Level	Mastery Level	Accuracy	Diagrams and Sketches	Manipulatives	Neatness and Organization
4	Exemplifying Mastery	All 5 of the problems are free of mathematical errors.	Diagrams and/or sketches are clear and greatly add to the reader's understanding of the procedure(s).	Student demonstrates full understanding of which manipulative or tool is appropriate for each situation.	The work is presented in a neat, clear, organized fashion that is very easy to read.
3	Approaching Mastery	4/5 of the problems are free of mathematical errors.	Diagrams and/or sketches are clear and mostly easy to understand.	Student demonstrates some understanding of which manipulative or tool is appropriate for each situation.	The work is presented in a neat and organized fashion that is somewhat easy to read.
2	Developing Mastery	3/5 of the problems are free of mathematical errors.	Diagrams and/or sketches are somewhat difficult to understand.	Student demonstrates little understanding of which manipulative or tool is appropriate for each situation.	The work is presented in an organized fashion but may be hard to read at times.
1	Not Representing Mastery	1-2 of the problems are free of mathematical errors.	Diagrams and/or sketches are difficult to understand or are not used.	Student demonstrates no understanding of which manipulative or tool is appropriate for each situation.	The work appears sloppy and unorganized. It is hard to know what information goes together.
0	No Understanding	All problems contained some mathematical errors.	Diagrams and/or sketches are missing.	Manipulatives and/or tools are not used.	No task submitted or task is illegible.

RAW SCORE: _____ / 16

FINAL SCORE: _____ / 100

For training or questions regarding this unit, please contact:

exemplarunit@mdek12.org