STEMscopes TEXAS MATH
POWERED BY ACCELERATE LEARNING

Kindergarten

Teacher Guide Sample

Made for Teachers, by Teachers

Built for Texas Math

STEMscopes Texas Math™ Teacher Guides

As educators and math experts, we understand the demands of teaching math, so we've designed our teacher guides to provide you with the support you need. Whether you're a seasoned veteran or at the start of your journey as a math teacher, we equip you to create engaging, impactful learning experiences.

Our Teacher Guides are printed supplementary resources that support high-quality, meaningful math instruction.

Don’t Miss Out on Key Digital Features – Log In Now!

The entire STEMscopes Texas Math curriculum is online, including Teacher Guide content.

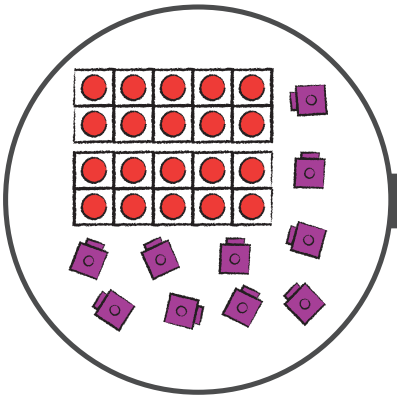
Access our full curriculum online in two easy ways:

1. Log in using your district's unique review URL and credentials.
2. Sign up at ***accelerateLearning.com/math/tx***.

SCAN ME TO REQUEST DIGITAL ACCESS

From our online platform, you can:

- Bookmark your favorite elements and craft lesson plans.
- Access detailed preparation instructions, facilitation prompts, discussion questions, and sample student answers.
- Preview assignments from the student’s view.
- Assign and grade activities while offering feedback through a user-friendly interface.
- Download and print handouts and resource files for added flexibility.
- Access all student resources in English and Spanish!



Count Objects

Scope Introduction

Scope Summary

This scope is first because it begins the important work of counting for kindergarten students throughout the year. This scope is written to stay within 20 (when working on the Explores and other elements) but also includes the standards for counting within 100. Please refer to Daily Numeracy activities to meet these standards and build on the skills from this scope as students begin to count beyond 20. Students begin by using one-to-one correspondence to count up to 10 objects both in a structured arrangement and in a scattered arrangement. They count forward by tens and ones to 100 and backward from 20 by ones. Students also count forward beginning with any number to 100 and backward from any number within 20. Through repeated practice, students develop efficient strategies to keep track of counted objects that are placed in varying formations and recognize that the amount of objects is the same even if the counting begins at a different spot within the set.

Student Expectations

K.2A

- Count forward and backward to at least 20 with and without objects.

K.2B

- Read, write, and represent whole numbers from 0 to at least 20 with and without objects or pictures. (Mastery of this standard is developed through the following scope: Represent Numbers to at Least 20.)

K.2C

- Count a set of objects up to at least 20 and demonstrate that the last number said tells the number of objects in the set regardless of their arrangement or order (cardinality). (Mastery of this standard is developed through the following scope: Represent Numbers to at Least 20.)

K.5A

- Recite numbers up to at least 100 by ones and tens beginning with any given number. (Mastery of this standard is developed through Daily Numeracy.)

Vertical Alignment

Background Knowledge

By the end of prekindergarten, students are able to count out loud to 30. They count objects up to ten, using both concrete models and pictorial models. Students are able to identify numbers and know that there is a difference between a number and a letter. They understand that a number shows value. They are able to recognize and identify numerals 0 through 9. When counting items, pre-kindergarteners understand that each object represents one number, and they practice one-to-one correspondence by using fingers to touch or point to objects while counting. They are able to answer the question "How many?" when examining a group of objects, because students can count objects in a variety of configurations—regardless of whether the objects are scattered, in a line, or in an array. Pre-kindergarteners also understand the principle of cardinality: that the last number counted is the total number of objects.

Future Expectations

In first grade, students count within 120, forward and backward, and read and write numbers up to 120. They organize and count items using a written numeral to represent the total amount. Students develop and discuss efficient strategies for counting by bundling 10 ones to form a set of ten and explain that the two digits of a 2-digit number represent the amounts of tens and ones.

Engage Activities

Accessing Prior Knowledge

In this activity, students work in pairs to practice counting using one-to-one correspondence with small candies. Each pair receives bags filled with varying amounts of candy to count and record the total on their handouts. The exercise allows students to vocalize their counting process, reinforcing number recognition and counting skills. A class discussion follows, aimed at understanding students' prior knowledge and identifying any misconceptions. This interactive approach not only engages students in a tactile learning experience but also prepares them for more complex mathematical concepts.

If your students are struggling with previously taught concepts, use the Foundation Builder activity in this scope to reinforce ideas presented in the APK.

Hook

In this activity, students engage in counting up to 20 coins in structured arrangements and up to 10 in scattered arrangements, using real-world context to enhance understanding and application of counting principles. They explore the concept through the story of Hayden and Braelyn saving coins for candy, prompting discussions on saving habits and preferences. This hands-on experience with coins encourages students to employ various counting strategies and mathematical tools, such as Hundreds Charts or ten frames, to ensure accuracy and understand the importance of precise counting methods. The activity not only strengthens counting skills but also fosters discussions on mathematical applications in everyday life.

Home

Explore Activities

Explore 1

Count Objects within 10

In this counting activity, students work in pairs to count objects up to 10, emphasizing that the last number spoken counts the total objects in the set. Using various manipulatives, students fill bags with specified numbers of items, trade with partners to verify accuracy, and then illustrate their counts in journals. The task fosters skills in applying math to real-life situations, selecting problem-solving tools, and communicating mathematical ideas, enhancing their understanding of numbers and counting principles.

Explore 2

Count Objects and Organize Counts

In this activity, students work in groups to count and compare sets of objects, using linking cubes and large cube blocks within a post office scenario. They are tasked with determining which sets have more or less boxes, applying practical math to everyday situations, and communicating their findings through drawings and numerals in their student journals. This hands-on approach not only reinforces counting and comparison skills but also encourages the use of comparative language, problem-solving, and justification of answers, aligning with mathematical process standards. The activity concludes with a Math Chat for sharing observations and an Exit Ticket for assessing understanding, fostering a comprehensive learning experience.

Explore 3

Count Forward and Backward within 10

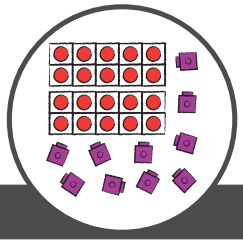
In this engaging activity, students learn to count forward and backward within the range of 1 to 10. They use practical tools like elevator buttons, a counter, and a ten-sided die to simulate riding an elevator to different floors, mirroring the counting process. This exercise reinforces their understanding of numerical sequences and the concept of counting in everyday contexts. It's designed to enhance problem-solving skills and applies mathematical concepts to real-life scenarios, supporting the development of essential math foundations.

Explore 4

Count Forward and Backward within 20

In this activity, students advance their counting skills by learning to count forward and backward within 20, and for those ready, up to 100. Using a subway-themed scenario, groups of students utilize task cards and a number path to navigate imaginary subway rides, practicing counting to and from various 'stations.' This method not only reinforces basic counting skills but also integrates real-world contexts, enhancing their problem-solving abilities and mathematical understanding.

Notes



Count Objects

Accessing Prior Knowledge

Activity Preparation

Students count objects using one-to-one correspondence.

Materials

Printed

- 1 Student Handout (per student)

Reusable

- 3 Resealable bags (per pair)

Consumable

- 1 Bag of small candy (per class)

Preparation

- Plan to have students work in pairs to complete this activity.
- Fill bags with 1–10 pieces of small candy, one color per bag (3 bags per pair).
- Print the Student Handout for each student.

Procedure and Facilitation

FACILITATION TIP

Consider filling the bags with the same number of candies and distributing them one color at a time in order to monitor students.

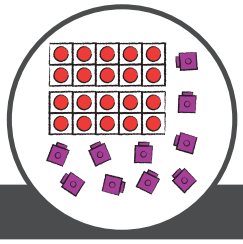
FACILITATION TIP

If the bags are clear and the candies are small, have the students leave the bags sealed while they count aloud and touch the pieces through the bags. The Student Handout directs students to pour the candies out.

1. Give a Student Handout to each student.
2. Read the following scenario to the class: *Tina's teacher gave her 3 bags of candy. Count the pieces of candy Tina's teacher gave her, and model your counting for your partner.*
3. Instruct students to take turns counting the candy aloud for their partners and recording the total number of pieces of candy on their Student Handouts.
4. Facilitate a class discussion about their counting strategies. This provides an opportunity to gather an understanding of prior student knowledge before beginning the lessons. Encourage students to support their answers, and check for understanding and misconceptions. Ask the following discussion questions:
   a. How did you count each bag of candy? I touched each piece of candy and said the number.
   b. How many pieces of candy are in this set? How do you know? Answers will vary. I counted each one.
   c. Show me how to write the number _____. Students will write the number on their Student Handouts.
5. If students are struggling to complete this task, do the Foundation Builder to fill the gap in prior knowledge before moving on to other parts of the scope.

Notes

Notes



Count Objects

Hook: Piggy Banks

Activity Preparation

Students count up to 20 objects in a variety of structured arrangements and up to 10 objects in a scattered arrangement.

Materials

Reusable

- 1 Phenomena (per class)
- 20 Coins (per student)
- 1 Resealable bag (per class)
- 1 Projector (per class)

Preparation

- Plan to show the Phenomena.
- Prepare a resealable bag of 20 coins for each student.

Procedure and Facilitation

FACILITATION TIP

If students have not used coins yet in the classroom, provide clear expectations. Be aware of safety concerns anytime small objects are distributed.

Part I: Pre-Explore

1. Introduce this activity toward the beginning of the scope. The class will revisit the activity and solve the original problem after students have completed the corresponding Explore activities.
2. Show the Phenomena. Ask students the following questions: *What do you notice? Where can you see math in this situation?* Allow students to share all ideas.
3. Explain the scenario to the class: *Hayden and Braelyn save their coins all year to buy candy at the city pool snack bar. How many coins have they saved so far?*
4. Allow the students to ask questions and clarify the context as needed. Encourage them to share their thoughts and experiences with the class using the following questions:
    a. Have you ever saved coins?
    b. What type of candy would you spend your coins on?
5. Discuss the following questions with the class:
    a. **DOK-1** What can we do to find out how many coins are in the bag? We can count them.
    b. **DOK-2** How will we make sure we count them all and don't count them more than once? Answers will vary. We will line them up or slide them to the side as we count.
6. Give each student a bag of coins. Let them explore and try to determine the answer. After allowing a couple of minutes to count the coins, have students put the coins back into the bags.
7. Move on to complete the Explore activities.

Notes

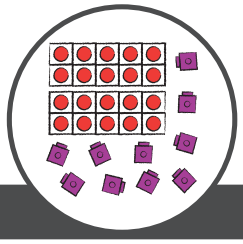
Part II: Post-Explore

1. After students have completed the Explore activities for this topic, show the Phenomena again, and repeat the scenario.
2. Discuss the following questions with the class:
   a. **DOK-1** What can we do to find out how many coins are in the bag? We can count them.
   b. **DOK-2** How will we make sure we count them all and don't count them more than once? Answers will vary. We will line them up or slide them to the side as we count.
3. Give each student a bag of coins.
4. Instruct students to find out how many coins Hayden and Braelyn have saved so far this year.
5. Encourage students to use math tools (Hundreds Chart, counting strips, ten frames) and strategies (count and slide, draw a picture, use a tool) to help them count the coins.
6. Discuss the following questions with the class:
   a. **DOK-1** How many coins are in the bag? 20 coins
   b. **DOK-2** How do you know? Answers will vary. I counted them, and then my partner counted them.
   c. **DOK-3** Explain how you organized the coins when counting. Answers will vary. I used a Hundreds Chart. I put one coin in each box until I ran out of coins.
7. As an extension, students could prepare a bag of coins for a partner (up to 20 coins) and trade to determine how many coins are in the bag.

FACILITATION TIP

Use the Supplemental Aids under the Intervention Tab to support the wide range of learners in the classroom.

Notes



Count Objects

Explore 1: Count Objects within 10

Activity Preparation

Students count various collections of objects up to 10. They demonstrate that the last number said is the number of objects in the set.

Mathematical Process Standards

- **(A)** Apply mathematics to problems arising in everyday life, society, and the workplace.
- **(C)** Select tools, including real objects, manipulatives, paper and pencil, and technology as appropriate, and techniques, including mental math, estimation, and number sense as appropriate, to solve problems.
- **(D)** Communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate.
- **(E)** Create and use representations to organize, record, and communicate mathematical ideas.

Materials

Printed

- 1 Student Journal (per student)
- 1 Set of Number Cards (per pair)
- 1 Exit Ticket (per student)

Reusable

- 1 Container of bear counters (per class)
- 1 Container of pattern blocks (per class)
- 1 Container of linking cubes (per class)
- 1 Container of two-colored counters (per class)
- 1 Container of color tiles (per class)
- 10 Resealable bags (per pair)

Preparation

- Plan to have students work in pairs to complete this activity.
- Print a set of Number Cards, and place one card in a resealable bag for each pair of students. Student pairs should receive 10 bags with one card in each bag.
- Prepare a container of each of the following manipulatives (manipulatives can change depending on what is available in the classroom):
  - Bear counters
  - Pattern blocks
  - Linking cubes
  - Two-colored counters
  - Color tiles
- Print a Student Journal and an Exit Ticket for each student.
- Save all of the bags students create during this explore for Explore 2.
- For students who need more support in recalling information, please see our 1–10 Number Chart Supplemental Aids elements in the Intervention section.
- **Go Digital!** Have students explore or present their solutions using virtual manipulatives! The manipulatives used in this lesson can be found in the Explore drop-down menu and can be digitally assigned to students. (Pattern Blocks, Linking Cubes, Two-Colored Counters, Color Tiles)

Procedure and Facilitation

1. Help students access the task by asking the following guiding questions:
   a. Have you ever had to help your mom or dad count?
   b. Did you count things in preschool or pre-K?
   c. Why do you think it is important to count items correctly?
2. Read the following scenario to the class: *Mrs. K is preparing counting bags for her students. Each bag has a card with the number of manipulatives needed for that bag. Can you help her make sure she has the correct number of manipulatives in each bag?*

3. Give each pair of students 10 bags with one Number Card in each bag.
4. Direct students' attention to the bags, and point out that each bag has a Number Card.
5. Instruct each student to choose five bags and fill each bag with a different manipulative from the containers provided.
6. When students have filled their bags, ask them to return to their tables to trade bags with their partners and recount the manipulatives to make sure the bag has the correct number.
7. When pairs agree that all bags have the correct number of manipulatives, instruct students to choose four bags to draw on their Student Journals.
8. Monitor students, and check for understanding as needed using the following guiding questions:
    a. **DOK-1** How did you count your objects? Answers will vary. I pointed to each object and counted from one to ten.
    b. **DOK-1** What can you draw to represent your objects? Answers will vary: circles for bears, squares for linking cubes, etc.
    c. **DOK-1** Does your drawing match the number of objects in the bag? Answers will vary. Yes, I counted nine erasers, and then I drew nine circles.
    d. **DOK-1** What numeral did you write to represent how much you counted? Answers will vary. I wrote the numeral 9 because I counted 9 erasers.
9. After students have completed all 10 bags and their Student Journals, bring the class together.
10. After the Explore, invite the students to a Math Chat to share their observations and learning.

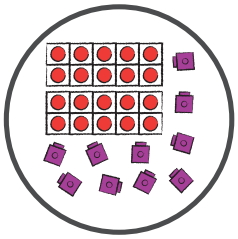
FACILITATION TIP

Break Step 3 into smaller chunks by providing one (or two) bags at a time to students. Have students turn in the filled bags while an adult (or older student) checks them before getting the next bag or pair of bags.

FACILITATION TIP

For Step 7, clarify which bags students are to choose from. Consider whether to provide the Number Cards in the bags they are to draw.

Notes



Count Objects

Explore 1: Count Objects within 10

FACILITATION TIP

For the Math Chat, conduct group counting from 1 and then other numbers. Call on small groups, partners and a few individuals. Quickly assess understanding during these choral/oral responses.

Math Chat

- **DOK-1** Can you count from one to ten? 1, 2, 3, 4, 5, 6, 7, 8, 9, 10
- **DOK-1** Can you count to ten starting at the number 3 instead of 1? 3, 4, 5, 6, 7, 8, 9, 10
- **DOK-3** Was this more difficult for you? Why? Yes, it was more difficult because I memorized counting from 1, and I can do that really fast. I have to stop and think and go a little slower when I start from 3.
- **DOK-3** Can you explain how you counted the items in one of your bags? I pointed to each object and said a number as I counted.
- **DOK-1** When your partner took a turn counting the items, did they start at the same object and end at the same object? No, I counted from the top down, and my partner counted from the bottom up.
- **DOK-1** Did that mean your partner counted a different number of items? No, my partner counted the same number of items as I did.
- **DOK-3** Why? It does not matter which items you start with or in what order you count the items. The total number of items is the same.
- **Choose a Structured Conversation routine to facilitate the following question: DOK-3** What would happen to the number of items if you put them back in the bag, moved them to a different place, and laid them out in a different arrangement? The number of items would stay the same. It does not matter how or where they are put, the number of items does not change.
- **DOK-3** How could you check to see if you wrote the correct number of items for your answer? I could see if my partner got the same number when they counted the objects; I could count the objects I drew on my paper and recount the objects on my desk to make sure they match.
- **DOK-4** How can knowing how to count to 10 help you at home? When I am setting the table for a large family dinner, I need to set out 8 forks, knives, and spoons, so I need to count them all. When I work out with my mom, I have to do 10 jumping jacks, 10 sit-ups, and 10 push-ups, so I need to count to do the right number.

FACILITATION TIP

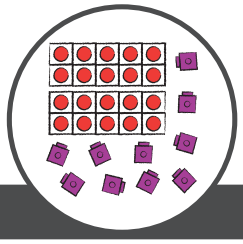
Consider printing the colorful Exit Ticket and projecting it for students before distributing it to them. Clarify how and where to record their responses. Some students may need to respond orally and have an adult or peer record their numerals.

Post-Explore

1. Have students complete the Exit Ticket to formatively assess their understanding of the concept.
2. Complete the Anchor Chart as a class.
3. Have each student complete their Interactive Notebook

Notes

Notes



Count Objects

Explore 2: Count Objects and Organize Counts

Activity Preparation

Students count various collections of objects up to 10. They organize their counts using different methods such as ten frames, counting strips, or circling groups.

Mathematical Process Standards

- **(A)** Apply mathematics to problems arising in everyday life, society, and the workplace.
- **(D)** Communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate.

Materials

Printed

- 1 Student Journal (per student)
- 1 Set of Counting Mats (per group)
- 1 Exit Ticket (per student)

Reusable

- 6 Sets of manipulatives (per group)
- 3 Sheet protectors (per group)
- 1 Dry-erase marker (per group)
- 6 Resealable bags (per group)

Preparation

- Plan to have students work in groups of 3–4 to complete this activity.
- Print a set of Counting Mats for each group. Place them in sheet protectors for use with a dry-erase marker. If desired, you can laminate them for long-term use.
- Use the bags from Explore 1 or make 6 new resealable bags of manipulatives with 1–10 objects per bag. Label each bag with the "Collection" and a numeral for each group (for example, "Collection 1," "Collection 2," etc., for group 1 and then another set of six collections for group 2, etc.).
- Print a Student Journal and an Exit Ticket for each student.
- For students who need more support in recalling information, please see our 1–10 Number Chart and Ten Frame Supplemental Aids elements in the Intervention section.
- **Go Digital!** Have students explore or present their solutions using virtual manipulatives! The manipulatives used in this lesson can be found in the Explore drop-down menu and can be digitally assigned to students. (Two-Color Counters and Linking Cubes)

Procedure and Facilitation

1. Help students access the task by asking the following guiding questions:
   a. Have you ever had to help organize a shelf or cabinet at home?
   b. Why do you think it is important to count items correctly when organizing?
   c. What do you remember about counting from Explore 1?
2. Read the following scenario to the class: *You did such a great job making bags for Mrs. K. that Mr. Ramirez is now asking for help with organizing his math cabinet. He needs your help to count different collections of objects. Once he knows how many objects are in the bag, he can refill them to replace any objects that may have gotten lost during the activity and make them all have an equal amount. Mr. Ramirez wants you to find the most efficient way to count each object. Can you help him count each collection?*
3. Give each student a Student Journal.
4. Take time to ensure students understand the context of the task, and allow them to share what they notice and wonder. Students may share a personal experience that relates to the task.

5. Place students into groups of 3–4, and give each group six collection bags, a set of Counting Mats, and a dry-erase marker.
6. Instruct students to use one of the Counting Mats to count each bag and write the number counted on the mat with the dry-erase marker.
7. Once the group agrees on the number, ask students to record the information on their Student Journals.
8. Repeat steps 6–7 with the other collection bags.
9. Monitor students, and check for understanding as needed using the following guiding questions:
    a. **DOK-1** What mat did you use to count this collection? Answers will vary. We chose the counting strip.
    b. **DOK-2** Why did you choose that mat? Answers will vary. We chose the counting strip because we could place one object in each space to help us count.
    c. **DOK-2** How did you count your objects? Answers will vary. We counted from left to right and pointed with our fingers so we did not skip any objects.
10. After students have completed all collections and their Student Journals, bring the class together.
11. After the Explore, invite the students to a Math Chat to share their observations and learning.

Math Chat

- **DOK-2** How did you choose which counting mat to use with each collection? We chose the ten frame when we had a larger collection and the empty space when we had a smaller collection and could remember the numbers.
- **DOK-2** How did you use the counting mats to help organize your collection? The counting strip helped me count the collection by spacing out my objects and counting one number per object. It gave each object a spot, and when everything had a place to go, it did not seem so hard to count.
- **Choose a Structured Conversation routine to facilitate the following question: DOK-3** Can you explain your strategy for counting one of your collections? For collection 4, since there were more than five, we used a ten frame to organize the cubes and make sure we did not count any of them more than once.
- **DOK-1** How do you say this number? One, two, three, four, five, six, seven, eight, nine, ten
- **DOK-4** How can using counting mats and knowing how to organize and count collections of items help you with tasks at home? It can help when counting and rolling coins for the bank when there needs to be a certain number of coins in each roll. It can help sorting out and counting different colors of buttons in a sewing kit. It can help sorting and counting plasticware for a big family reunion picnic.

Post-Explore

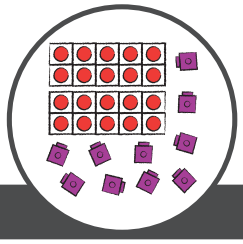
1. Have students complete the Exit Ticket to formatively assess their understanding of the concept.
2. Complete the Anchor Chart as a class.
3. Have each student complete their Interactive Notebook.

FACILITATION TIP

Use partner pairs rather than small groups to increase active student counting time.

FACILITATION TIP

Consider generating a list of high interest activities (cupcakes for a party, video game points needed, tickets won at local amusement park...) to connect students with their real world experiences.



Count Objects

Explore 3: Count Forward and Backward within 10

Activity Preparation

Students count forward and backward within 10 by ones.

Mathematical Process Standards

- **(A)** Apply mathematics to problems arising in everyday life, society, and the workplace.
- **(C)** Select tools, including real objects, manipulatives, paper and pencil, and technology as appropriate, and techniques, including mental math, estimation, and number sense as appropriate, to solve problems.

Materials

Printed

- 1 Student Journal (per student)
- 1 Set of Elevator Buttons (per group)
- 1 Exit Ticket (per student)

Reusable

- 1 Counter (per group)
- 1 Ten-sided die (per group)

Preparation

- Plan to have students work in groups of 2 or 3 to complete this activity.
- Print a set of Elevator Buttons for each group.
- Prepare a counter and a 10-sided die for each group.
- Print a Student Journal and an Exit Ticket for each student.
- For students who need more support in recalling information, please see our 1–10 Number Chart Supplemental Aids elements in the Intervention section.
- **Go Digital!** Have students explore or present their solutions using virtual manipulatives! The manipulatives used in this lesson can be found in the Explore drop-down menu and can be digitally assigned to students (Hundred Board).

Procedure and Facilitation

FACILITATION TIP

Take time to demonstrate the 10-sided die and model a few turns to show students how to use the Elevator Buttons, and move the counter.

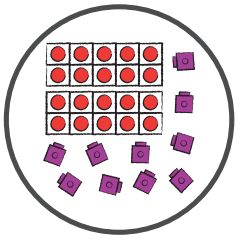
1. Help students access the task by asking the following guiding questions:
   a. Have you ever been to a tall building or hotel?
   b. Have you ever ridden in an elevator?
   c. What did you notice about the floors and the buttons? Did you see any patterns?
2. Read the following scenario to the class: *The Watsons are on summer vacation. The children decide to play the elevator game in the hotel. They enter the elevator in the lobby on the first floor and push a button. They count all the way up to that floor. Then they ride the elevator back down to the lobby and count all the way down. Would you like to play the elevator game with them?*
3. Place students in groups of 2 or 3, and give each group a set of Elevator Buttons, a counter, and a 10-sided die.
4. Instruct students to place the counter on 1 and then roll the die to decide what floor they will visit first. If students roll a 1, then they need to roll again.
5. Depending on what number is rolled, students count forward from 1 to the number while moving their counters on the Elevator Buttons.
6. After students reach their floor, instruct them to count backward to 1 while moving their counters on the Elevator Buttons.

7. Give each student a Student Journal, and instruct them to fill in the buttons to record how they counted forward and backward. Students will color the starting number green and the ending number red.
8. Repeat these steps several times to practice counting forward and backward from 1. Students do not record while practicing.
9. Monitor students, and check for understanding as needed using the following guiding questions:
    a. **DOK-1** What number did you roll? 8
    b. **DOK-2** How do you count to this number? 1, 2, 3, 4, 5, 6, 7, 8
    c. **DOK-2** Did working with the counting bags in Explore 1 help you count? Yes, because if I forgot what number comes next, I could picture the bags with objects in my head.
    d. **DOK-2** How would you count from this number back to 1? 8, 7, 6, 5, 4, 3, 2, 1
    e. **DOK-3** Explain how you used the Elevator Buttons to help you. Answers will vary. We used the Elevator Buttons and our counter to help us count to the number we rolled and back to 1. It helped us keep track of our counting.
10. Instruct students to place their counters on 3 and then roll the die to decide what floor they will visit next. If students roll a 1, 2, or 3, they need to roll again.
11. Ask students to count forward from 3 to the number they rolled while moving their counters on the Elevator Buttons.
12. After students reach that floor, instruct them to count backward to 3 while moving their counters on the Elevator Buttons.
13. Instruct students to fill in the buttons on their Student Journals to record how they counted forward and backward. Students will color the starting number green and the ending number red.
14. Repeat these steps several times to practice counting forward and backward from 3. Students do not record while practicing.
15. Monitor students, and check for understanding as needed using the following guiding questions:
    a. **DOK-3** How was starting at 3 different from starting at 1? Answers will vary. We had to use the Elevator Buttons to remember what number came next. The numbers were similar, except we started and stopped at a different number.
    b. **DOK-1** What number did you roll? 8
    c. **DOK-2** How do you count to this number? 3, 4, 5, 6, 7, 8
    d. **DOK-2** How would you count from this number back to 3? 8, 7, 6, 5, 4, 3
16. After students have completed their Student Journals, bring the class together.
17. After the Explore, invite the class to a Math Chat to share their observations and learning.

FACILITATION TIP

Clarify the directions on the Student Journal. Some students may forget to write the numerals and just add the colors. Other students may need the elevator floor numbers written in the circles for them.

Notes



Count Objects

Explore 3: Count Forward and Backward within 10

Math Chat

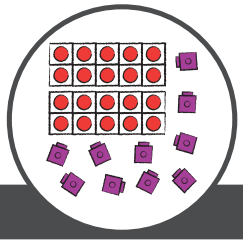
- **DOK-2** How do you count forward from 1 to 10? 1, 2, 3, 4, 5, 6, 7, 8, 9, 10
- **DOK-2** How do you count backward from 10 to 1? 10, 9, 8, 7, 6, 5, 4, 3, 2, 1
- **DOK-3** How could you check to see if you counted correctly? We could use the Elevator Buttons and counter to help us count.
- **Choose a Structured Conversation routine to facilitate the following question: DOK-3** What are some other strategies or tools we could have used? We could have used a number path or a number chart.
- **DOK-4** How can knowing how to count forward and backward to 10 help you at home? Counting down with the microwave till my food is ready

Post-Explore

1. Have students complete the Exit Ticket to formatively assess their understanding of the concept.
2. Complete the Anchor Chart as a class.
3. Have each student complete their Interactive Notebook.

Notes

Notes



Count Objects

Explore 4: Count Forward and Backward within 20

Activity Preparation

Students count forward and backward within 20 by ones. For students who are ready, extend counting forward to 100 throughout this Explore and in Daily Numeracy.

Mathematical Process Standards

- **(A)** Apply mathematics to problems arising in everyday life, society, and the workplace.
- **(C)** Select tools, including real objects, manipulatives, paper and pencil, and technology as appropriate, and techniques, including mental math, estimation, and number sense as appropriate, to solve problems.
- **(F)** Analyze mathematical relationships to connect and communicate mathematical ideas.

Materials

Printed

- 1 Student Journal (per student)
- 1 Number Path (per group)
- 1 Set of Task Cards (per group)
- 1 Exit Ticket (per student)

Preparation

- Plan to have students work in groups of 2 or 3 to complete this activity.
- Print a set of Task Cards and a Number Path for each group.
- Print a Student Journal and an Exit Ticket for each student.
- For students who need more support in recalling information, please see our 1–20 Number Chart Supplemental Aids element in the Intervention section.
- **Go Digital!** Have students explore or present their solutions using virtual manipulatives! The manipulatives used in this lesson can be found in the Explore drop-down menu and can be digitally assigned to students. (Hundred Board)

Procedure and Facilitation

FACILITATION TIP

Consider distributing the 6 Task Cards one at a time or in smaller sets of two or three to keep them sorted.

1. Help students access the task by asking the following guiding questions:
    a. What do you remember about counting forward and backward with the Elevator buttons in Explore 3?
    b. Have you ever seen New York City in person, on TV, or in the movies?
    c. Have you ever seen or ridden on a subway?
    d. How is a subway train different from a car?
2. Read the following scenario to the class: *The Watsons flew to New York City for winter vacation. To get around the city without a car, they need to ride the subway. These underground trains do not turn around; they just go forward and backward. Can you help the family get to their destinations and back safely?*
3. Place students into groups of two or three, and give each group a set of Task Cards and a Number Path.
4. Instruct students to pull a Task Card and count forward to the station and then backward to return. Encourage them to use the Number Path to assist in counting forward and backward.
5. Give each student a Student Journal. Ask students to fill in the missing numbers for each Task Card.

6. Monitor students, and check for understanding as needed using the following guiding questions:
   a. **DOK-1** What is the starting station number? 1
   b. **DOK-1** What is the number you are counting to? 13
   c. **DOK-2** How do you count to this number? 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13
   d. **DOK-2** How would you count backward from this number? 13, 12, 11, 10, 9, 8, 7, 6, 5, 4, 3, 2, 1
   e. **DOK-3** What strategies or tools did you use? Answers will vary. We used the Number Path to help us count to the station number and back. I remembered counting forward and backward on the Elevator buttons.
7. After students have completed the Task Cards and their Student Journals, bring the class together.
8. After the Explore, invite the class to a Math Chat to share their observations and learning.

Math Chat

- **DOK-2** How do you count forward from 1 to 20? 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20
- **DOK-2** How do you count backward from 20 to 1? 20, 19, 18, 17, 16, 15, 14, 13, 12, 11, 10, 9, 8, 7, 6, 5, 4, 3, 2, 1
- **DOK-3** How could you check to see if you counted correctly? We could use the Number Path to help us count to the number and back.
- **DOK-3** How was starting at a number other than 1 different from starting at 1? We had to use the Number Path to remember what number came next. The numbers were similar, except we started and stopped at a different number.
- **DOK-3** What are some other strategies or tools we could have used? We could have used a number path or number chart.
- **Choose a Structured Conversation routine to facilitate the following question: DOK-4** How can knowing how to count forward and backward to 20 help you at home? Counting down with the microwave till my food is ready

FACILITATION TIP

Provide students multiple opportunities to count forward and backward. Students can pick a partner or two to count with them. Assign different start values and up vs down. Lead several choral count alongs with the whole class and a variety of groupings.

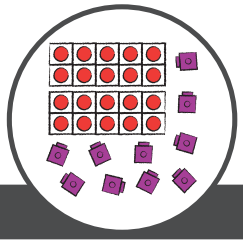
Post-Explore

1. Have students complete the Exit Ticket to formatively assess their understanding of the concept.
2. Complete the Anchor Chart as a class.
3. Have each student complete their Interactive Notebook.
4. Return to the Hook and instruct students to use their newly acquired skills to successfully complete the activity.

FACILITATION TIP

This colorful Explore 4 Exit Card could be used as a pre-test to guide instruction and plan for differentiation. Consider using it as a post test to measure growth as well.

Notes



Count Objects

Additional Scope Resources

Explain Elements

ELEMENT USE KEY ● Can be assigned digitally ■ Contains printable handouts ★ Can be done independently

Picture Vocabulary

A slide presentation of important vocabulary terms along with a picture and definition

● ■ ★

Anchor Chart

A guide to facilitating the creation of a chart with students for each scope.

● ■

My Math Thoughts

A collection of journal prompts designed to allow students to explain their thinking and reflect on their learning

● ■ ★

Interactive Notebook

A cut-and-glue activity to process learning that can be added to a notebook for future reference

■ ★

Language Connections

Language Connections

An opportunity to use linguistic and cultural background knowledge to support connections to new skills, vocabulary, and concepts at different proficiency levels and linguistic domains.

● ■

Show What You Know, Part 1

Count Objects within 10

Independent practice assignment that gives students an opportunity to demonstrate their learning

● ■ ★

Show What You Know, Part 2

Count Objects and Organize Counts

Independent practice assignment that gives students an opportunity to demonstrate their learning

● ■ ★

Show What You Know, Part 3

Count Forward and Backward within 10

Independent practice assignment that gives students an opportunity to demonstrate their learning

● ■ ★

Show What You Know, Part 4

Count Forward and Backward within 20

Independent practice assignment that gives students an opportunity to demonstrate their learning

● ■ ★

Notes

Elaborate Elements

ELEMENT USE KEY ● Can be assigned digitally ■ Contains printable handouts ★ Can be done independently

Spiraled Review
The Playground
A quick story to engage student interest along with four problems over previously learned skills.

Math Story
Easter at Grandma's
Reading passage that supports literacy and expands the students' ability to identify the information they need to solve problems

Interactive Practice
Feed the Fish
A game to practice the skills established by the standards in the scope.

Interactive Practice
Duck Pond
A game to practice the skills established by the standards in the scope.

Interactive Practice
Numbers in the Sand
A game to practice the skills established by the standards in the scope.

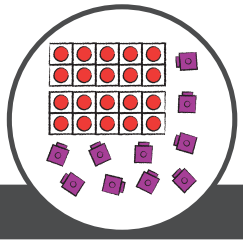
Fluency Builder
Count Objects to 10
Independent and partner games and other activities that provide students with an engaging way to practice the new concept

Fluency Builder
Roll and Count within 10
Independent and partner games and other activities that provide students with an engaging way to practice the new concept

Problem-Based Task
Birthday Fun
Independent or collaborative task that allows students to solve a challenging, meaningful problem in a real-world context

Life Connections
Life Connections
A video and activity that introduce students to careers and everyday life experiences that highlight the mathematical concepts being learned in the classroom.

Notes



Count Objects

Intervention and Assessment

Student Intervention

Depending on available time and your teaching style, use the resources provided in our Explain, Elaborate, Intervention, and Acceleration sections of this scope to move forward. Use the space below to organize next steps while keeping the needs of your students in mind. Some suggested resources have been listed. (Look online to see the full menu.)

	Resources	*Students*	*Notes & Comments*
Students who are still acquiring the concept and need remediation	❑ *Fluency Builder* ❑ *Small-Group Intervention*		
Students who are approaching mastery and need review	❑ *Career Connections* ❑ *Interactive Practice*		
Students who have mastered the concept and need extension	❑ *Problem-Based Task* ❑ *Math Today* ❑ *Create Your Own*		

Assessment Planner

Evaluate Resources

- ❑ *Observation Checklist*
- ❑ *Show-and-Tell*
- ❑ *Skills Quiz*
- ❑ *Technology-Enhanced Questions*
- ❑ *Heat Map*

Use this template to decide how to assess your students for concept mastery. Depending on the format of the assessment, you can identify prompts and intended responses that would measure student mastery of the expectation. See the beginning of this scope to identify standards and grade-level expectations.

Fundamental Questions	*What prompts will be used?*	*What does mastery look like?*
I can count forward and backward to 20 with and without objects.		
I can read, write, and represent whole numbers from 0 to 20 with and without objects or pictures.		
I can count a set of objects to 20, and I know the last number I say tells the total number of objects in that set.		
I can count to 100 by ones starting with any number. (Only mastery to 20 in this scope)		

STEMscopes TEXAS MATH
POWERED BY ACCELERATE LEARNING

MADE FOR TEXAS

Our lessons and resources:

- Prioritize ease of use.
- Cater to the unique needs of Texas classrooms.
- Prepare students to become successful STEM leaders.

Everything you need is all in one place.

ASSESSMENTS AND REPORTING

- Make data-driven instructional decisions with various TEKS-aligned assessments and report types.
- Provide meaningful insight and feedback.

PROVEN RESULTS

The data speaks for itself.

- Research shows that implementing our program boosts math proficiency and overall performance.
- User testimonials reveal that Texas teachers and students *love* us.

Disclaimer: This sample is intended solely for review purposes. It is not to be distributed, reproduced, or used for any other purpose.

AccelerateLEARNING
THE LEADER in STEM EDUCATION

learn more at **AccelerateLearning.com**