Dear Students and Families,

Welcome to the MCPS instructional resources for your child's grade level. All of the resources and materials in this course are available for students to work on while school is closed. Since these materials serve as review and practice of content, you may choose what experiences are most appropriate and meaningful for your child. Your child may work on any or all of the experiences, in any order. Feel free to modify the resources and provide your child with accommodations as necessary. Resources are intended to be completed with little or no adult support, but you are welcome to support your child as needed. Since these resources serve as review and practice, they do not need to be returned to school and will not be graded.

Literacy, mathematics, and science experiences have been designed for your child. A literacy experience requires students to engage with reading, writing, listening, speaking, and/or viewing and responding to literary or informational text. Mathematics experiences allow students to use multiple strategies in order to practice concepts that they have learned. Science experiences provide the opportunity for students to engage in a deeper exploration of real world phenomena, using the practices of scientists and engineers.

Literacy

Grade 2 Literacy Experiences #1-5

Literacy Experiences may be completed in one or multiple sittings. Keep track of the texts you read by filling in your Reading Log. You may record your responses to texts on paper, in a journal, or using a device.

Literacy Experience 1: Informational Text and Written Response
Read or listen to an informational text and respond to the following questions:

What information did you learn from the text? What information did you learn from the pictures or illustrations? Use key details to support your answer.

Literacy Experience 2: Literary Text and Written Response
Read or listen to a literary text and respond to the prompt. Use text evidence to support your thinking.

Write a who, what, when, where, why, or how question about the text you read or listened to. Answer the question using details from the text.

Literacy Experience 3: Literary Text and Written Response
Read or listen to a literary text and respond to the prompt. Use text evidence to support your thinking.

Write a paragraph to retell the beginning, middle, and end of the story. Use the graphic organizer to help you plan your writing.

Literacy Experience 4: Informational Text and Written Response
Select an informational text to read or listen to. Before reading, list what you know and want to know about the topic of the text by completing the Know and Want to Know columns of the provided KWL chart. As you read, record what you learn about the topic by completing the Learn column of the chart.

Literacy Experience 5: Literary Text and Written Response
Read or listen to a literary text and respond to the prompt. Use text evidence to support your thinking.

After reading the text, identify one character in the story and write about one major event or challenge in the story and describe how the character responds to that event or challenge.

Name: _____

Home Reading Log

Read for at least 10-15 minutes and fill in the log below. Reading could include having someone read to you, reading to someone else, reading to yourself, and/or listening to a book.

Date	Title of Text	Author	Time Spent Reading

BEGINNING, MIDDLE, AND END

	Write about the story!
Beginning: • **How is the story introduced?** • **What did you learn about the characters and setting?** • **What is the problem to be solved?**	
Middle: • **What happens in the middle of the story?** • **What events took place?** • **What did you learn about the problem?**	
End: • **How did the story end?** • **What did you learn about the solution to the problem?**	

K-W-L Chart

Topic: _____

What I **Know**	What I **Want** to Know	What I **Learned**

Grade 2 Literacy Experiences #6-10

Literacy Experiences may be completed in one or multiple sittings. Keep track of the texts you read by filling in your Reading Log. You may record your responses to texts on paper, in a journal, or using a device.

Literacy Experience 6: Informational Text and Written Response
Read or listen to an informational text and respond to the prompt. Use text evidence to support your thinking.

What is the main topic of this text? Use key details to support your answer. Use this graphic organizer to help organize your thinking.

Literacy Experience 7: Literary Text and Written Response
Read or listen to a literary text and respond to the prompt. Use text evidence to support your thinking.

Pick a character from the text. What is the character's point of view? What words or key details help you understand the character's point of view? Use this graphic organizer to help organize your thinking.

Literacy Experience 8: Informational Text and Written Response
Read or listen to an informational text and respond to the prompt. Use text evidence to support your thinking.

What is the author's point? Identify reasons from the text that support the author's point. Use this graphic organizer to help organize your thinking.

Literacy Experience 9: Literary Text and Written Response
Read or listen to a literary text and respond to the prompt. Use text evidence to support your thinking.

Choose an illustration from the text. Write a short paragraph that tells why the illustrator of the text did a good job of portraying the character in the illustration you selected.

Literacy Experience 10: Opinion Writing
Write an opinion essay to respond to one of the questions below, or to share your opinion on an issue that is important to you. Use the graphic organizer to plan your writing.

Possible Opinion Writing Issues:
What is the best kind of pet?
What season of the year is the best?
Should kids have longer recess?
Should kids have homework?
What kind of field trip should your class take?
What is the best game to play outside?
What is the best lunch to eat at school?

Key Details	I think the main topic is __ because ___

Key Details to State Main topic graphic organizer

Name: _____

Character's Point of View

Title: _____

Problem: _____

Character Name:

What the character says:

What the character does:

I think ___'s point of view is ___.

Title: _____

Author: _____

What is the author's point?	What reasons from the text support the author's point?

What's Your Opinion? _____

Point 1:

Point 2:

Point 3:

Reasons to Support Point 1:

Reasons to Support Point 2:

Reasons to Support Point 3:

Grade 2 Literacy Experiences #11-15

Literacy Experiences may be completed in one or multiple sittings. Keep track of the texts you read by filling in your Reading Log. You may record your responses to texts on paper, in a journal, or using a device.

Literacy Experience 11: Informational Text and Written Response Read or listen to an informational text and respond to the prompt. Use text evidence to support your thinking. After reading the text, sketch a picture based on the important information you remember from the text. Your picture should include labels. Go back and read the text again. Add more detail to your picture based on your second read of the text. Go back and read the text once more. Add any final details to the picture to show what you learned and understand.
Literacy Experience 12: Literary Text and Written Response Read or listen to a literary text and respond to the prompt. Use text evidence to support your thinking. Create a comic strip to illustrate the story. Be sure to include the beginning, middle, and end and important details from the story. The comic strip should include pictures and dialogue to retell the story.
Literacy Experience 13: Writing Create an alphabet book based on a theme such as food, animals, toys, sports, etc. For each letter of the alphabet, choose a word, write the letter, word, and/or a sentence about the topic. This activity can be modified or expanded.
Literacy Experience 14: Writing Interview someone in your house about an important event in their life. Write a paragraph to share the information you learned from the interview.
Literacy Experience 15: Narrative Writing Write a paragraph about a special event in your life, such as a birthday, a family vacation, a time your team won a game, etc. Use the graphic organizer to plan your paragraph. This activity can be modified or expanded.

Personal Narrative Organizer

Directions: Use the bullets to list the ideas for your personal narrative. You can use just a few words. You do not have to have complete sentences, yet.

Beginning

- Who?
- What?
- When?
- Where?

Middle

- What happened?

- What happened next?

- What happened next?

- The best part of this was...

End

- I felt...

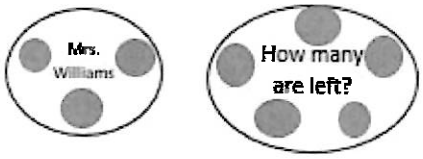
Mathematics

Grade 2 Math Experiences

During math instruction, students are expected to be able to use multiple strategies to solve problems. While completing the problems that follow at home, students should also use multiple strategies to show their complete understanding. An example of different strategies students should use to complete problems is provided below.

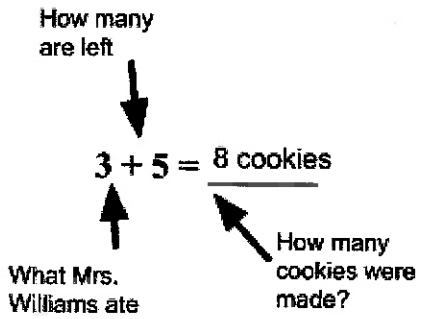
Sample Problem:
Mrs. Sampson made cookies for her friends. Mrs. Williams ate 3 cookies. Mrs. Sampson now has 5 cookies. How many cookies did Mrs. Sampson make first?

Strategy 1: Pictures



3 + 5 = 8 cookies

Strategy 2: Numbers



Strategy 3: Words

I know Mrs. Sampson made 8 cookies because Mrs. Williams ate 3, and she had 5 left. 3 + 5 = 8, so that means Mrs. Sampson had made 8 total cookies.

Additionally, it is important to discuss with your student the steps they take to solve the problem and why those steps are important. With the Common Core State Standards, students are expected to be able to talk about their understanding of mathematical concepts and their analysis of problems.

Grade 2 Mathematics

Complete 4 boxes each day.

Jose had 26 marbles. He gave some to Janice. He had 19 left. How many did he give to Janice?	Write an equation and draw a picture to solve the following problem. Ms. Wyatt's class read for 364 minutes. Ms. Tono's class read for 452 minutes. How many more minutes did Ms. Tono's class read than Ms. Wyatt's class?	How are addition and subtraction related? How does knowing about the relationship between the two operations help you solve addition and subtraction problems?	Write an equation and draw a picture to solve the following problem: Ms. Acard has 59 blocks. Ms. Lukas has 68 blocks. How many more blocks does Ms. Lukas have than Ms. Acard?	Jenny loves skip-counting while jumping rope. If she starts at 203 and skip counts by 10, how many times does Jenny have to jump to get to 353? Explain your thinking. Jenny then skip-counts by 100, jumps 5 times, and stops at 832? What number did she start at? How can a number line be used to model your answer?
What is the number name for 5 hundreds, 7 tens and 2 ones? What is the number name for 5 tens, 7 ones and 2 hundreds? How are these numbers similar? How are they different?	Jessie has 3 dimes, 2 nickels, and 4 pennies. You have 1 quarter, 2 dimes, 3 nickels and 4 pennies. Does Jessie have more or less money than you do? How much more or less?	Use a strategy to solve the following problems. Explain your strategy to your family. · 62 + ___ = 81 · 35 + ___ = 46 · ___ + 19 = 28	Use mental math to solve. Explain your strategy to someone at home. · 2 + 5 + 7 = ___ · 3 + 2 + 9 = ___ · 6 + 8 + 4 = ___	Write a three digit number. Name the value of each digit in your three digit number. Draw a place value chart to justify your response. *Ex: 3<u>4</u>5* *The value of the 5 is 5.* *The value of the four is 40.* *The value of the 3 is 300.*

Grade 2 Mathematics

Identify the pairs of numbers that make 20. Write equations to represent the relationship between each pair.	The jar holds 68¢. What coins might be in the jar? Using the different coin pieces, record how many different ways can you make 68¢.	Find 5 objects around your house to measure to the nearest inch. After you measure the length of each object, line them up in order of shortest to longest.	Name three numbers that are greater than 634. Explain how you know.	John is building a road for his toy cars. He has three pieces of board that are between 15 cm and 25 cm. Their total length, when laid end-to-end, is 56 cm. What could their individual measures be?
Diego made a train of marshmallows that measured 16 inches long. Jose made a train that measured 23 inches long. If they put the two trains together, how long would it be?	Find the sum of the following: · 24 + 13 + 17 + 10 = · 17 + 34 + 16 + 23 = · 10 + 45 + 13 + 22 =	Juan had 134 baseball cards. His father gave him some. He now has 234 cards. How many did his father give him?	Without solving, tell if you need to compose a ten or not. · 345 + 222 = · 135 + 138 = · 233 + 243 = Explain how you can know.	Choose 2 two-digit numbers. Write an addition expression using your two numbers. Draw a tape diagram to show how you could solve your addition expression by making it an easier problem.

Illustrative Mathematics

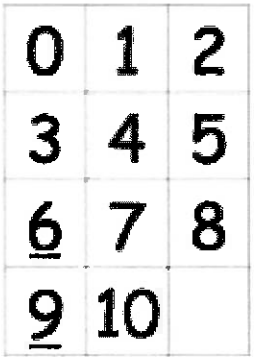
2.OA Hitting The Target Number

Alignments to Content Standards: 2.OA.B.2

Task

Materials

- Number cards labeled 1-10 (attached as a PDF)



Actions

- Begin by playing the game as a whole class to demonstrate the rules and for students to illustrate the range of possible strategies.
- Have a student pick 5 number cards from the cards labeled 1 through 10. Then, have another student pick a "Target Number" between 10 through 20. Students must add and/or subtract 2 or more of the 5 number cards to arrive at the "target" number.
- As students present the different number combinations for the "target" number, write their expressions on the board and have them explain how they were able to mentally come up with the solution.
- As students explain their reasoning, name the strategies they used. For example, look for students making fives (e.g. 6 + 8 = 5 + 1 + 5 +3= 10 + 4 = 14) and tens (9 + 8 = 10 + 7), and using known facts (e.g. 8 + 8 is 16 so 8 + 7 is one less than 16) to encourage

flexible thinking about the relationship among the facts.
- When students understand how the game works, they can play in pairs, checking each other's solutions.

IM Commentary

The purpose of this task is to help students develop flexible strategies for adding and subtracting within 20. "Computational fluency refers to having efficient, accurate, generalizable methods (algorithms) for computing numbers that are based on well-understood properties and number relationships" (NCTM, 2000). Therefore, the focus in developing fluency should be more than the internalization of facts but on supporting students natural development of number sense so that they are able to solve computations flexibly and efficiently using their understanding of place value and relationships between numbers.

Children's natural development of numbers progress from the concrete to the abstract, from counting all (e.g. physically making four counters and then making twelve and counting all the counters to get sixteen), to counting on (e.g., counting four more starting at twelve to get to sixteen), to using part-whole (e.g. splitting apart the twelve to ten and two, and adding the two to four, then adding the ten) and relational thinking (knowing that 4 + 10 is 14 so 4 + 9 would be just one less). As this activity requires students to add or subtract two or more numbers mentally, students are pushed to develop more efficient strategies.

Once you have modeled the game as a whole class, this activity can be played by individual pairs of students. The number of cards and the target number can be modified to meet the needs of your students and your instructional intent.

Reference

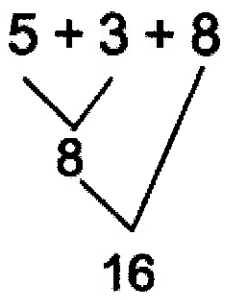
National Council of Teachers of Mathematics. (2000). Principles and standards for school mathematics. Reston, VA: Author.

Edit this solution

Solution

Suppose the five number cards selected are 5, 3, 8, 1, and 9 and a target number is 16.

- 5 + 3 + 8. 5 and 3 is 8 and doubles 8 is 16.



Another strategy:

- Break apart the 8 into 5 and 3. Add the two 5s to make 10 and the two 3s to make 6. Then add 10 and 6 to make 16.

Grade 2 Mathematics

Complete 4 boxes each day.

You put a cake in the oven. It baked for 40 minutes. At what time could you have put it in the oven? At what time would it be finished baking?	Use a strategy to solve the following problems. Explain your strategy to your family. · 80 = ___ + 26 · 65 + 49 = ___ · ___ + 34 = 78	I bought a dog for $40. I sold the dog for $50. I bought the dog back for $60. Juan said the dog cost me $100. Lelia said the dog cost me $60. Randy said the dog cost me $50. Who is right? Why?	What coins could I have? • I have 3 coins. • I have less than 40 cents. • I have more than 20 cents. Make a list of all possible answers.	Maria has 30 marbles. Some are red and some are blue. Write all the different equations that show how many red marbles and how many blue marbles Maria could have. What strategy did you use to find all of the equations?
I have a brother and a sister. • We are all different ages. • I am the oldest. • My sister is the youngest. • I am 7 years old. • When you add our 3 ages, you get 17. How old is my sister?	Find the sum of each of the following: · 26 + 15 + 24 + 35 = · 33 + 27 + 10 + 26 = · 34 + 8 + 12 + 16 =	My garden is shaped like a rectangle. It is 6 feet long and 4 feet wide. I put a fence along the edges of my garden. How long is the fence, in feet?	Erika gets up at 7:00. She goes to school 2 hours later. She has lunch 3 hours after she arrives at school. What time does Erika have lunch?	What time do you wake up for school? What time is it if you wake up five minutes late? What time is it if you wake up 10 minutes early?

Grade 2 Mathematics

Two apples and two bananas together weigh 26 ounces. About how many ounces does each banana weigh? How did you solve the problem?	Solve each: · 159 + 674 = · 351 + 195 = · 209 + 405 =	Suppose you know that 173 + 173 = 346. How can you use that to solve 175 + 175 = ?	It is 8:45. Lucia's art class begins at 9:30. How many minutes will she have to wait? Tell how you know.	Jorge likes to count while dribbling a basketball. He has been dribbling for a while, and counting by 10s. He is currently at 308. How many times did he dribble if he started at 278? How many more times will he need to dribble if he continues from 308 to get to 608 if he starts counting by 100s now?
Luis collects stamps. • He has 4 more stamps from Egypt than from Peru. • He has 3 fewer stamps from Nigeria than from Egypt. • He has 27 stamps from Nigeria. How many stamps does he have from Peru?	Use mental math to solve. Explain your strategy to someone at home. · 6 + 5 + 4 = ___ · 7 + 1 + 7 = ___ · 8 + 4 + 2 = ___	How many ways can you have 20 cents in coins? Make a list. Show the ways.	Two years ago, Maria was 7 years old. How old will she be next year? Explain how you know.	Jamie and Sonya have a train of marshmallows that together measure 39 inches long. Their trains are different lengths. Write two different equations that could show how long each girl's train might be. Draw tape diagrams to justify each equation.

Curious Subtraction

Sample task from achievethecore.org
By Student Achievement Partners, adapted from a video by Global Education Resources

GRADE LEVEL Second

IN THE STANDARDS 2.NBT.A.1, 2.NBT.B.5, (3.OA.D.9)

WHAT WE LIKE ABOUT THIS TASK

Mathematically:

- Offers an opportunity to practice subtraction within 100 and work towards fluency (2.NBT.B.5).
- Reinforces understandings of the place value system (2.NBT.A).
- Engages students in looking for and expressing regularity in repeated reasoning (MP8).

In the classroom:

- Encourages students to talk about each other's thinking in order to improve their mathematical understanding.
- Can lead into related discussions about interesting mathematical phenomena (see Additional Thoughts).
- Allows for whole class, small group, or individual work.

This task was designed to include specific features that support access for all students and align to best practice for English Language Learner (ELL) instruction. Go here to learn more about the research behind these supports. This lesson aligns to ELL best practice in the following ways:

- Provides opportunities for students to practice and refine their use of mathematical language.
- Allows for whole class, small group, and paired discussion for the purpose of practicing with mathematical concepts and language.

MAKING THE SHIFTS[1]

 Focus	Belongs to the Major Mork[2] of second grade
 Coherence	Builds on previous work with place value (1.NBT.B); Lays foundations for grade three work with multiplication patterns and multi-digit arithmetic (3.OA and 3.NBT)
 Rigor[3]	Conceptual Understanding: secondary in this task Procedural Skill and Fluency: primary in this task Application: not targeted in this task 1

[1]For more information read Shifts for Mathematics.
[2] For more information, see Focus in Grade Two.
[3] Tasks will often target only one aspect of Rigor.

LANGUAGE DEVELOPMENT

Ensure students have ample opportunities in instruction to read, write, speak, listen, and understand the mathematical concepts that are represented by the following terms and concepts:

- Numbers
- Digits
- Regrouping
- Subtracting
- Place Value
- Tens
- Ones
- Difference

Students should engage with these terms and concepts in the context of mathematical learning, not as a separate vocabulary study. Students should have access to multi-modal representations of these terms and concepts, including: pictures, diagrams, written explanations, gestures, and sharing of non-examples. These representations will encourage precise language, while prioritizing students' articulation of concepts. These terms and concepts should be reinforced in teacher instruction, classroom discussion, and student work.

ELLs may need support with the following vocabulary words during the classroom discussion:

- Investigate
- Result
- Same

TASK

TASK: ACTIONS

The teacher sets the stage by letting students know that today they will investigate an interesting thing that happens when subtracting certain numbers. (For an illustration of this, please see video, start–1:17.)

The investigation begins with the teacher displaying the digits 1 through 9 on the board. S/he chooses two digits and asks the class what possible two-digit numbers they can make. (For an illustration of this, please see video, 1:17–2:16.)
The teacher then asks students to find the difference between the numbers they created. (The problem and the difference should be recorded on the subtraction template.) The teacher leads students through a second example, making sure to choose digits that will have the same result as the first example. (For an illustration of this, please see video, 2:16–5:10.)

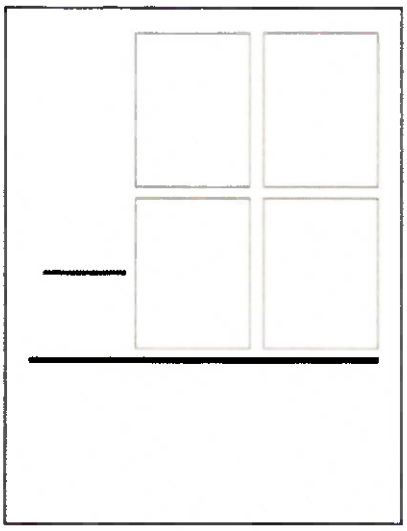
The teacher then asks the students if the result will always be the same when subtracting two two-digit numbers made from the same pair of digits and challenges them to find out. Students can work independently or with partners using the subtraction template. As the students work, the teacher has the opportunity to encourage students to try different digit combinations and support any students who are subtracting incorrectly. After enough time has passed, the teacher has the students put their results (subtraction templates or equations) on the board. (For an illustration of this, please see video, 5:10–6:55.)

Once the results are all on the board, the class discussion begins. (For an illustration of this, please see video, 6:55–13:56) Follow up questions the teacher may ask include, but are not limited to:

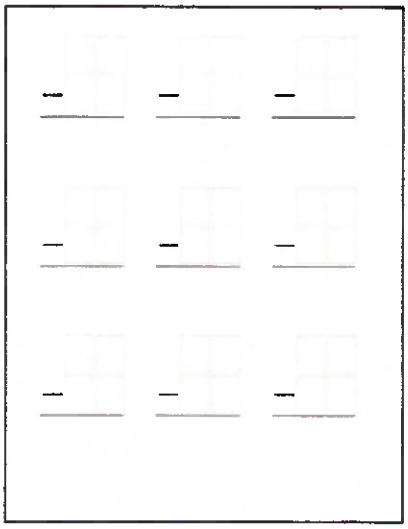
- Were all of our answers the same?
- What are all the differences that our class found?
- Do you think we missed any possible differences?

- Is there anything special about the differences we found?
- With your partner, discuss one or two interesting things you wrote down about the results of this investigation.

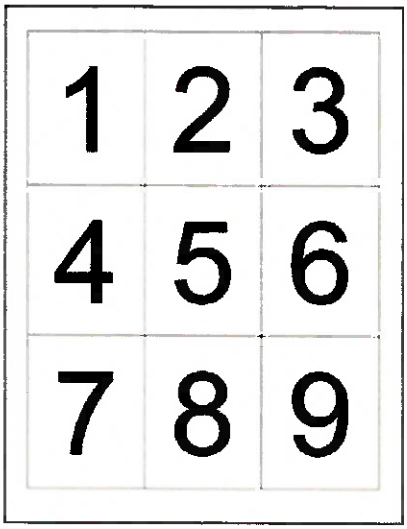
TASK: MATERIALS



Two-Digit Subtraction Print Template (large)



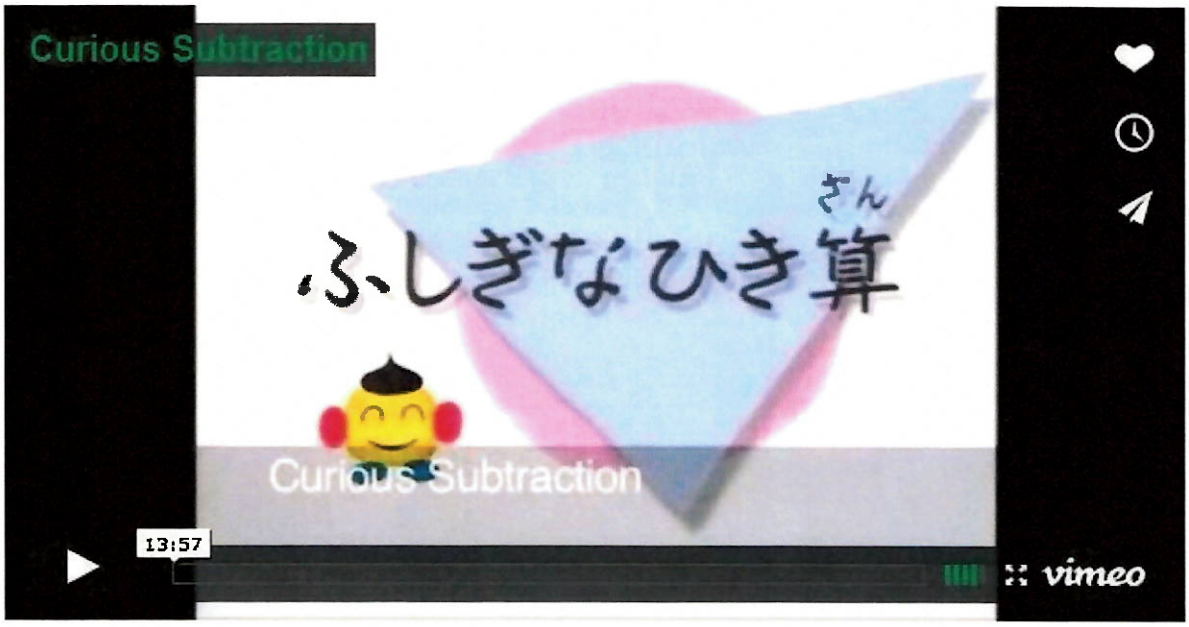
Two-Digit Subtraction Print Template (small)



Digits 1 –9 Print Template

For a direct link, go to: http://achievethecore.org/page/907/curious-subtraction-task

TASK: ADDITIONAL RESOURCES



Curious Subtraction (K–2), by Mr. Hiroshi Tanaka, University of Tuskuba Elementary School

This video serves as an illustration of this task in action. The original video can be viewed here.

COMMENTARY AND SOLUTION

COMMENTARY

The joint purpose of this task is to provide students an opportunity to practice two-digit subtraction with regrouping and to engage students in looking for and expressing regularity in repeated reasoning (MP8). Throughout grade 2, students need many opportunities to practice subtraction in order to achieve fluency subtracting within 100 by the end of the grade. For students in grade 2, it is sufficient for them to recognize that differences of 9 will stem from numbers whose digits differ by 1, subtractions resulting in 18 will stem from numbers whose digits differ by 2, etc.

SOLUTION

Having worked extensively with place value in grade 1 (1.NBT.B), students should come to grade 2 able to make both possible two-digit numbers from any given two digits.

The answers for the subtraction problems are dependent upon the numbers chosen, but are always multiples of 9 (e.g., if the digits 5 and 9 are selected, the numbers 59 and 95 are possible. When subtracting 59 from 95, the result is 36, a multiple of 9.).

The students should notice that when their subtraction result is 9, the difference of the two digits used is 1 (the numbers are consecutive or adjacent). When the result is 18, the difference is 2 (the numbers are "neighbors"). And so on. Some students may also notice that the digits in the results have a sum of nine if they are added together.

ADDITIONAL THOUGHTS

This task engages students in thinking about relationships between numbers and operations and can lead to investigations of other mathematical phenomena (e.g., reverse subtraction with three-digit numbers, adding two-digit reverse numbers). This task can be adapted or extended for students working above grade level. Identifying the arithmetic patterns in the numbers used and the solutions to the subtractions extends to grade three (3.OA.D.9). Students in grade three should note that the solutions are always multiples of 9 and that the difference will always be 9 times the positive difference between the two digits.

This task can also be adapted to eighth grade by asking students to algebraically prove that the solutions will always be a specific multiple of nine, depending on the digits selected. For example, when choosing two digits, a and b, one can make two distinct, two-digit numbers: ab and ba. To see why the difference between these will always be a multiple of 9 when subtracting the smaller from the larger, consider:

$$\begin{aligned}(10a+b)-(10b+a) &= 10a+b-10b-a \\ &= 10a-a+b-10b \\ &= 9a-9b \\ &= 9(a-b)\end{aligned}$$

The difference between the two numbers will be 9 times the positive difference between the two digits in the numbers.

For more information on the progression of place value understanding and properties of operations in grade 2, read pages 8–10 of the progression document, K–5, Number and Operations in Base Ten.

Grade 2 Mathematics

Complete 4 boxes each day.

Use a strategy to solve the following problems. Explain your strategy to your family. · 84 = ___ + 36 · 56 + 84= ___ · ___ + 16 = 64	29 + 57 = ? Noah says the best estimate for the sum is 70. Regina says the best estimate for the sum is 90. Who is correct? Explain why.	Who is in grade 2? • Todd is 3 years older than Kiran. • Kiran is 10 years younger than Chad. • Chad is 14 years old.	Write numbers in the blanks so that the story makes sense. Jose loves fruit. In one week, he ate _____ bananas and _____ apples. He ate _____ more bananas than apples. Altogether he ate _____ pieces of fruit.	One school library has 345 books. Another library has 543 books. Which library would you prefer to visit? Explain your reasoning using what you know about ones, tens and hundreds.
Find the sum of the following: · 72 + 36 + 19 = · 37 + 29 + 46 = · 55 + 18 + 64 =	Write 9 different problems that each have an answer of 9. Use addition and subtraction only.	How many stamps does Zelika have? • Zelika has twice as many stamps as Ken. • Ken has twice as many stamps as Lena. • Lena has twice as many stamps as Rob. • Rob has 8 stamps.	Balls are $5. Bats are $7. How much more do 2 bats cost than 2 balls? Give 2 ways to solve the problem.	What number am I? • I am greater than 6+7. • I am less than 9+9. • You say me when you count by twos. • I am not 8+8.

Grade 2 Mathematics

Solve. · 479 + 123 = · 294 + 309 = · 536 + 89 =	Gena had some carrot sticks. She ate 3 of the carrot sticks. She gave 4 carrot sticks to Malia. She has 2 carrot sticks left. How many carrot sticks did Gena have at the start?	Jess has 1 dollar and 2 quarters. Ron has 4 quarters and 6 dimes. Who has more money? Explain how you figured it out.	Name something that is: 1. Big and lightweight 2. Small and heavy 3. Longer and lighter than a pencil 4. Wider and shorter than the classroom door	How much money could I have? • I have more than 70 cents. • I have less than 94 cents. • I do not have any pennies. Give all the answers.
Use mental math to solve. Explain your strategy to someone at home. · 4 + 4 + 4 = ___ · 8 + 7 + 1 = ___ · 6 + 2 + 5 = ___	Mr. Tang planted a rose garden in the shape of a rectangle. • There is a rose bush on each corner. • There are 3 rose bushes between each of the corner bushes. How many rose bushes are there in all?	Louis, Pam, and Ali compare their heights. Louis is 9 inches taller than Pam. Pam is 5 inches shorter than Ali. Ali is 50 inches tall. How tall is Pam? How tall is Louis?	Diedre has 6 cousins. Lucy has 8 more cousins than Diedre. Nathan has 3 fewer cousins than Lucy. How many cousins does Nathan have?	Suppose you start at 100, and keep subtracting 7 until you get close to 0. Will you land on any even numbers? If yes, which numbers?

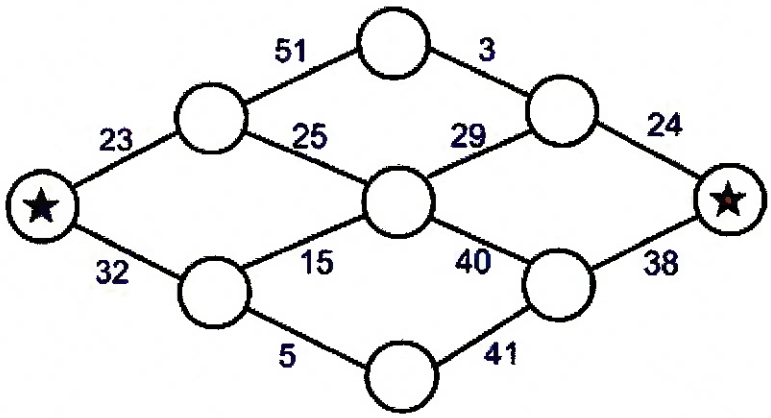
Illustrative Mathematics

2.NBT Toll Bridge Puzzle

Alignments to Content Standards: 2.NBT.B.6

Task

The picture shows islands connected by bridges. To cross a bridge, you must pay a toll in coins. If you start on the island marked in blue with 100 coins, how can you make it to the island marked in red?



IM Commentary

This task is intended to assess adding of four numbers as given in the standard while still being placed in a problem-solving context.

As written this task is instructional; due to the random aspect regarding when the correct route is found, it is not appropriate for assessment.

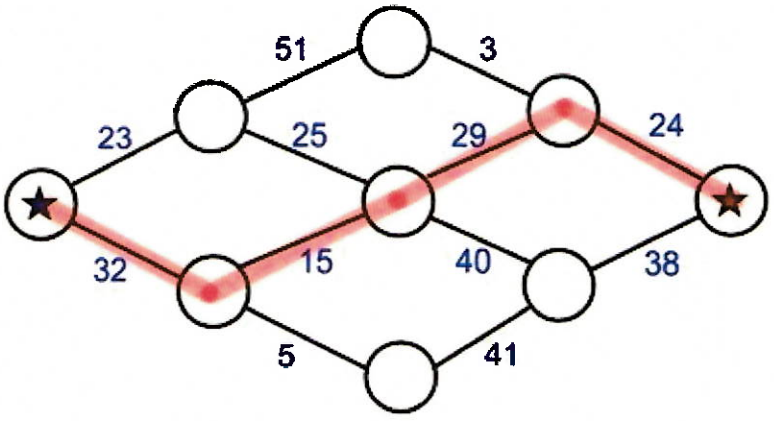
This puzzle works well as a physical re-enactment, with paper plates marking the islands and strings with papers attached for the tolls.

Students will often be tempted by the single digit numbers to assume the route has to pass that way. They may also miss the "crossover" using the central island, finding the 23 + 25 + 29 + 24 route and the 32 + 15 + 40 + 38 route but not the 23 + 25 + 40 + 38 route or the 32 + 15 + 29 + 24 one.

Technically, paths that run from right to left along some bridges could be considered as well (for example, 32 + 5 + 41 + 40 + 29 + 24). However, for this particular example, such paths can be ignored since students will find a cheap enough path by only investigating paths that run from left to right. One might be tempted to modify the problem by having the student start with 99 coins, and ask if it is possible to reach the red island. However, such a modification would be inappropriate since a mathematically valid solution would require that the student consider all paths, including those that cross some bridges from right to left.

Edit this solution

Solution



32 + 15 + 29 + 24 = 100

Other possible routes:

23 + 51 + 3 + 24 = 101
23 + 25 + 29 + 24 = 101

$23 + 25 + 40 + 38 = 126$
$32 + 15 + 40 + 38 = 116$
$32 + 5 + 41 + 38 = 116$

Science

Name: _____

Grade 2 Science Experiences

Your child may complete one to two experiences per week.

Science Experience #1
Find two different habitats near your home. Compare the living things found in each. (Examples of habitats: parking lot, grass, trees).

Think about:
- What does each habitat look like?
- Which habitat has more living things?

Science Experience #2
Read or listen to a story about animal habitats.
→ You may use any story you like. One example of a story is provided in this packet.

Think about:
- What does the habitat look like?
- What other living things are in this habitat?

Science Experience #3
Make observations of insects on flowers.

Think about:
- What kinds of insects do you see?
- What does the insect do while it is on the flower?

Science Experience #4
Read or listen to a story about bees.
→You may use any story you like. One example of a story is provided here:
https://www.tumblebooklibrary.com/Result.aspx?m=Title&key=Bumblebee%20Queen,%20The

Think about:
- What kinds of insects do you see?
- Does it live in the ground, or on a plant, or somewhere else?

Name: _____

Science Experience #1

Observe ....

- What does each habitat look like?
- Which habitat has more living things?

Habit 1:_____	Habit 2: _____
Draw and label what you observed.	Draw and label what you observed.

Which habitat had more living things? _____

Name: _____

Science Experience #2

Read or listen to a story about animal habitats

Pick any habitat and complete the graphic organizer below.

Think about:

- What does the habitat look like?
- What other living things are in this habitat?

Draw a picture of a _____ animal in the habitat.
(name of habitat)

My favorite kind of _____ animal is: _____.

Facts about my animal:

_____

_____

_____

_____

_____

Desert Animals

Deserts

Desert animals live in the driest places on Earth.

Deserts get little rain.

Most deserts are also hot.

Desert animals are adapted to these hot, dry places.

Bodies

Desert animals have bodies
that help them save water.
A reptile, like the Gila monster,
does not sweat. Its skin keeps
water inside the body.

Camels

It can be hard to find food
in the desert. Camels have
humps that store fat.
Camels use the fat
when they can't find
food or water.

Nighttime

To stay out of the sun,
many desert animals sleep
during the day. They wake up
at night. In the cool darkness,
scorpions hunt for food.

Birds

Many birds live in deserts.
They get water from
the insects they eat.
The elf owl stays cool
in its nest in a cactus.

Glossary Terms

cactus - a desert plant that has a thick trunk and sharp spikes

sweat - to give off water when the body is hot

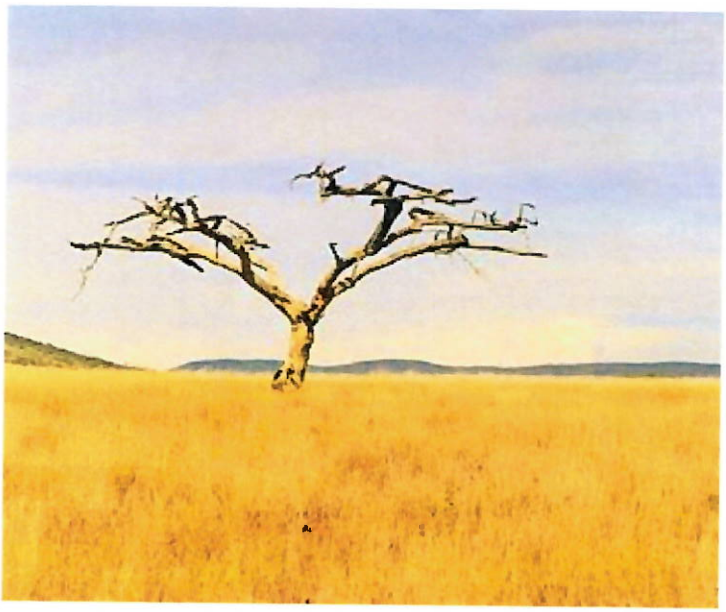
hump - the rounded area on the back of a camel; some camels have one hump; other camels have two humps

adapt - to change to fit into a new or different environment

reptile - a cold-blooded animal with a backbone; scales cover a reptile's body

"Desert Animals." ***Animals.*** **Capstone, www.pebblego.com. Accessed 9 Mar. 2020.**

Grassland Animals



Grassland

Grasslands lie on flat land or rolling hills between forests and deserts. The land is too dry for many trees.
Grassland animals are at home with grass and bushes growing all around them.

Grazers

Grass makes tasty meals
for many grassland animals.
Grasshoppers and deer
munch tender green grass.
Cattle, sheep, and goats
graze on grass. Zebras and
kangaroos graze too.

Nesters

Grassland areas have few
trees. Birds must build nests
on the ground. They build
their nests from grasses.
Hawks and bobolinks live in
grasslands. Sparrows and
meadowlarks live here too.

Burrowers

Prairie dogs and rabbits don't climb trees. They make their homes and stay safe under the ground. They use their claws to dig burrows. They hide underground to escape predators.

Hunters

Not all grassland animals eat plants. Some chase other animals to eat. Hawks hunt for mice. Lions hunt zebras Cheetahs chase impalas. Hunters must run or fly fast to catch their prey.

Glossary Terms

prey - an animal that is hunted by another animal for food

graze - to eat grass and other plants on the ground

impala - an African antelope with curved horns

burrow - a tunnel or hole in the ground made or used by an animal

predator - an animal that hunts other animals for food

"Grassland Animals." ***Animals.*** **Capstone, www.pebblego.com. Accessed 9 Mar. 2020.**

Ocean Animals

Oceans

Oceans are large, deep bodies of salt water.

Oceans cover 71 percent of earth's surface.

Millions of kinds of animals live in oceans.

Fish

The ocean is home
to millions of fish.
Fish have scales and
breathe with gills.
Parrotfish are colorful
fish that eat plants.
Swordfish and sharks
eat smaller fish.

Mammals

Ocean mammals breathe
with lungs. Whales and
dolphins breathe through
blowholes. They hold their
breath for a long time.
Walruses, seals, and otters
are also ocean mammals.

Hard Shells

Crustaceans live on the ocean floor. They have hard shells and many legs. Crabs and lobsters have large claws. Shrimp have plump bodies.

Soft Bodies

Invertebrates swim and hunt in every ocean. Many have soft bodies and tentacles. Squids and octopuses grab prey with their tentacles. Jellyfish and sea anemones use tentacles to sting prey.

Glossary Terms

prey - an animal hunted by another animal for food

blowhole - an opening on the tops of the heads of whales and dolphins; whales and dolphins breathe air through blowholes.

crustacean - an ocean animal with an outer skeleton or shell

gill - a body part used to take oxygen from water; fish breathe through gills.

invertebrate - an animal without any bones

lung - a body part in the chest that animals use to breathe

mammal - a warm-blooded animal that has a backbone and hair or fur; female mammals feed milk to their young.

scale - one of the small, hard plates that covers the body of fish and reptiles

tentacle - a thin, flexible arm on some animals

"Ocean Animals." ***Animals.*** **Capstone, www.pebblego.com. Accessed 9 Mar. 2020.**

Polar Animals

Icy Cold

Polar animals live near the North Pole or the South Pole. These areas are very cold and windy. Polar animals live with snow and ice all around.

Warm Bodies

Polar animals have bodies
that help them stay warm.
Sea lions and whales have
blubber. This layer of fat
protects them from icy water.

Thick Fur

Polar animals have thick fur
to keep them warm.
Arctic foxes and Arctic
wolves have white fur
to help them hide
in the snow.

Hiding

A polar bear's clear fur helps the animal blend in with the snow. Polar bears sneak up on seals or other animals.

Ice Walking

Penguins have large feet. Their claws help them walk on slippery ice. Their webbed feet help them swim and catch fish.

Glossary Terms

blubber - the fat under the skin of a whale or seal

claws - hard, curved nails on the foot of an animal or bird

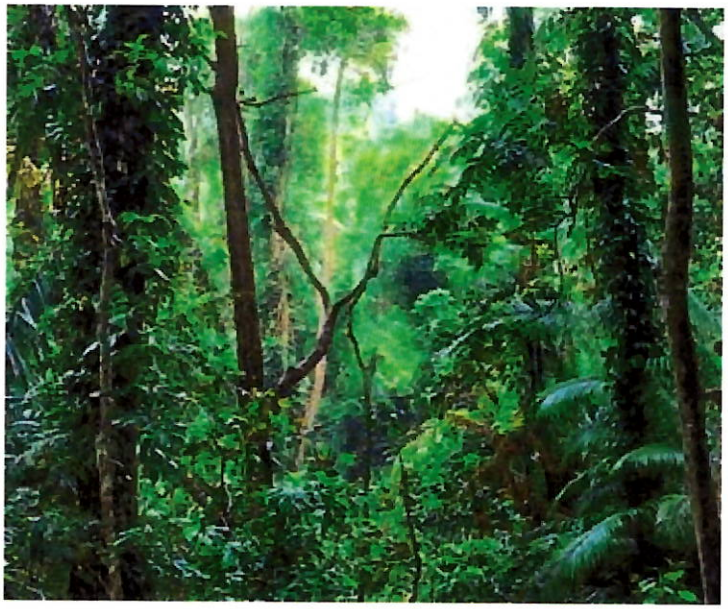
North Pole - the most northern point on earth; the North Pole is in the Arctic.

South Pole - the most southern part of the earth; the South Pole is in Antarctica.

webbed - having a fold of skin that connects the toes

"Polar Animals." ***Animals.*** **Capstone, www.pebblego.com. Accessed 9 Mar. 2020.**

Rain Forest Animals



Rain Forests

Rain forests are full of trees.

Rain falls almost every day.

Most rain forests are near

the equator where it's warm.

These warm, wet places

are home to millions

of kinds of animals.

Wet Weather

Rainy weather helps animals
that need to stay wet.
Rain forests have many
amphibians, like tree frogs.
Frogs must keep their skin wet
to stay alive.

Tree Climbing

Many rain forest animals live
in trees. Spider monkeys have
strong arms and legs. They climb
trees and swing on vines.
Even their tails grab
tree branches.

Food

Many rain forest animals
need trees for food.
Macaws have strong beaks
to crack tree nuts to eat.
Leaf-cutter ants take leaves
back to their nest. They eat
fungus that grows on leaves.

Blend In

Some animals even look
like their rain forest home.
Insects called katydids look
like dead tree leaves.
Predators don't see them.
Camouflage helps rain forest
animals stay safe.

Glossary Terms

camouflage - coloring that makes animals look like their surroundings

equator - an imaginary line around the middle of earth

amphibian - a cold-blooded animal with a backbone and wet skin

insect - a small animal with a hard outer shell, six legs, three body sections, and two antennae; most insects have wings.

predator - an animal that hunts other animals for food

"Rain Forest Animals." ***Animals.*** **Capstone, www.pebblego.com. Accessed 9 Mar. 2020.**

Wetland Animals

Wetlands

Marshes, swamps,
and bogs are wetlands.
Shallow water covers them.
Wetlands join deep water
and dry land. Wetland animals
are adapted to their wet world.

Land and Water

Many wetland animals live
both in and out of the water.
Frogs and salamanders need
wet skin to stay alive. They go
in and out of the water
when needed.

Insects

Many insects grow up
in the still water of wetlands.
Dragonflies and mosquitoes
lay eggs in still water.
The larvae live in water
until they turn into adults.

Waders

Cranes, herons, and ibises
are long-legged birds.
They wade through shallow
wetlands as they hunt.
Their long bills grab fish
or find bugs in the mud.

Beavers

Beavers can make
their own wetlands.
They build dams in rivers.
Water builds up behind
the dam. The water then
surrounds the beaver's
lodge and keeps
predators away.

Glossary Terms

wade - to walk in water that is often below the knees

shallow - not deep

lodge - a rounded home made of plants, sticks, and mud; beaver lodges have an underwater door.

larva - an insect at the stage in its life cycle between an egg and a pupa; larvae often look like worms.

adapt - to change to fit into a new or different environment

predator - an animal that hunts other animals for food

"Wetland Animals." ***Animals.*** **Capstone, www.pebblego.com. Accessed 9 Mar. 2020.**

Woodland Animals

Woodlands

Woodlands are filled with trees, bushes, and plants. Woodlands are often found between grasslands and polar areas. Woodland animals live in a forest of changing seasons.

Nesters

Trees provide homes
for many nesting birds.
Songbirds like cardinals,
blue jays, and robins
nest in woodland trees.
Woodpeckers peck holes
in trees to make their nests.

Climbers

Many woodland animals are good
climbers. Bears, squirrels, and
opossums have sharp claws to
grab bark. Opossums also wrap
their tails around branches.

Forest Floor

Not all woodland animals climb
trees. Deer and rabbits graze
on bushes and plants.
Wild boars dig for roots.
Wolves and badgers catch
prey on the ground.

Winter

Woodland animals handle
cold winters in many ways.
Bears hibernate. Many birds
migrate to warmer places.
Wolves, rabbits, and deer
have thick fur to stay warm.

Glossary Terms

migrate - to move from one place to another when seasons change or to find food

polar - having to do with the icy areas around the North and South Poles

hibernate - to spend winter in a deep sleep

graze - to eat grass and other plants on the ground

prey - an animal hunted by another animal for food

boar - a wild pig

season - one of the four parts of the year; the seasons are spring, summer, fall, and winter.

"Woodland Animals." *Animals.* Capstone, www.pebblego.com. Accessed 9 Mar. 2020.

Name: _____

Science Experience #3

Make Observations of Insects on Flowers

Think about:

Make observations of insects on flowers.

- What kinds of insects do you see?
- What does the insect do while it is on the flower?

Draw and label what you observed.

Name: _____

Science Experience #4

Bees

Read or listen to a story about an animal and its home.

Think about:

- What kind of insects do you see?
- Does it live in the ground, or on a plant, or somewhere else?

Draw and label a picture of the Bumblebee Queen's home.

Health and Physical Education

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March 2020

Elementary Mind & Body Calendar

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
1 Mindful Minute For 60 seconds, clear your mind & only focus on your breathing. If your mind starts to wander, bring your attention back to your breathing. Self-Injury Awareness Day	**2 Musical Frogs** This game is just like musical chairs except players hop around like frogs and sit on lily pads (pillows).	**3 Mindful Minute** For 60 seconds, clear your mind & only focus on your breathing. If your mind starts to wander, bring your attention back to your breathing.	**4 Walking Race** Pick a distance and challenge a friend to a speed walking race. No running!	**5 Sidewalk Chalk Balance** Draw different kinds of lines on the ground with chalk. Walk along them one foot in front of the other balancing.	**6 Bear Walk** With your bottom in the air, step forward with your right hand & step forward with your left foot. Step forward with the left hand then the right foot. Continue to move across the room.	**7 Wild Arms** As fast as you can complete: 10 Arm Circles front & back 10 Forward punches 10 Raise the Roof's Repeat 3x
8 Sugarcane Pose Hold Sugarcane Pose for 30 seconds on each side. 	**9 Limbo** Grab a broom stick and have 2 people hold it. Take turns going under the stick arching backwards. Lower the stick after each successful pass. How low can you go?	**10 Crazy 8's** 8 jumping jacks 8 leaps 8 frog jumps 8 vertical jumps (as high as you can) Repeat 3 times	**11 Between the Knees** Gather rounded objects of varying size. Starting with the largest try walking around your house keeping the object between your knees.	**12 Happy Baby Pose** Straighten your legs for an added challenge. 	**13 Toe Fencing** With a partner, hold each other's shoulders. Try to tap the other person's toe without having yours tapped.	**14 Chest Pass** Practice your chest passes against a brick wall. Remember to step towards your target.
15 Put a piece of tape on the ground and jump back and forth as quick as you can for 30 seconds.	**16 Mindful Minute** For 60 seconds, clear your mind & only focus on your breathing. If your mind starts to wander, bring your attention back to your breathing.	**17 Code Words** While watching TV any time you hear the code words complete 10 jumping jacks. Code words: green, St. Patrick's Day, lucky, leprechaun	**18 Mindful Minute** For 60 seconds, clear your mind & only focus on your breathing. If your mind starts to wander, bring your attention back to your breathing.	**19 Pretend!** Pretend to: -Sit in a chair for 10 seconds -Shoot a basketball 10 times - Ride a horse -Be a frog -Lift a car	**20 Commercial Stroll** During a commercial break take a walk around your entire house. Still a commercial? Go again this time speed walking so you don't miss a thing!	**21 Walking Race** Pick a distance and challenge a friend to a speed walking race. No running!
22 Dance, Dance Put on your favorite song or turn on the radio. Dance however you like during the entire song!	**23 Arm and Leg Tag** A regular game of tag, but if someone touches your arm/leg you can no longer use that body part. If both legs are tagged start a new round.	**24 Read & Move** Pick a book to read and select an "action word" that will be repeated often. When the "action word is read stand up and sit down.	**25 Army Crawl** Lay on your stomach resting on your forearms. Crawl across the room dragging your body as if you're moving under barbed wire.	**26 Do this:** -Hop on one leg 30 times, switch legs -Take 10 giant steps -Walk on your knees -Do a silly dance -Sprint for 10 seconds	**27 Set the Menu** Talk with who takes care of you about choosing the dinner menu. Pick whole grains and veggies.	**28 Vertical Jump** Jump as high as you can for 30 seconds. Repeat.
29 Ragdoll Pose Hold Ragdoll Pose for 30 seconds. Repeat. 	**30 Crabby Clean Up** Tidy up while walking like a crab! Carry items on your belly across the room to put them away.	**31 Mindful Minute** For 60 seconds, clear your mind & only focus on your breathing. If your mind starts to wander, bring your attention back to your breathing.	**National Health Observances:** • National Nutrition Month • 1st- Self-Injury Awareness Day • 6th -7th National Day of Unplugging (sundown-to-sundown) • 13th National Good Samaritan Day Yoga pictures from www.forteyoga.com		SHAPE America recommends school-age children accumulate at least 60 minutes and up to several hours of physical activity per day. Each bout of physical activity should be followed by cool-down stretches that help reduce soreness and avoid injury. Happy exercising!	