

Guide to Using Digital Activities to Support Kindergarten Teaching and Learning

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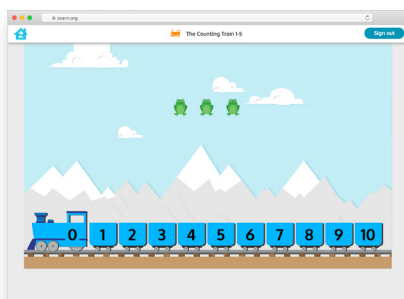
Implementing Digital Activities in Kindergarten

Zearn Math for Kindergarten includes developmentally appropriate Digital Activities, which are short, engaging, and designed to build number sense. During the Digital Activities, students build number sense at their own pace through an intentional progression from Numbers to 5 to Numbers to 20, and receive precise digital feedback at the moment of misconception.

Students complete each Digital Activity independently through their Zearn account. When students log in, they are directed to their personal Student Feed, where they can see their currently assigned Digital Activity. Students can only access the next Digital Activity in the sequence once they complete their currently assigned activity. Each activity takes about ten minutes. Students advance through activities at their own pace and can revisit activities for additional practice.

Embedded supports in the Digital Activities precisely address misconceptions in real time and give all students opportunities to try again. The concrete to pictorial to abstract learning approach serves as the foundation for all Digital Activities, in order to create access by visually supporting developing understanding. Each Mission Overview has specific guiding questions for teachers to support students' mathematical development in the Digital Activity station.

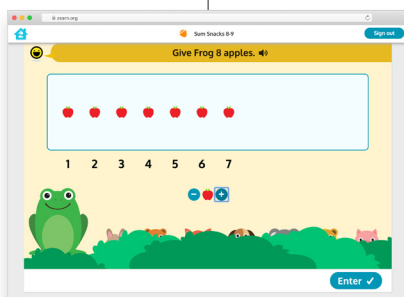
It is recommended that before teaching with Zearn Math Kindergarten, teachers try out each type of Digital Activity, making sure to get a few answers incorrect to experience the embedded and precise feedback. Activities can be previewed in Teacher Accounts, or through the links below:



THE COUNTING TRAIN®

The Counting Train activity prompts students to choose different balloons on screen that are each filled with a different number of colorful and fun animals. Students count the objects and select the train car number that matches the total.

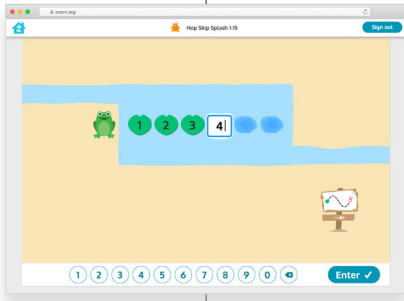
[Try The Counting Train →](#)



SUM SNACKS®

Sum Snacks asks students to give playful, onscreen animals fruit to eat, prompting them to count each additional piece of fruit. As the student increases the amount of fruit, numbers appear below each piece of fruit to help count on to the total and begin to build number sense around embedded numbers and addition.

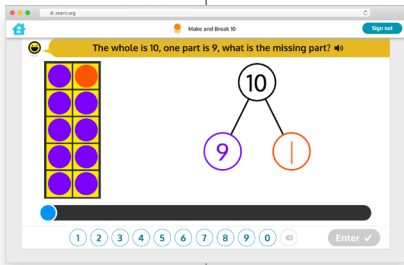
[Try Sum Snacks →](#)



HOP SKIP SPLASH!®

Hop Skip Splash prompts students to count additional objects needed to help the frog hop across a stream. Students are asked to both count up and count down for each problem, solidifying their understanding of the counting sequence.

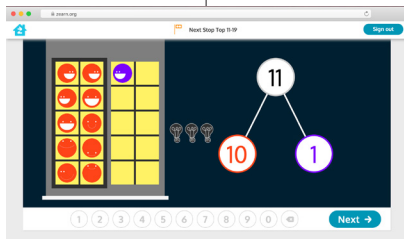
[Try Hop Skip Splash! →](#)



MAKE AND BREAK®

Make and Break asks students to decompose and compose numbers 5 to 20 using interactive five frames, ten frames, and number bonds. Students are prompted to complete addition or subtraction sentences, reinforcing how their practiced counting abilities, knowledge of the value of numbers, and work with embedded numbers connects to solving addition and subtraction equations.

[Try Make and Break →](#)



NEXT STOP TOP®

Next Stop Top asks students to decompose and compose numbers 5 to 20 using interactive number bonds that prompt students to practice identifying 5 and 10 as embedded numbers. The activity engages students by having them work their way up to the top of a building, stopping at each floor to decompose and compose colorful ten frames (depicted as large windows!).

[Try Next Stop Top →](#)

ZEARN MATH TIP

Embedded supports in the Digital Activities precisely address misconceptions in real time and give all students opportunities to try again. As you explore the Digital Activities, make sure to get a few answers incorrect to experience the embedded and precise feedback.

As students work through Digital Activities, the Zearn Math Activity Tracker provides teachers with real-time data into student progress through the sequence of Digital Activities

Many teachers introduce their kindergarten students to Zearn Math Digital Activities by modeling the student experience together. The Zearn Help Center includes [a short video](#) to help teachers orient their students to the digital experience. It is recommended that teachers whole class model one Digital Activity each day during the first week of instruction, making sure to show students how to:

- **Sign-in:** Log in as a student, and show students where to put their username and password, and how to click the blue button to begin.
- **Start an activity:** Show students that clicking the blue Start button on the top card in their Next Up feed will start the activity. Once in the activity, start by pressing the green play button.
- **Press the text to speech button:** Digital Activities are designed with minimal instructional prompts to support young learners. All instructional prompts students see in Digital Activities have audio support through either recorded audio or Zearn’s text-to-speech feature. Students can click on the audio button next to text questions or prompts to hear the words spoken aloud. These accessibility features are particularly important for students with cognitive impairments, students with learning differences, and English Language Learners. Ensure all students know where to find this button by whole class modeling the text to speech function. If English Language Learners need instructional prompts read out loud to them in another language, it is recommended that students use the Google Chrome browser and use the Dictation plug-in. Instructions for teachers on how to use this plug-in can be found in the Zearn Help Center.
- **Show the on-screen keypad:** When students complete questions on Zearn, they have the option to use Zearn’s on-screen keypad, rather than a computer keyboard, to type and submit their answers. This accessibility feature is particularly important for tablet users and young students who may not know how to use a computer keyboard. Teachers should orient all students to this feature to show them how to use it. Instructions for using the keypad can be found in the Zearn Help Center.
- **Complete an activity:** Complete the full activity and end the activity by clicking the blue Done button.
- **Use the feed:** Show students that the next activity is on the top of their Next Up feed.
- **Log out:** Show students how to click the log-out button when they are done Zearning!

After week 1, students should independently work through Digital Activities. As students work through Digital Activities, the Zearn Math Activity Tracker provides teachers with real-time data for student progress through the sequence of Digital Activities. Teachers should check the Activity Tracker twice weekly to monitor student progress in their digital fluency work. If students are not completing four activities per week, teachers should check in with students during station time and use the guiding questions provided in each Mission Overview to support students’ mathematical development in each type of fluency activity. Additionally, as teachers are circulating through the Problem Set station, they should periodically circulate through the Digital Activity station to ensure students are making progress, using the questions provided in the Mission Overview as a way to check for understanding.

Using Digital Activities To Support Each Student's Developing Math Understanding

MISSION 1

Zearn Math Digital Activities provide students with a safe space for independent practice as they develop understanding, fluency, and overall number sense. Digital Activities are responsive and provide students the feedback they need to progress through the activity and, more importantly, to continue to build their developing understanding. Digital Activities are focused on one of the big ideas of K: representing, relating, and operating on whole numbers.

While the focus of teacher-led instruction in Mission 1 is numbers to 10, we built the first set of digital activities to focus on numbers to 5. This not only reinforces and supports the learning from the first half of the Mission, it also builds a solid foundation from which we will be able to extend to larger sets of numbers as we move through K. In Mission 1, students should complete between 30 and 35 digital activities where students will have time to build deep understanding of numbers to 5, including matching a set of objects to the number that represents the total number of objects, completing a counting sequence of numbers by filling in the missing number, counting out a given number of objects, as well as completing a visual representation of a given number. The concrete to pictorial to abstract learning approach that serves as the foundation for the Mission 1 digital activities creates access for all learners. Additionally, this set of digital activities directly supports students in their pursuit of the grade-level fluency: adding and subtracting within 5. Mastering numbers to 5 will set students up for long term success throughout the rest of K and beyond.

Further supports for meeting the needs of all student populations can be found in the Kindergarten Grade Overview.

Digital Activities for Mission 1 consist of:

» THE COUNTING TRAIN (1-5, 2-5) || 10 ACTIVITIES

The Counting Train activity prompts students to choose different balloons on screen that are each filled with a different number of colorful and fun animals. Students count the objects and select the train car number that matches the total. Counting is the foundation for addition and subtraction, and, while many students come into K knowing how to say the counting words, we must move them from saying the counting words to actually counting objects, understanding that each word said pairs with a single object and eventually building up to an understanding that the last number said tells the number of objects

counted. Additionally, as students progress through The Counting Train activities, students will have the opportunity to move from counting all to counting on as what falls from the balloons shifts from individual objects to a count of objects with a few more individual objects. As teachers circulate during station time, teachers should periodically circulate through the Digital Activity station to ensure students are making progress, using the instructional ‘look-fors’ below:

- Look for students who try to use the train to count by clicking each car as they count and remind them to only click on the car that represents the total count of objects. Consider giving these students something they can use to count on such as a left hand mat or a number path.
- Look for students who struggle to count the objects when presented in an arrangement other than a line. Consider giving students a five dot mat to help organize their thinking.
- Look for students who still use the counting all strategy even when the activity moves toward counting on. At this point in the year, it is okay if students are still counting all. Take note of these students, and consider adjusting your teacher-led instruction to emphasize counting on.

Questions to support student understanding in The Counting Train:

- Can you count aloud for me while solving the next problem?
- How can you use the train to help?
- What does your answer represent?
- Explain how you found the total.
- Was there a particular configuration of 5 objects that you found more challenging to count than others?
- What is one way you can make 5? Can you think of another?

NOTE

MULTIPLE MEANS OF REPRESENTATION:

Students who are struggling in The Counting Train might benefit by having various tools and representations made available to them to use while completing the digital activity, especially here in Mission 1 as students are having their first experience with digital learning. The goal is to provide students with something that allows them to replicate the digital activity, helping them with one-to-one correspondence and cardinality. Some tools and representations that may prove especially helpful for The Counting Train include: five dot mat, number path, left hand mat, 5-group cards, concrete materials for counting.

MULTIPLE MEANS OF ENGAGEMENT:

The Counting Train was specifically designed to limit the use of language, allowing all students, including English Language Learners, greater access. There are no on-screen directions for students to read, and the activity remains constant: select the number that represents the total number of objects. This intentional limited use of language allows students to focus on the mathematics without having to overcome any language barriers. In order to further support language development, consider using the guiding questions above to encourage students to make connections between representations and language. Offer sentence frames such as “I found the total by...” or “The train helped me see that...”

» SUM SNACKS (INCREASING TO 5, TO 5, 1 MORE, MAKE 5) || 7 ACTIVITIES

Sum Snacks asks students to give playful, on-screen animals fruit to eat, prompting them to count each additional piece of fruit. As the student increases the amount of fruit, numbers appear below each piece of fruit to help count to the total. Sum Snacks is developing students' ability to subitize, perceptually and conceptually, which is actually building the foundation of addition! Moving from simply counting to 5 to counting 1 more and finally to make 5, students have the opportunity to see how a number like 5 can be made multiple ways (i.e., 5 has many compositions and decompositions). Additionally, Sum Snacks is intentionally designed to help students continue to develop their understanding that each number name said pairs with exactly one object and that, when counting, we say the numbers in the standard order. This reinforces the idea that each successive number refers to a quantity that is one larger. As teachers circulate during station time, teachers should periodically circulate through the Digital Activity station to ensure students are making progress, using the instructional 'look-fors' below:

- Look for students who mistakenly give too many pieces of fruit and do not understand how to remove additional pieces of fruit. Direct them to the minus sign and ensure they understand how to add and take away pieces of fruit.
- Look for students who struggle to transition from starting with no pieces of fruit to starting with a non-zero number of pieces of fruit. This slight shift in the problem structure supports students moving from counting all to counting on, but some students may struggle to make the leap. Help them break down the problem by pointing to the given pieces of fruit and understanding the problem is asking for a certain number "more." Reassure students that it is okay to start back from the beginning of the counting sequence if that's where they're most comfortable at this point in the year.
- Look for students who, when asked to name the total number of pieces of fruit, start back at the beginning of the counting sequence, as opposed to simply naming the total with a single number. This tells you that this particular student has not made the move from one-to-one correspondence to cardinality (i.e., they have yet to master the idea that the last name said names the total number of objects and, if the last number is known, there is no need to recount the objects).

Questions to support student understanding in Sum Snacks:

- What are you doing in this problem?
- Can you count aloud for me as you solve the next problem?
- How do you know when to stop adding fruit?
- What do you do if you add too many pieces of fruit?
- After giving more fruit, how many pieces are there total?
- What is one way you can make 5? Can you think of another?

NOTE

MULTIPLE MEANS OF REPRESENTATION:

Students who are struggling in Sum Snacks might benefit by having various tools and representations made available to them to use while completing the digital activity, especially here in Mission 1 as students are having their first experience with digital learning. The goal is to provide students with something that allows them to replicate the digital activity, helping them with one-to-one correspondence and cardinality. Some tools and representations that may prove especially helpful for Sum Snacks include: five dot mat, five-frame, concrete materials for counting.

MULTIPLE MEANS OF ENGAGEMENT:

To help support K students still learning to read, including English Language Learners (ELLs) and other special populations who would benefit from extra audio support, Sum Snacks uses audio prompts to direct students. Make sure your students know that they can replay the directions by pressing the read aloud button on each screen. The prompts used in Sum Snacks are deliberately short, and the combination of on-screen text and on-screen pictures of the animals and fruit will help ELLs with language development, both mathematical language and everyday language. Offer sentence frames such as “I know to stop adding fruit when...” or “I found the total by...”

» HOP SKIP SPLASH! (1-5, TO 5, 2-5, 0-5, 5) || 10 ACTIVITIES

Hop Skip Splash prompts students to complete the counting sequence needed to help the frog hop across a stream. Students are asked to both count up (forwards) and count down (backwards), solidifying their understanding of the counting sequence. Hop Skip Splash! helps students move toward mastery of the counting sequence to 5 while also building a mental image that will serve as an anchor and precursor to the number line used often in later grades. Having a mental image of the counting sequence will give students a foundation on which they can fall back as they move toward adding and subtracting. As teachers circulate during station time, teachers should periodically circulate through the Digital Activity station to ensure students are making progress, using the instructional ‘look-fors’ below:

- Look for students who struggle to accurately complete the problems, as this might indicate he/she has not mastered the counting sequence. Consider providing students additional time to practice counting.

Questions to support student understanding in Hop Skip Splash!:

- How did you know which number was missing from the sequence?
- Tell me your strategy for completing the path when the path counted backwards? Was it more difficult than when the path counted forwards?
- How did your thinking change when the first number in the sequence was no longer 1?

NOTE**MULTIPLE MEANS OF REPRESENTATION:**

Students who are struggling in Hop Skip Splash! might benefit by having various tools and representations made available to them to use while completing the digital activity, especially here in Mission 1 as students are having their first experience with digital learning. The goal is to provide students with something that allows them to replicate the digital activity, helping them with the counting sequence. Some tools and representations that may prove especially helpful for Hop Skip Splash! include: rulers for use as a straightedge, number path.

MULTIPLE MEANS OF ENGAGEMENT:

Hop Skip Splash! was specifically designed to limit the use of language, allowing all students, including English Language Learners, greater access. There are no on-screen directions for students to read, and the activity remains constant: complete the number sequence by selecting (or typing) the missing numbers. This intentional limited use of language allows students to focus on the mathematics without having to overcome any language barriers. Offer

sentence frames such as “I knew to count forward because...” or “When the first number in the sequence was not 1, I had to...”

» MAKE AND BREAK (2-5, TO 5, 5) || 8 ACTIVITIES

Make and Break asks students to compose numbers to 5 using interactive five frames. After completing the five frame to build the target number, students are then asked to complete a statement relating the target number to its parts. While all of the digital activities help build a foundation for addition and subtraction through counting, Make and Break has the most obvious connection to the operations and as such serves a critical role in helping students attain the required K fluency: fluently add and subtract within 5. As teachers circulate during station time, teachers should periodically circulate through the Digital Activity station to ensure students are making progress, using the instructional ‘look-fors’ below:

- Look for students who struggle to accurately complete the statements where they identify the total number. Ensure they understand the statement is referring to the total that is made by combining the two numbers.
- Look for students who need to start back at 0 to count all and students who are able to count on from one of the 2 parts. It is not an expectation in Mission 1 to count on, but this is a more sophisticated strategy that Make and Break encourages.

Questions to support student understanding in Make and Break:

- How do the colors help you solve the problem?
- How many chips did you add to make the target number?
- How did the 5 frame help you organize your thinking?
- What is one way you can make 5? Can you think of another?
- 0 and 2 make what number? What about 0 and 3?
- In what order did you fill in the 5 frame? Could you have done it a different way?
- Which number represents the total number of chips?

NOTE

MULTIPLE MEANS OF REPRESENTATION:

Students who are struggling in Make and Break might benefit by having various tools and representations made available to them to use while completing the digital activity, especially here in Mission 1 as students are having their first experience with digital learning. The goal is to provide students with something that allows them to replicate the digital activity, helping them with various compositions of 5. Some tools and representations that may prove especially helpful for Make and Break include: five frame cards, concrete materials for decomposing and counting.

MULTIPLE MEANS OF ENGAGEMENT:

To help support K students still learning to read, including English Language Learners (ELLs) and other students of special populations who would benefit from extra audio support, Make and Break uses audio prompts to direct students. Make sure your students know that they can replay the directions by pressing the read aloud button on

each screen. The prompts used in Make and Break are deliberately short, and the combination of on-screen text, color, and the on-screen five frame will help ELLs with language development, both mathematical language and everyday language. Offer sentence frames such as “The 5 frame helped me by...” or “The total number of chips is represented by the number...”

MISSION 2

Mission 2 shifts the focus from working with whole numbers to the second big idea of K: describing shapes and space. While the teacher-led instruction of Mission 2 gives students a slight break from their work with whole numbers, students will complete the remaining digital activities (about 15 total) from the Numbers to 5 strand. This set of activities builds directly off of the activities completed in Mission 1 and will help students deepen their understanding of numbers to 5, including matching a set of objects to the number that represents the total number of objects, completing a counting sequence of numbers by filling in the missing number, counting out a given number of objects, as well as completing a visual representation of a given number. Furthermore, the daily independent digital practice will help bridge the learning in Mission 1 to the learning in Mission 3.

Further supports for meeting the needs of all student populations can be found in the Kindergarten Grade Overview.

Digital Activities for Mission 2 consist of:

» THE COUNTING TRAIN (2-5, 1-5, TO 5, 3-5) || 4 ACTIVITIES

The Counting Train activity prompts students to choose different balloons on screen that are each filled with a different number of colorful and fun animals. Students count the objects and select the train car number that matches the total. After Mission 1, students should be well on their way moving from saying the counting words to actually counting objects, understanding that each word said pairs with a single object, and students should be close to understanding that the last number said tells the number of objects counted. The activities here in Mission 2 continue to move students from counting all to counting on as what falls from the balloons shifts from individual objects to a count of objects with a few more individual objects. Keeping the numbers limited to within 5 will help students focus on the big mathematical idea before moving to larger number sets in the coming missions. As teachers circulate during station time, teachers should periodically circulate through the Digital Activity station to ensure students are making progress, using the instructional ‘look-fors’ below:

- Look for students who try to use the train to count by clicking each car as they count and remind them to only click on the car that represents the total count of objects. Consider giving these students something they can use to count on such as a left hand mat or a number path.
- Look for students who struggle to count the objects when presented in an arrangement other than a line. Consider giving students a five dot mat to help organize their thinking.
- Look for students who still use the counting all strategy even when the activity moves toward counting on. Consider having bags of objects where the total is known (e.g., 1 object, 2 objects, 3 objects, etc.) for students to use alongside loose counters, helping them make the leap from counting all to counting on.

Questions to support student understanding in The Counting Train:

- Can you count aloud for me while solving the next problem?
- How can you use the train to help?

- What does your answer represent?
- Explain how you were able to use counting on to find the total.
- Was there a particular configuration of 5 objects that you found more challenging to count than others?
- What is one way you can make 5? Can you think of another?
- What does the number on the crate represent? How can you use that number to find the total?

NOTE

MULTIPLE MEANS OF REPRESENTATION:

Students who are struggling in The Counting Train might benefit by having various tools and representations made available to them to use while completing the digital activity, especially here in Mission 2 as students are being encouraged to move from counting all to counting on. The goal is to provide students with something that allows them to replicate the digital activity, helping them with one-to-one correspondence and cardinality. Some tools and representations that may prove especially helpful for The Counting Train include: five dot mat, number path, left hand mat, 5-group cards, concrete materials for counting (individual counters and bags of known amounts).

MULTIPLE MEANS OF ENGAGEMENT:

The Counting Train was specifically designed to limit the use of language, allowing all students, including English Language Learners, greater access. There are no on-screen directions for students to read, and the activity remains constant: select the number that represents the total number of objects. This intentional limited use of language allows students to focus on the mathematics without having to overcome any language barriers. In order to further support language development, consider using the guiding questions above to encourage students to make connections between representations and language. Offer sentence frames such as “I found the total by...” or “The train helped me see that...”

» SUM SNACKS (1 MORE, MAKE 5) || 3 ACTIVITIES

Sum Snacks asks students to give playful, on-screen animals fruit to eat, prompting them to count each additional piece of fruit. As the student increases the amount of fruit, numbers appear below each piece of fruit to help count to the total. Sum Snacks is developing students’ ability to subitize, perceptually and conceptually, which is actually building the foundation of addition! Building from the activities in Mission 1, the focus in Mission 2 is counting 1 more and counting to make 5. These activities should help complete students’ developing understanding of composing and decomposing 5 as well as understanding that each number name said pairs with exactly one object and that, when counting, we say the numbers in the standard order. This reinforces the idea that each successive number refers to a quantity that is one larger. As teachers circulate during station time, teachers should periodically circulate through the Digital Activity station to ensure students are making progress, using the instructional ‘look-fors’ below:

- Look for students who mistakenly give too many pieces of fruit and do not understand how to remove additional pieces of fruit. Direct them to the minus sign and ensure they understand how to add and take away pieces of fruit.
- Look for students who struggle starting with a non-zero number of pieces of fruit. This slight shift in the problem structure supports students moving from counting all to counting on, but some students may struggle to make the

leap. Help them break down the problem by pointing to the given pieces of fruit and understanding the problem is asking for a certain number “more.” Reassure students that it is okay to start back from the beginning of the counting sequence if that’s where they’re most comfortable at this point in the year.

- Look for students who, when asked to name the total number of pieces of fruit, start back at the beginning of the counting sequence, as opposed to simply naming the total with a single number. This tells you that this particular student has not made the move from one-to-one correspondence to cardinality (i.e., they have yet to master the idea that the last name said names the total number of objects and, if the last number is known, there is no need to recount the objects). Consider having bags of objects where the total is known (e.g., 1 object, 2 objects, 3 objects, etc.) for students to use alongside loose counters, helping them make the leap from counting all to counting on.

Questions to support student understanding in Sum Snacks:

- What are you doing in this problem?
- Can you count aloud for me as you solve the next problem?
- How do you know when to stop adding fruit?
- What do you do if you add too many pieces of fruit?
- After giving more fruit, how many pieces are there total?
- What is one way you can make 5? Can you think of another?
- (When the problem starts with a known amount of fruit) What does the first number in the sequence represent? Why isn’t it 1?
- How can I use the fruit he already has to help find the total?

NOTE

MULTIPLE MEANS OF REPRESENTATION:

Students who are struggling in Sum Snacks might benefit by having various tools and representations made available to them to use while completing the digital activity, especially here in Mission 2 as students are being encouraged to move from counting all to counting on. The goal is to provide students with something that allows them to replicate the digital activity, helping them with one-to-one correspondence and cardinality. Some tools and representations that may prove especially helpful for Sum Snacks include: five dot mat, five frame, 5-group cards, concrete materials for counting (individual counters and bags of known amounts).

MULTIPLE MEANS OF ENGAGEMENT:

To help support K students still learning to read, including English Language Learners (ELLs) and other students of special populations who would benefit from extra audio support, Sum Snacks uses audio prompts to direct students. Make sure your students know that they can replay the directions by pressing the read aloud button on each screen. The prompts used in Sum Snacks are deliberately short, and the combination of on-screen text and on-screen pictures of the animals and fruit will help ELLs with language development, both mathematical language and everyday language. Offer sentence frames such as “I know to stop adding fruit when…” or “I found the total by…”

» HOP SKIP SPLASH! (1-5, TO 5) || 4 ACTIVITIES

Hop Skip Splash prompts students to complete the counting sequence needed to help the frog hop across a stream. Students are asked to both count up (forwards) and count down (backwards), solidifying their understanding of the counting sequence. Hop Skip Splash! helps students move toward mastery of the counting sequence to 5 while also building a mental image that will serve as an anchor and precursor to the number line used often in later grades. Having a mental image of the counting sequence will give students a foundation on which they can fall back as they move toward adding and subtracting. As teachers circulate during station time, teachers should periodically circulate through the Digital Activity station to ensure students are making progress, using the instructional ‘look-fors’ below:

- Look for students who struggle to accurately complete the problems, as this might indicate he/she has not mastered the counting sequence. Consider providing students additional time to practice counting.

Questions to support student understanding in Hop Skip Splash!:

- How did you know which number was missing from the sequence?
- Tell me your strategy for completing the path when the path counted backwards. Was it more difficult than when the path counted forwards?
- How did your thinking change when the first number in the sequence was no longer 1?

NOTE

MULTIPLE MEANS OF REPRESENTATION:

Students who are struggling in Hop Skip Splash! might benefit by having various tools and representations made available to them to use while completing the digital activity. The goal is to provide students with something that allows them to replicate the digital activity, helping them with the counting sequence. Some tools and representations that may prove especially helpful for Hop Skip Splash! Include: number path.

MULTIPLE MEANS OF ENGAGEMENT:

Hop Skip Splash! was specifically designed to limit the use of language, allowing all students, including English Language Learners, greater access. There are no on-screen directions for students to read, and the activity remains constant: complete the number sequence by selecting (or typing) the missing numbers. This intentional limited use of language allows students to focus on the mathematics without having to overcome any language barriers. Offer sentence frames such as “I knew to count forward because...” or “When the first number in the sequence was not 1, I had to...”

» MAKE AND BREAK (2-5, 5) || 4 ACTIVITIES

Make and Break asks students to compose numbers to 5 using interactive five frames. After completing the five frame to build the target number, students are then asked to complete a statement relating the target number to its parts. While all of the digital activities help build a foundation for addition and subtraction through counting, Make and Break has the most obvious connection to the operations and as such serves a critical role in helping students attain the required K fluency: fluently add and subtract within 5. As teachers circulate during station time, teachers should periodically circulate through the Digital Activity station to ensure students are making progress, using the instructional ‘look-fors’ below:

- Look for students who struggle to accurately complete the statements where they identify the total number. Ensure they understand the statement is referring to the total that is made by combining the two numbers.

Questions to support student understanding in Make and Break:

- How does the use of color help you solve the problem?
- How many chips did you add to make the target number?
- How did the 5 frame help you organize your thinking?
- What is one way you can make 5? Can you think of another?
- 0 and 2 make what number? What about 0 and 3?
- In what order did you fill in the 5 frame? Could you have done it a different way?
- Which number represents the total number of chips?

NOTE

MULTIPLE MEANS OF REPRESENTATION:

Students who are struggling in Make and Break might benefit by having various tools and representations made available to them to use while completing the digital activity. The goal is to provide students with something that allows them to replicate the digital activity, helping them with various compositions of 5. Some tools and representations that may prove especially helpful for Make and Break include: five-frame cards, concrete materials in for decomposing and counting.

NOTE MULTIPLE MEANS OF ENGAGEMENT:

To help support K students still learning to read, including English Language Learners (ELLs) and other students of special populations who would benefit from extra audio support, Make and Break uses audio prompts to direct students. Make sure your students know that they can replay the directions by pressing the read aloud button on each screen. The prompts used in Make and Break are deliberately short, and the combination of on-screen text, color, and the on-screen five frame will help ELLs with language development, both mathematical language and everyday language. Offer sentence frames such as “The 5 frame helped me by...” or “The total number of chips is represented by the number...”

MISSION 3

As the teacher-led instruction shifts to numbers to 10, so do the Digital Activities. By this point, all students should be starting Numbers to 10 in their digital activities. In Mission 3, students should complete between 25 and 30 digital activities where students will extend their understanding of numbers to 5 to a larger set of numbers. As students study length, weight, and capacity in their teacher-led instruction, the Mission 3 digital activities focus on matching a set of objects to the number that represents the total number of objects, completing a counting sequence of numbers by filling in the missing number, counting out a given number of objects, completing a visual representation of a given number, and building a number bond to match a visual representation of a given number. The digital activities in this mission will support students in their daily instruction as well as set students up for success in Mission 4 where they will begin formally adding and subtracting whole numbers.

Further supports for meeting the needs of all student populations can be found in the Kindergarten Grade Overview.

Digital Activities for Mission 3 consist of:

» THE COUNTING TRAIN (6-10, 6-7, 8-9, TO 10, 1-10, 0-10, TO 5) || 7 ACTIVITIES

The Counting Train activity prompts students to choose different balloons on screen that are each filled with a different number of colorful and fun animals. Students count the objects and select the train car number that matches the total. After completing the first 50 digital activities in Missions 1 and 2, students should feel comfortable and confident with counting objects, understanding that each word said pairs with a single object, and should have a firm understanding that the last number said tells the number of objects counted. The activities here in Mission 3 move beyond numbers to 5, extending the concepts learned in Missions 1 and 2 to numbers to 10, and continue to push students to more efficient counting strategies that coincide with the strategies they will use to solve addition and subtraction problems beginning in the next mission. As teachers circulate during station time, teachers should periodically circulate through the Digital Activity station to ensure students are making progress, using the instructional ‘look-fors’ below:

- Look for students who try to use the train to count by clicking each car as they count and remind them to only click on the car that represents the total count of objects. Consider giving these students something they can use to count on such as a left hand mat or a number path.
- Look for students who struggle to count the objects when presented in an arrangement other than a line. Consider giving students a five dot mat to help organize their thinking.
- Look for students who still use the counting all strategy even when the activity moves toward counting on. Consider having bags of objects where the total is known (e.g., 2 objects, 3 objects, 4 objects, etc.) for students to use alongside loose counters, helping them make the leap from counting all to counting on.

Questions to support student understanding in The Counting Train:

- Can you count aloud for me while solving the next problem?
- How can you use the train to help?
- What does your answer represent?
- Explain how you were able to use counting on to find the total.
- What is one way you can make 10? Can you think of another?
- What do 4 and 3 more make? How about 5 and 2 more?

NOTE

MULTIPLE MEANS OF REPRESENTATION:

Students who are struggling in The Counting Train might benefit by having various tools and representations made available to them to use while completing the digital activity, especially here in Mission 3 as students are moving from numbers to 5 to numbers to 10. The goal is to provide students with something that allows them to replicate the digital activity, helping them with one-to-one correspondence and cardinality. Some tools and representations

that may prove especially helpful for The Counting Train include: five frame and ten frame cards, number path, two hands mat, 5-group cards, concrete materials for counting (individual counters and bags of known amounts).

MULTIPLE MEANS OF ENGAGEMENT:

The Counting Train was specifically designed to limit the use of language, allowing all students, including English Language Learners, greater access. There are no on-screen directions for students to read, and the activity remains constant: select the number that represents the total number of objects. This intentional limited use of language allows students to focus on the mathematics without having to overcome any language barriers. In order to further support language development, consider using the guiding questions above to encourage students to make connections between representations and language. Offer sentence frames such as “I found the total by...” or “The train helped me see that...”

» **SUM SNACKS (6-7, 8-9, 5-10, MAKE 10, MAKE 5, 1-10) || 6 ACTIVITIES**

Sum Snacks asks students to give playful, on-screen animals fruit to eat, prompting them to count each additional piece of fruit. As the student increases the amount of fruit, numbers appear below each piece of fruit to help count to the total. Counting out a certain number of objects requires more advanced thinking than simply counting the number of objects shown on screen, and moving from numbers to 5 to numbers to 10 beginning here in Mission 3 will stretch students’ thinking. Students should begin to feel comfortable recognizing the cardinalities of small groups without having to count each individual object, as reinforced in Sum Snacks by showing the written numeral below the objects, and they should feel confident in their understanding of fundamental counting concepts, including understanding that each number name said pairs with exactly one object, that, when counting, we say the numbers in the standard order, and that each successive number refers to a quantity that is one larger. As teachers circulate during station time, teachers should periodically circulate through the Digital Activity station to ensure students are making progress, using the instructional ‘look-fors’ below:

- Look for students who mistakenly give too many pieces of fruit and do not understand how to remove additional pieces of fruit. Direct them to the minus sign and ensure they understand how to add and take away pieces of fruit.
- Look for students who struggle to transition from starting with no pieces of fruit to starting with a non-zero number of pieces of fruit. This slight shift in the problem structure supports students moving from counting all to counting on, but some students may struggle to make the leap. Help them break down the problem by pointing to the given pieces of fruit and understanding the problem is asking for a certain number “more.” Consider having bags of objects where the total is known (e.g., 2 objects, 3 objects, 4 objects, etc.) for students to use alongside loose counters, helping them make the leap from counting all to counting on.
- Look for students who, when asked to name the total number of pieces of fruit, start back at the beginning of the counting sequence, as opposed to simply naming the total with a single number. This tells you that this particular student has not made the move from one-to-one correspondence to cardinality (i.e., they have yet to master the idea that the last name said names the total number of objects and, if the last number is known, there is no need to recount the objects).

Questions to support student understanding in Sum Snacks:

- What are you doing in this problem?
- Can you explain your thinking aloud for me as you solve the next problem?

- How do you know when to stop adding fruit?
- What do you do if you add too many pieces of fruit?
- After giving more fruit, how many pieces are there total?
- What is one way you can make 10? Can you think of another?
- If you have 8 pieces of fruit, how many more do you need to make 10?

NOTE

MULTIPLE MEANS OF REPRESENTATION:

Students who are struggling in Sum Snacks might benefit by having various tools and representations made available to them to use while completing the digital activity, especially here in Mission 3 as students are moving from numbers to 5 to numbers to 10. The goal is to provide students with something that allows them to replicate the digital activity, helping them with one-to-one correspondence and cardinality. Some tools and representations that may prove especially helpful for Sum Snacks include: five dot mat, five frame and ten frame cards, 5-group cards, concrete materials for counting (individual counters and bags of known amounts).

MULTIPLE MEANS OF ENGAGEMENT:

To help support K students still learning to read, including English Language Learners (ELLs) and other students of special populations who would benefit from extra audio support, Sum Snacks uses audio prompts to direct students. Make sure your students know that they can replay the directions by pressing the read aloud button on each screen. The prompts used in Sum Snacks are deliberately short, and the combination of on-screen text and on-screen pictures of the animals and fruit will help ELLs with language development, both mathematical language and everyday language. Offer sentence frames such as “I know to stop adding fruit when...” or “I found the total by...” or “I need _____ more to make ten.”

» HOP SKIP SPLASH! (1-7, 1-9, 6-10, 1-10, 0-10, TO 5) || 7 ACTIVITIES

Hop Skip Splash prompts students to complete the counting sequence needed to help the frog hop across a stream. Students are asked to both count up (forwards) and count down (backwards), solidifying their understanding of the counting sequence. Hop Skip Splash! helps students move toward mastery of the counting sequence to 10 while also building a mental image that will serve as an anchor and precursor to the number line used often in later grades. Having a mental image of the counting sequence will give students a foundation on which they can fall back as they move toward adding and subtracting. As teachers circulate during station time, teachers should periodically circulate through the Digital Activity station to ensure students are making progress, using the instructional ‘look-fors’ below:

- Look for students who struggle to accurately complete the problems, as this might indicate he/she has not mastered the counting sequence. Consider providing students additional time to practice counting.

Questions to support student understanding in Hop Skip Splash!:

- How did you know which number was missing from the sequence?

- Tell me your strategy for completing the path when the path counted backwards. Was it more difficult than when the path counted forwards?
- How did your thinking change when the first number in the sequence was no longer 1?
- What number comes after 9?

NOTE

MULTIPLE MEANS OF REPRESENTATION:

Students who are struggling in Hop Skip Splash! might benefit by having various tools and representations made available to them to use while completing the digital activity, especially here in Mission 3 as students are moving from numbers to 5 to numbers to 10. The goal is to provide students with something that allows them to replicate the digital activity, helping them with the counting sequence. Some tools and representations that may prove especially helpful for Hop Skip Splash! include: number path.

MULTIPLE MEANS OF ENGAGEMENT:

Hop Skip Splash! was specifically designed to limit the use of language, allowing all students, including English Language Learners, greater access. There are no on-screen directions for students to read, and the activity remains constant: complete the number sequence by selecting (or typing) the missing numbers. This intentional limited use of language allows students to focus on the mathematics without having to overcome any language barriers. Offer sentence frames such as “I knew to count forward because...” or “When the first number in the sequence was not 1, I had to...”

» MAKE AND BREAK (6-7, 8-9, 10, 5-10, 2-5, 3-5) || 8 ACTIVITIES

Make and Break asks students to compose numbers to 10 using interactive ten frames. After completing the ten frame to build the target number, students are then asked to complete a statement relating the target number to its parts. These activities are preparing students for their introduction to addition and subtraction in Mission 4’s teacher-led instruction as well as helping students understand that 10 can be decomposed multiple ways. As teachers circulate during station time, teachers should periodically circulate through the Digital Activity station to ensure students are making progress, using the instructional ‘look-fors’ below:

- Look for students who struggle to accurately complete the statements where they identify the total number. Ensure they understand the statement is referring to the total that is made by combining the two numbers.

Questions to support student understanding in Make and Break:

- How does the use of color help you solve the problem?
- How many chips did you add to make the target number?
- How did the 10 frame help you organize your thinking?
- What is one way you can decompose 10? Can you think of another?
- What is one way you can make 10? Can you think of another?

- 1 and 9 make what number? What about 3 and 7?
- In what order did you fill in the 10 frame? Could you have done it a different way?
- Which number represents the total number of chips?

NOTE

MULTIPLE MEANS OF REPRESENTATION:

Students who are struggling in Make and Break might benefit by having various tools and representations made available to them to use while completing the digital activity, especially here in Mission 3 as students are moving from numbers to 5 to numbers to 10. The goal is to provide students with something that allows them to replicate the digital activity, helping them with various compositions of 10. Some tools and representations that may prove especially helpful for Make and Break include: ten frame cards, concrete materials for decomposing and counting.

MULTIPLE MEANS OF ENGAGEMENT:

To help support K students still learning to read, including English Language Learners (ELLs) and other students of special populations who would benefit from extra audio support, Make and Break uses audio prompts to direct students. Make sure your students know that they can replay the directions by pressing the read aloud button on each screen. The prompts used in Make and Break are deliberately short, and the combination of on-screen text, color, and the on-screen ten frame will help ELLs with language development, both mathematical language and everyday language. Offer sentence frames such as “The 10 frame helped me by...” or “The total number of chips is represented by the number...”

MISSION 4

As students embark on their very first exploration of addition and subtraction during their teacher-led instruction, students will finish the remaining digital activities from the Numbers to 10 strand and begin working in the Numbers to 15 strand, including a new digital activity: Next Stop Top! Students’ time engaged with the digital activities will reinforce and support the learning of the Mission, giving students a foundation they can fall back on while learning to add and subtract. In Mission 4, students should complete between 40 and 45 digital activities where the focus will remain largely on developing counting strategies that mirror those strategies students will use to solve addition and subtraction problems throughout the Mission. The study of addition and subtraction during teacher-led instruction will provide teachers the opportunity to ask new questions that give students a fresh perspective on familiar activities and make explicit connections between the digital activities and their teacher-led instruction.

Further supports for meeting the needs of all student populations can be found in the Kindergarten Grade Overview.

Digital Activities for Mission 4 consist of:

» THE COUNTING TRAIN (6-10, 10-12, 10-15, 1-10) || 7 ACTIVITIES

The Counting Train activity prompts students to choose different balloons on screen that are each filled with a different number of colorful and fun animals. Students count the objects and select the train car number that matches the total. The

activities now are almost exclusively designed for counting on, making it more difficult for students to use the counting all method. As students are learning how to add and subtract during their teacher-led instruction, this activity may take on a new meaning for students, providing the teacher with more opportunities to connect the digital activities to her daily instruction. As teachers circulate during station time, teachers should periodically circulate through the Digital Activity station to ensure students are making progress, using the instructional ‘look-fors’ below:

- Look for students who still use the counting all strategy even when the activity moves toward counting on. Consider having bags of objects where the total is known (e.g., 8 objects, 9 objects, 10 objects, etc.) for students to use alongside loose counters, helping them make the leap from counting all to counting on.
- Look for students who struggle when the train does not begin at 1, making it more difficult for students who are still counting all instead of counting on.
- Look for students who are selecting the number shown on the crate, not recognizing that the additional objects increase the total.

Questions to support student understanding in The Counting Train:

- Can you count aloud for me while solving the next problem?
- How can you use the train to help?
- What does your answer represent?
- Explain how you were able to use counting on to find the total.
- What is one way you can make 10? Can you think of another?
- 10 and 3 more make what number? How about $10 + 3$?

NOTE

MULTIPLE MEANS OF REPRESENTATION:

Students who are struggling in The Counting Train might benefit by having various tools and representations made available to them to use while completing the digital activity, especially here in Mission 4 as students transition from numbers to 10 to numbers to 15. The goal is to provide students with something that allows them to replicate the digital activity, helping them with one-to-one correspondence and cardinality. Some tools and representations that may prove especially helpful for The Counting Train include: five frame and ten frame cards, number path, two hands mat, 5-group dot cards, concrete materials for counting (individual counters and bags of known amounts).

MULTIPLE MEANS OF ENGAGEMENT:

The Counting Train was specifically designed to limit the use of language, allowing all students, including English Language Learners, greater access. There are no on-screen directions for students to read, and the activity remains constant: select the number that represents the total number of objects. This intentional limited use of language allows students to focus on the mathematics without having to overcome any language barriers. In order to further support language development, consider using the guiding questions above to encourage students to make connections between representations and language. Offer sentence frames such as “I found the total by...” or “The train helped me see that...”

» SUM SNACKS (5-10, TO 5, TO 10, MAKE 10, 10-12, 10-15, 1-10) || 10 ACTIVITIES

Sum Snacks asks students to give playful, on-screen animals fruit to eat, prompting them to count each additional piece of fruit. As the student increases the amount of fruit, numbers appear below each piece of fruit to help count to the total. Counting out a certain number of objects requires more advanced thinking than simply counting the number of objects shown on screen. Moving from numbers to 5 to numbers to 10 to numbers to 15, beginning here in Mission 4, will stretch students' thinking. Students should feel comfortable recognizing the cardinalities of small groups without having to count the objects, as reinforced in Sum Snacks by showing the written numeral below the objects, and their understanding will be stretched to larger groups of objects, forcing them to consider if what they know to be true still holds for larger sets of objects. As teachers circulate during station time, teachers should periodically circulate through the Digital Activity station to ensure students are making progress, using the instructional 'look-fors' below:

- Look for students who struggle starting with a non-zero number of pieces of fruit. Help them break down the problem by pointing to the given pieces of fruit and understanding the problem is asking for a certain number "more." Consider having bags of objects where the total is known (e.g., 8 objects, 9 objects, 10 objects, etc.) for students to use alongside loose counters, helping them make the leap from counting all to counting on.
- Look for students who, when asked to name the total number of pieces of fruit, start back at the beginning of the counting sequence, as opposed to simply naming the total with a single number (pay close attention to problems that start with 10 objects, as the visual representation is more challenging for students to see all 10 objects). This tells you that this particular student has not made the move from one-to-one correspondence to cardinality (i.e., they have yet to master the idea that the last name said names the total number of objects and, if the last number is known, there is no need to recount the objects).

Questions to support student understanding in Sum Snacks:

- What are you doing in this problem?
- Can you count aloud for me as you solve the next problem?
- How do you know there are 10 apples in the basket? Is it challenging to count them? Explain.
- After giving more fruit, how many pieces are there total?
- What is one way you can make 10? Can you think of another?
- 10 apples and 3 apples make how many apples? How about $10 + 3$?

NOTE

MULTIPLE MEANS OF REPRESENTATION:

Students who are struggling in Sum Snacks might benefit by having various tools and representations made available to them to use while completing the digital activity, especially here in Mission 4 as students transition from numbers to 10 to numbers to 15. The goal is to provide students with something that allows them to replicate the digital activity, helping them with one-to-one correspondence and cardinality. Some tools and representations that may prove especially helpful for Sum Snacks include: five-group dot cards, five frame and ten frame cards, concrete materials for counting (individual counters and bags of known amounts).

NOTE MULTIPLE MEANS OF ENGAGEMENT:

To help support K students still learning to read, including English Language Learners (ELLs) and other students of special populations who would benefit from extra audio support, Sum Snacks uses audio prompts to direct students. Make sure your students know that they can replay the directions by pressing the read aloud button on each screen. The prompts used in Sum Snacks are deliberately short, and the combination of on-screen text and on-screen pictures of the animals and fruit will help ELLs with language development, both mathematical language and everyday language. It is common for ELLs to struggle with numbers 11 to 19 as their names do not make their meanings clear nor is there a clear language pattern from 11 to 19. Hearing these numbers read aloud while also having a visual representation on screen will help students master the numbers 11 to 19. Offer sentence frames such as “I know to stop adding fruit when...” or “I found the total by...”

» HOP SKIP SPLASH! (0-10, 6-10, 0-7, 10-12, 10-15, 1-15) || 10 ACTIVITIES

Hop Skip Splash prompts students to complete the counting sequence needed to help the frog hop across a stream. Students are asked to both count up (forwards) and count down (backwards), solidifying their understanding of the counting sequence. Hop Skip Splash! helps students move toward mastery of the counting sequence to 15 while also building a mental image that will serve as an anchor and precursor to the number line used often in later grades. Having a mental image of the counting sequence will give students a foundation on which they can fall back as they move toward adding and subtracting. Furthermore, now that students are practicing addition and subtraction, they can relate counting forwards to adding and counting backwards to subtracting. As teachers circulate during station time, teachers should periodically circulate through the Digital Activity station to ensure students are making progress, using the instructional ‘look-fors’ below:

- Look for students who struggle to accurately complete the problems, as this might indicate he/she has not mastered the counting sequence. Consider providing students additional time to practice counting.

Questions to support student understanding in Hop Skip Splash!:

- How did you know which number was missing from the sequence?
- Tell me your strategy for completing the path when the path counted backwards. Was it more difficult than when the path counted forwards?
- How did your thinking change when the first number in the sequence was no longer 1?
- What number comes after 9? After 12?
- What number is 1 more than 9? What number is 1 less than 9?

NOTE**MULTIPLE MEANS OF REPRESENTATION:**

Students who are struggling in Hop Skip Splash! might benefit by having various tools and representations made available to them to use while completing the digital activity, especially here in Mission 4 as students transition from numbers to 10 to numbers to 15. The goal is to provide students with something that allows them to replicate the digital activity, helping them with the counting sequence. Some tools and representations that may prove especially helpful for Hop Skip Splash! include: number path.

MULTIPLE MEANS OF ENGAGEMENT:

Hop Skip Splash! was specifically designed to limit the use of language, allowing all students, including English Language Learners, greater access. There are no on-screen directions for students to read, and the activity remains constant: complete the number sequence by selecting (or typing) the missing numbers. This intentional limited use of language allows students to focus on the mathematics without having to overcome any language barriers. Offer sentence frames such as “I knew to count forward because...” or “When the first number in the sequence was not 1, I had to...”

» MAKE AND BREAK (6-9, 8-9, 10, 11-15) || 10 ACTIVITIES

Make and Break asks students to decompose and compose numbers to 15 using interactive five frames, ten frames, and number bonds. Students are prompted to complete addition or subtraction sentences, reinforcing how their practiced counting abilities, knowledge of the value of numbers, and work with embedded numbers connects to solving addition and subtraction equations. These activities will reinforce and support students in their exploration of addition and subtraction within 10, helping them see various decompositions of 10 as well as helping them identify the number that makes 10 when added to a number 1-9.

- Look for students who struggle to accurately complete the statements where they identify the total number. Ensure they understand the statement is referring to the total that is made by combining the two numbers.
- Look for students who struggle to complete the addition sentence after completing the verbal statement, especially as the unknown moves position in the addition equation. As this is their first time studying addition, it is possible that some students may not make this connection as quickly. Take note of these students and consider adjusting your teacher-led instruction to emphasize this connection.

Questions to support student understanding in Make and Break:

- How does the use of color help you solve the problem?
- How many chips did you add to make the target number?
- How did the 10 frame help you organize your thinking?
- What is one way you can make 10? Can you think of another?
- 1 and 9 make what number? What about 3 and 7?
- In what order did you fill in the 10 frame? Could you have done it a different way?
- Which number represents the total number of chips?
- What do the numbers 11 to 15 all have in common?

NOTE**MULTIPLE MEANS OF REPRESENTATION:**

Students who are struggling in Make and Break might benefit by having various tools and representations made available to them to use while completing the digital activity, especially here in Mission 4 as students transition from numbers to 10 to numbers to 15. The goal is to provide students with something that allows them to replicate the

digital activity, helping them with various compositions of numbers to 15, including seeing the embedded 10. Some tools and representations that may prove especially helpful for Make and Break include: ten frame cards, concrete materials for decomposing and counting.

MULTIPLE MEANS OF ENGAGEMENT:

To help support K students still learning to read, including English Language Learners (ELLs) and other students of special populations who would benefit from extra audio support, Make and Break uses audio prompts to direct students. Make sure your students know that they can replay the directions by pressing the read aloud button on each screen. The prompts used in Make and Break are deliberately short, and the combination of on-screen text, color, and the on-screen ten frame will help ELLs with language development, both mathematical language and everyday language. It is common for ELLs to struggle with numbers 11 to 19 as their names do not make their meanings clear nor is there a clear language pattern from 11 to 19. Hearing these numbers read aloud while also having a visual representation on screen will help students master the numbers 11 to 19. Offer sentence frames such as “The 10 frame helped me by...” or “The total number of chips is represented by the number...”

» **NEXT STOP TOP (3-5, 6-7, 8-9, 10, 10-15, 11-15) || 10 ACTIVITIES**

Next Stop Top extends the work done in Make and Break and asks students to decompose and compose numbers to 15 using interactive number bonds that prompt students to practice identifying 5 and 10 as embedded numbers. The activity engages students by having them work their way up to the top of a building, stopping at each floor to decompose and compose colorful ten frames (depicted as large windows!). The strategic use of the number bond will support students’ developing understanding of addition and moving the unknown to various positions in the number bond will support students’ developing understanding of subtraction. As teachers circulate during station time, teachers should periodically circulate through the Digital Activity station to ensure students are making progress, using the instructional ‘look-fors’ below:

- Look for students who struggle to accurately complete the number bond, especially when the unknown changes position. Ensure they understand the structure of the number bond.

Questions to support student understanding in Next Stop Top:

- How does the use of color help you solve the problem?
- What is one way you can make 10? Can you think of another?
- What does the number at the top of the bond represent?
- How did you find the missing number?
- 5 and 2 make what number? 10 and 2 make what number? 2 and what number make 10?

NOTE

MULTIPLE MEANS OF REPRESENTATION:

Students who are struggling in Next Stop Top might benefit by having various tools and representations made available to them to use while completing the digital activity, especially here in Mission 4 as students are seeing this activity for the first time this year. The goal is to provide students with something that allows them to replicate the digital activity, helping them with various compositions of numbers to 10 and 15. Some tools and representations that may

prove especially helpful for Next Stop Top include: ten frame cards, number bond template, concrete materials for decomposing and counting.

MULTIPLE MEANS OF ENGAGEMENT:

Next Stop Top was specifically designed to limit the use of language, allowing all students, including English Language Learners, greater access. There are no on-screen directions for students to read, and the activity remains constant: complete the number bond. This intentional limited use of language allows students to focus on the mathematics without having to overcome any language barriers. In order to further support language development, consider using the guiding questions above to encourage students to make connections between representations and language. Offer sentence frames such as “The number at the top of the bond represents...” or “I found the missing number by...”

MISSION 5

After connecting all of their work with counting whole numbers to the operations of addition and subtraction in Mission 4, students shift their attention in Mission 5 to studying numbers 10-20. Students will finish the remaining digital activities from the Numbers to 15 strand and begin working in the final strand, Numbers to 20. The daily independent practice students get while engaging with these digital activities will reinforce and enhance what they’re learning during teacher-led instruction. In Mission 5, students should complete between 30 and 35 digital activities, and, at this point in the year, students should have a firm grasp on the purpose of each activity. That said, students will be challenged as the numbers grow in these activities, and teachers will be able to extend their questions to support student understanding. Furthermore, while students do not learn to see a ten as a countable unit until Grade 1, the number 10 still serves a major role in K, and these activities help build a deep understanding of 10.

Further supports for meeting the needs of all student populations can be found in the Kindergarten Grade Overview.

Digital Activities for Mission 5 consist of:

» THE COUNTING TRAIN (1-10, 5-10, 11-19, 5-19, 10-19, TO 10) || 6 ACTIVITIES

The Counting Train activity prompts students to choose different balloons on screen that are each filled with a different number of colorful and fun animals. Students count the objects and select the train car number that matches the total. The activities now are almost exclusively designed for counting on, making it more difficult for students to use the counting all method. Students can now see how counting on is synonymous with addition, adding the additional objects to the known amount shown in the crate. As teachers circulate during station time, teachers should periodically circulate through the Digital Activity station to ensure students are making progress, using the instructional ‘look-fors’ below:

- Look for students who still use the counting all strategy even when the activity moves toward counting on. Consider having bags of objects where the total is known (e.g., 9 objects, 10 objects, 11 objects, etc.) for students to use alongside loose counters, helping them make the leap from counting all to counting on.
- Look for students who struggle when the train does not begin at 1, making it more difficult for students who are still counting all instead of counting on.
- Look for students who are selecting the number shown on the crate, not recognizing that the additional objects increase the total.

Questions to support student understanding in The Counting Train:

- Can you count aloud for me while solving the next problem?
- What does your answer represent?
- Explain how you were able to use addition to find the total.
- What number is 1 more than 10? Than 12? Than 16?
- What is $13 + 2$?

NOTE

MULTIPLE MEANS OF REPRESENTATION:

Students who are struggling in The Counting Train might benefit by having various tools and representations made available to them to use while completing the digital activity, especially here in Mission 5 as students transition from numbers to 15 to numbers to 20. The goal is to provide students with something that allows them to replicate the digital activity, helping them with one-to-one correspondence, cardinality, and addition. Some tools and representations that may prove especially helpful for The Counting Train include: single and double 10 frames, number path, concrete materials for counting (individual counters and bags of known amounts).

MULTIPLE MEANS OF ENGAGEMENT:

The Counting Train was specifically designed to limit the use of language, allowing all students, including English Language Learners, greater access. There are no on-screen directions for students to read, and the activity remains constant: select the number that represents the total number of objects. This intentional limited use of language allows students to focus on the mathematics without having to overcome any language barriers. In order to further support language development, consider using the guiding questions above to encourage students to make connections between representations and language. Offer sentence frames such as “I found the total by...” or “The train helped me see that...”

» SUM SNACKS (10-15, 0-10, 10-19) || 6 ACTIVITIES

Sum Snacks asks students to give playful, on-screen animals fruit to eat, prompting them to count each additional piece of fruit. As the student increases the amount of fruit, numbers appear below each piece of fruit to help count to the total. The study of teen numbers is central to the teacher-led instruction of Mission 5, and the activities in Sum Snacks will support students’ developing understanding, helping them see a basketful of ten objects before adding more to make numbers 11 through 19. The familiar prompts and language support built into Sum Snacks will support all students as they study the composition of numbers to 20. As teachers circulate during station time, teachers should periodically circulate through the Digital Activity station to ensure students are making progress, using the instructional ‘look-fors’ below:

- Look for students who struggle starting with a non-zero number of pieces of fruit. Help them break down the problem by pointing to the given pieces of fruit and understanding the problem is asking for a certain number “more.” Consider having bags of objects where the total is known (e.g., 9 objects, 10 objects, 11 objects, etc.) for students to use alongside loose counters, helping them make the leap from counting all to counting on.

- Look for students who, when asked to name the total number of pieces of fruit, start back at the beginning of the counting sequence, as opposed to simply naming the total with a single number (pay close attention to problems that start with 10 objects, as the visual representation is more challenging for students to see all 10 objects). This tells you that this particular student has not made the move from one-to-one correspondence to cardinality (i.e., they have yet to master the idea that the last name said names the total number of objects and, if the last number is known, there is no need to recount the objects).

Questions to support student understanding in Sum Snacks:

- What are you doing in this problem?
- Can you count aloud for me as you solve the next problem?
- How do you know there are 10 apples in the basket? Is it challenging to count them? Explain.
- After giving more fruit, how many pieces are there total? Explain how you can use addition to find the total.
- What is one way you can make 10? Can you think of another?
- 10 apples and 3 apples make how many apples? How about $10 + 3$?
- What do the numbers 11 to 19 all have in common?

NOTE

MULTIPLE MEANS OF REPRESENTATION:

Students who are struggling in Sum Snacks might benefit by having various tools and representations made available to them to use while completing the digital activity, especially here in Mission 5 as students transition from numbers to 15 to numbers to 20. The goal is to provide students with something that allows them to replicate the digital activity, helping them with one-to-one correspondence and cardinality. Some tools and representations that may prove especially helpful for Sum Snacks include: single and double 10 frames, concrete materials for counting (individual counters and bags of known amounts).

MULTIPLE MEANS OF ENGAGEMENT:

To help support K students still learning to read, including English Language Learners (ELLs) and other students of special populations who would benefit from extra audio support, Sum Snacks uses audio prompts to direct students. Make sure your students know that they can replay the directions by pressing the read aloud button on each screen. The prompts used in Sum Snacks are deliberately short, and the combination of on-screen text and on-screen pictures of the animals and fruit will help ELLs with language development, both mathematical language and everyday language. It is common for ELLs to struggle with numbers 11 to 19 as their names do not make their meanings clear nor is there a clear language pattern from 11 to 19. Hearing these numbers read aloud while also having a visual representation on screen will help students master the numbers 11 to 19. Offer sentence frames such as “I know to stop adding fruit when...” or “I found the total by...”

» HOP SKIP SPLASH! (10-15, 0-10, 1-19) || 5 ACTIVITIES

Hop Skip Splash prompts students to complete the counting sequence needed to help the frog hop across a stream. Students are asked to both count up (forwards) and count down (backwards), solidifying their understanding of the counting sequence. Hop Skip Splash! helps students move toward mastery of the counting sequence to 19 while also building a mental image that will serve as an anchor and precursor to the number line used often in later grades. Having a mental image of the counting sequence will give students a foundation on which they can fall back as they move toward adding and subtracting. Furthermore, now that students are practicing addition and subtraction, they can relate counting forwards to adding and counting backwards to subtracting. As teachers circulate during station time, teachers should periodically circulate through the Digital Activity station to ensure students are making progress, using the instructional ‘look-fors’ below:

- Look for students who struggle to accurately complete the problems, as this might indicate he/she has not mastered the counting sequence. Consider providing students additional time to practice counting.

Questions to support student understanding in Hop Skip Splash!:

- How did you know which number was missing from the sequence?
- Tell me your strategy for completing the path when the path counted backwards. Was it more difficult than when the path counted forwards?
- How did your thinking change when the first number in the sequence was no longer 1?
- What number comes after 10? After 13?
- What number is 1 more than 10? What number is 1 less than 10?

NOTE

MULTIPLE MEANS OF REPRESENTATION:

Students who are struggling in Hop Skip Splash! might benefit by having various tools and representations made available to them to use while completing the digital activity, especially here in Mission 5 as students transition from numbers to 15 to numbers to 20. The goal is to provide students with something that allows them to replicate the digital activity, helping them with the counting sequence. Some tools and representations that may prove especially helpful for Hop Skip Splash! include: number path.

MULTIPLE MEANS OF ENGAGEMENT:

Hop Skip Splash! was specifically designed to limit the use of language, allowing all students, including English Language Learners, greater access. There are no on-screen directions for students to read, and the activity remains constant: complete the number sequence by selecting (or typing) the missing numbers. This intentional limited use of language allows students to focus on the mathematics without having to overcome any language barriers. Offer sentence frames such as “I knew to count forward because...” or “When the first number in the sequence was not 1, I had to...”

» MAKE AND BREAK (11-15, 5, 11-19, 5-19) || 5 ACTIVITIES

Make and Break asks students to decompose and compose numbers to 19 using interactive five frames, ten frames, and number bonds. Students are prompted to complete addition or subtraction sentences, reinforcing how their practiced counting abilities, knowledge of the value of numbers, and work with embedded numbers connects to solving addition and subtraction equations. These activities will reinforce and support students in their exploration of addition and subtraction within 10 as well as their study of numbers 11 to 19, helping see that each has an embedded 10.

- Look for students who struggle to accurately complete the number bond, especially when the unknown changes position. Ensure they understand the structure of the number bond.
- Look for students who struggle to complete the addition or subtraction sentences. Since addition and subtraction are still fairly new concepts, some students may struggle to connect the number bond to the number sentence.

Questions to support student understanding in Make and Break:

- How does the use of color help you solve the problem?
- How many chips did you add to make the target number?
- How did the 10 frame help you organize your thinking?
- Which number represents the total number of chips?
- What do the numbers 11 to 19 all have in common?
- The number 13 is made up of ten ones and how many more ones?

NOTE

MULTIPLE MEANS OF REPRESENTATION:

Students who are struggling in Make and Break might benefit by having various tools and representations made available to them to use while completing the digital activity, especially here in Mission 5 as students transition from numbers to 15 to numbers to 20. The goal is to provide students with something that allows them to replicate the digital activity, helping them with various compositions of numbers to 19, including seeing the embedded 10. Some tools and representations that may prove especially helpful for Make and Break include: ten frame cards, hide Zero cards (called Place Value cards in later grades), number bond template, concrete materials for decomposing and counting.

MULTIPLE MEANS OF ENGAGEMENT:

To help support K students still learning to read, including English Language Learners (ELLs) and other students of special populations who would benefit from extra audio support, Make and Break uses audio prompts to direct students. Make sure your students know that they can replay the directions by pressing the read aloud button on each screen. The prompts used in Make and Break are deliberately short, and the combination of on-screen text, color, and the on-screen five frame will help ELLs with language development, both mathematical language and everyday language. It is common for ELLs to struggle with numbers 11 to 19 as their names do not make their meanings clear nor is there a clear language pattern from 11 to 19. Hearing these numbers read aloud while also having a visual representation on screen will help students master the numbers 11 to 19. Offer sentence frames such as “The 10 frame helped me by...” or “The total number of chips is represented by the number...”

» NEXT STOP TOP (11-15, 5, 5-15, 5-10, 10) || 8 ACTIVITIES

Next Stop Top asks students to decompose and compose numbers to 15 using interactive number bonds that prompt students to practice identifying 5 and 10 as embedded numbers. The activity engages students by having them work their way up to the top of a building, stopping at each floor to decompose and compose colorful ten frames (depicted as large windows!). The strategic use of the number bond will support students' developing understanding of addition and moving the unknown to various positions in the number bond will support students' developing understanding of subtraction. As teachers circulate during station time, teachers should periodically circulate through the Digital Activity station to ensure students are making progress, using the instructional 'look-fors' below:

- Look for students who struggle to accurately complete the number bond, especially when the unknown changes position. Ensure they understand the structure of the number bond.
- Look for students who struggle to complete the number bond after "lights out." While the ten frames are still present, students can no longer see the people in the windows, making it much more challenging to complete the bond.

Questions to support student understanding in Next Stop Top:

- How does the use of color help you solve the problem?
- What is one way you can make 10? Can you think of another?
- What does the number at the top of the bond represent?
- How did you find the missing number?
- 7 and 3 make what number? 10 and 3 make what number? 6 and what number make 10?
- How did you complete the bond during "lights out?"

NOTE

MULTIPLE MEANS OF REPRESENTATION:

Students who are struggling in Next Stop Top might benefit by having various tools and representations made available to them to use while completing the digital activity, especially here in Mission 5 as students transition from numbers to 15 to numbers to 20. The goal is to provide students with something that allows them to replicate the digital activity, helping them with various compositions of numbers to 10 and 15. Some tools and representations that may prove especially helpful for Next Stop Top include: ten frame cards, number bond template, concrete materials for decomposing and counting.

MULTIPLE MEANS OF ENGAGEMENT:

Next Stop Top was specifically designed to limit the use of language, allowing all students, including English Language Learners, greater access. There are no on-screen directions for students to read, and the activity remains constant: complete the number bond. This intentional limited use of language allows students to focus on the mathematics without having to overcome any language barriers. In order to further support language development, consider using the guiding questions above to encourage students to make connections between representations and language. Offer sentence frames such as "The number at the top of the bond represents..." or "I found the missing number by..."

MISSION 6

Teacher-led instruction in Mission 6 closes the year with a second look at important geometric concepts. Additionally, the digital activities will continue to move forward with the needed practice to finish mastering several grade-level concepts including fluency with addition and subtraction within 5, understanding how to decompose and compose 10 in multiple ways, and understanding numbers 11-19 as ten ones and some further ones. In Mission 6, students should complete the remaining digital activities from the Numbers to 20 strand, with the goal being to end the year having completed all K digital activities.

Further supports for meeting the needs of all student populations can be found in the Kindergarten Grade Overview.

Digital Activities for Mission 6 consist of:

» THE COUNTING TRAIN (11-19, 5-19) || 2 ACTIVITIES

The Counting Train activity prompts students to choose different balloons on screen that are each filled with a different number of colorful and fun animals. Students count the objects and select the train car number that matches the total. The activities now are almost exclusively designed for counting on, making it more difficult for students to use the counting all method. Students should have a good understanding of how counting on is synonymous with addition, adding the additional objects to the known amount shown in the crate, and be able to use addition to solve the problems. As teachers circulate during station time, teachers should periodically circulate through the Digital Activity station to ensure students are making progress, using the instructional ‘look-fors’ below:

- Look for students who still use the counting all strategy even when the activity moves toward counting on. Consider having bags of objects where the total is known (e.g., 11 objects, 12 objects, 13 objects, etc.) for students to use alongside loose counters, helping them make the leap from counting all to counting on.
- Look for students who struggle when the train does not begin at 1, making it more difficult for students who are still counting all instead of counting on.
- Look for students who are selecting the number shown on the crate, not recognizing that the additional objects increase the total.

Questions to support student understanding in The Counting Train:

- Can you count aloud for me while solving the next problem?
- What does your answer represent?
- Explain how you were able to use addition to find the total.
- What number is 1 more than 10? Than 12? Than 16?
- What is $13 + 2$?

NOTE

MULTIPLE MEANS OF REPRESENTATION:

Students who are struggling in The Counting Train might benefit by having various tools and representations made available to them to use while completing the digital activity, especially here in Mission 6 where nearly every

problem starts with a number other than 1. The goal is to provide students with something that allows them to replicate the digital activity, helping them with one-to-one correspondence, cardinality, and addition. Some tools and representations that may prove especially helpful for The Counting Train include: single and double 10-frames, number path, concrete materials for counting (individual counters and bags of known amounts).

MULTIPLE MEANS OF ENGAGEMENT:

The Counting Train was specifically designed to limit the use of language, allowing all students, including English Language Learners, greater access. There are no on-screen directions for students to read, and the activity remains constant: select the number that represents the total number of objects. This intentional limited use of language allows students to focus on the mathematics without having to overcome any language barriers. In order to further support language development, consider using the guiding questions above to encourage students to make connections between representations and language. Offer sentence frames such as “I found the total by...” or “The train helped me see that...”

» **SUM SNACKS (TO 15, 10-19) || 2 ACTIVITIES**

Sum Snacks asks students to give playful, on-screen animals fruit to eat, prompting them to count each additional piece of fruit. As the student increases the amount of fruit, numbers appear below each piece of fruit to help count to the total. After studying numbers to 20 in their teacher-led instruction in Mission 5, these activities in Mission 6 provide students the opportunity to solidify their understanding of the teen numbers being composed of ten ones and some more ones, which will prove foundational as students move onto Grade 1, where they learn to think of ten ones as a countable unit, called a ten. As teachers circulate during station time, teachers should periodically circulate through the Digital Activity station to ensure students are making progress, using the instructional ‘look-fors’ below:

- Look for students who struggle starting with a non-zero number of pieces of fruit. Help them break down the problem by pointing to the given pieces of fruit and understanding the problem is asking for a certain number “more.” Consider having bags of objects where the total is known (e.g., 11 objects, 12 objects, 13 objects, etc.) for students to use alongside loose counters, helping them make the leap from counting all to counting on.
- Look for students who, when asked to name the total number of pieces of fruit, start back at the beginning of the counting sequence, as opposed to simply naming the total with a single number (pay close attention to problems that start with 10 objects, as the visual representation is more challenging for students to see all 10 objects). This tells you that this particular student has not made the move from one-to-one correspondence to cardinality (i.e., they have yet to master the idea that the last name said names the total number of objects and, if the last number is known, there is no need to recount the objects).

Questions to support student understanding in Sum Snacks:

- What are you doing in this problem?
- Can you count aloud for me as you solve the next problem?
- How do you know there are 10 apples in the basket? Is it challenging to count them? Explain.
- After giving more fruit, how many pieces are there total? Explain how you can use addition to find the total.
- What is one way you can make 10? Can you think of another?

- 10 apples and 3 apples make how many apples? How about $10 + 3$?
- What do the numbers 11 to 19 all have in common?

NOTE

MULTIPLE MEANS OF REPRESENTATION:

Students who are struggling in Sum Snacks might benefit by having various tools and representations made available to them to use while completing the digital activity. The goal is to provide students with something that allows them to replicate the digital activity, helping them with one-to-one correspondence and cardinality. Some tools and representations that may prove especially helpful for Sum Snacks include: single and double 10-frames, concrete materials for counting (individual counters and bags of known amounts).

MULTIPLE MEANS OF ENGAGEMENT:

To help support K students still learning to read, including English Language Learners (ELLs) and other students of special populations who would benefit from extra audio support, Sum Snacks uses audio prompts to direct students. Make sure your students know that they can replay the directions by pressing the read aloud button on each screen. The prompts used in Sum Snacks are deliberately short, and the combination of on-screen text and on-screen pictures of the animals and fruit will help ELLs with language development, both mathematical language and everyday language. It is common for ELLs to struggle with numbers 11 to 19 as their names do not make their meanings clear nor is there a clear language pattern from 11 to 19. Hearing these numbers read aloud while also having a visual representation on screen will help students master the numbers 11 to 19. Offer sentence frames such as “I know to stop adding fruit when...” or “I found the total by...”

» HOP SKIP SPLASH! (1-19, 1-20) || 3 ACTIVITIES

Hop Skip Splash prompts students to complete the counting sequence needed to help the frog hop across a stream. Students are asked to both count up (forwards) and count down (backwards), solidifying their understanding of the counting sequence. Hop Skip Splash! helps students move toward mastery of the counting sequence to 19 while also building a mental image that will serve as an anchor and precursor to the number line used often in later grades. Having a mental image of the counting sequence will give students a foundation on which they can fall back as they move toward adding and subtracting. Furthermore, now that students understand addition and subtraction, they can relate counting forwards to adding and counting backwards to subtracting. As teachers circulate during station time, teachers should periodically circulate through the Digital Activity station to ensure students are making progress, using the instructional ‘look-fors’ below:

- Look for students who struggle to accurately complete the problems, as this might indicate he/she has not mastered the counting sequence. Consider providing students additional time to practice counting.

Questions to support student understanding in Hop Skip Splash!:

- How did you know which number was missing from the sequence?
- Tell me your strategy for completing the path when the path counted backwards. Was it more difficult than when the path counted forwards?
- How did your thinking change when the first number in the sequence was no longer 1?

- What number comes after 12? After 15?
- What number is 1 more than 12? What number is 1 less than 12?

NOTE

MULTIPLE MEANS OF REPRESENTATION:

Students who are struggling in Hop Skip Splash! might benefit by having various tools and representations made available to them to use while completing the digital activity. The goal is to provide students with something that allows them to replicate the digital activity, helping them with the counting sequence. Some tools and representations that may prove especially helpful for Hop Skip Splash! include: number path.

MULTIPLE MEANS OF ENGAGEMENT:

Hop Skip Splash! was specifically designed to limit the use of language, allowing all students, including English Language Learners, greater access. There are no on-screen directions for students to read, and the activity remains constant: complete the number sequence by selecting (or typing) the missing numbers. This intentional limited use of language allows students to focus on the mathematics without having to overcome any language barriers. Offer sentence frames such as “I knew to count forward because...” or “When the first number in the sequence was not 1, I had to...”

» MAKE AND BREAK (10, 11-19) || 3 ACTIVITIES

Make and Break asks students to decompose and compose numbers to 19 using interactive five frames, ten frames, and number bonds. Students are prompted to complete addition or subtraction sentences, reinforcing how their practiced counting abilities, knowledge of the value of numbers, and work with embedded numbers connects to solving addition and subtraction equations. These activities will reinforce and support students in their exploration of addition and subtraction within 10 as well as their study of numbers 11 to 19, helping see that each has an embedded 10 and some further ones.

- Look for students who struggle to accurately complete the number bond, especially when the unknown changes position. Ensure they understand the structure of the number bond.
- Look for students who struggle to complete the addition or subtraction sentences. Since addition and subtraction are still fairly new concepts, some students may struggle to connect the number bond to the number sentence.

Questions to support student understanding in Make and Break:

- How does the use of color help you solve the problem?
- How many chips did you add to make the target number?
- How did the 10 frame help you organize your thinking?
- Which number represents the total number of chips?
- What do the numbers 11 to 19 all have in common?
- The number 16 is made up of ten ones and how many more ones?

NOTE

MULTIPLE MEANS OF REPRESENTATION:

Students who are struggling in Make and Break might benefit by having various tools and representations made available to them to use while completing the digital activity. The goal is to provide students with something that allows them to replicate the digital activity, helping them with various compositions of numbers to 19, including seeing the embedded 10. Some tools and representations that may prove especially helpful for Make and Break include: ten frame cards, hide Zero cards (called Place Value cards in later grades), number bond template, concrete materials for decomposing and counting.

MULTIPLE MEANS OF ENGAGEMENT:

To help support K students still learning to read, including English Language Learners (ELLs) and other students of special populations who would benefit from extra audio support, Make and Break uses audio prompts to direct students. Make sure your students know that they can replay the directions by pressing the read aloud button on each screen. The prompts used in Make and Break are deliberately short, and the combination of on-screen text, color, and the on-screen five frame will help ELLs with language development, both mathematical language and everyday language. It is common for ELLs to struggle with numbers 11 to 19 as their names do not make their meanings clear nor is there a clear language pattern from 11 to 19. Hearing these numbers read aloud while also having a visual representation on screen will help students master the numbers 11 to 19. Offer sentence frames such as “The 10 frame helped me by...” or “The total number of chips is represented by the number...”

» NEXT STOP TOP (10, 11-19) || 5 ACTIVITIES

Next Stop Top extends the work done in Make and Break and asks students to decompose and compose numbers to 19 using interactive number bonds that prompt students to practice identifying 5 and 10 as embedded numbers. The activity engages students by having them work their way up to the top of a building, stopping at each floor to decompose and compose colorful ten frames (depicted as large windows!). The strategic use of the number bond will support students’ developing understanding of addition and moving the unknown to various positions in the number bond will support students’ developing understanding of subtraction. As teachers circulate during station time, teachers should periodically circulate through the Digital Activity station to ensure students are making progress, using the instructional ‘look-fors’ below:

- Look for students who struggle to accurately complete the number bond, especially when the unknown changes position. Ensure they understand the structure of the number bond.
- Look for students who struggle to complete the number bond after “lights out.” While the ten frames are still present, students can no longer see the people in the windows, making it much more challenging to complete the bond.

Questions to support student understanding in Next Stop Top:

- How does the use of color help you solve the problem?
- What is one way you can make 10? Can you think of another?
- What does the number at the top of the bond represent?
- How did you find the missing number?
- 10 and 4 make what number? 10 and 6 make what number? 7 and what number make 17?

- How did you complete the bond during “lights out?”

NOTE

MULTIPLE MEANS OF REPRESENTATION:

Students who are struggling in Next Stop Top might benefit by having various tools and representations made available to them to use while completing the digital activity. The goal is to provide students with something that allows them to replicate the digital activity, helping them with various compositions of numbers to 10 and 19. Some tools and representations that may prove especially helpful for Next Stop Top include: ten frame cards, number bond template, concrete materials for decomposing and counting.

NOTE MULTIPLE MEANS OF ENGAGEMENT:

Next Stop Top was specifically designed to limit the use of language, allowing all students, including English Language Learners, greater access. There are no on-screen directions for students to read, and the activity remains constant: complete the number bond. This intentional limited use of language allows students to focus on the mathematics without having to overcome any language barriers. In order to further support language development, consider using the guiding questions above to encourage students to make connections between representations and language. Offer sentence frames such as “The number at the top of the bond represents...” or “I found the missing number by...”