Washington Township School District

The mission of the Washington Township Public Schools *is to provide a safe, positive, and progressive educational environment that provides opportunity for all students to attain the knowledge and skills specified in the NJ Learning Standards at all grade levels, so as to ensure their full participation in an ever-changing world as responsible, self-directed and civic-minded citizens.*

Course Title:	Math
Grade Level(s):	Kindergarten

Duration:	*Full Year:*	**X**	*Semester:*		*Marking Period:*	
Course Description:	Eureka Math² is designed to build enduring knowledge of mathematics through rigorous instruction that meets the unique needs of the learning community. The program focuses on accessibility, coherence, and conceptual understanding, with models, ideas, and strategies that connect across units and grade levels. In kindergarten, students develop a deep understanding of numbers as they count, compare, compose, and decompose. They learn to make sense of problems as they explore number, shape, and measurement concepts.					
Grading Procedures:	The district utilizes standards-based grading					
Primary Resources:	Eureka Math^2 by Great Minds					

Washington Township Principles for Effective Teaching and Learning

- Implementing a standards-based curriculum
- Facilitating a learner-centered environment
- Using academic target language and providing comprehensible instruction
- Adapting and using age-appropriate authentic materials
- Providing performance-based assessment experiences
- Infusing 21st century skills for College and Career Readiness in a global society

Designed by:	Lauren Gregory
Under the Direction of:	Gretchen Gerber and Janine Ryan

Written:	July 2021 by Lauren Gregory
Revised:	July 2024 by Suzanne Brennan
BOE Approval:	

Unit Title: Module 1 (Counting and Cardinality)

Unit Description: This module includes counting experiences that integrate the four parts of the number core: number sequence, cardinality, one-to-one correspondence, and written number symbols. Students connect sorting a group into parts and decomposing numbers.

Unit Duration: 33 instructional days (+ a few days to administer the 1:1 end-of-module assessment)

Desired Results

Standard(s):

- **K.CC.A.3 – Write numbers from 0 to 20. Represent a number of objects with a written numeral 0–20 (with 0 representing a count of no objects).**
- **K.DL.A.1 – Classify objects into given categories; count the numbers of objects in each category and sort the categories by count. (Clarification: Limit category counts to be less than or equal to 10)**
- **K.CC.A.1 – Count to 100 by ones and by tens.**
- **K.CC.B.4.a – When counting objects, say the number names in the standard order, pairing each object with one and only one number name and each number name with one and only one object.**
- **K.CC.B.4.b – Understand that the last number name said tells the number of objects counted. The number of objects is the same regardless of their arrangement or the order in which they were counted.**
- **K.CC.B.4.c – Understand that each successive number name refers to a quantity that is one larger.**
- **K.CC.B.5 – Count to answer "how many?" questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1–20, count out that many objects.**
- **K.CC.C.6 – Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group, e.g., by using matching and counting strategies. (Clarification: Include groups with up to ten objects.)**
- **K.OA.A.1 – Represent addition and subtraction with objects, fingers, mental images, drawings, sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations.**
- **K.OA.A.3 – Decompose numbers less than or equal to 10 into pairs in more than one way, e.g., by using objects or drawings, and record each decomposition by a drawing or equation (e.g., 5 = 2 + 3 and 5 = 4 + 1).**

Understandings:

Topic A:

- I can sort and classify objects into groups according to their attributes.
- I can count and name numbers in sequence.
- I can count objects in a set using one-to-one correspondence.

Topic B:

- I can use different strategies to count sets of (up to 5) objects correctly and tell how many there are.

Topic C:

- I can count sets of (up to 5) objects (both concrete and abstract) and write the matching numeral.
- I can count to determine if I have enough of something.

Topic D:

- I can recognize that zero (0) means nothing and write the matching numeral.
- I can break a group of objects up into smaller parts.

Essential Questions:

- What does it mean to sort into groups?
- What are some ways you can sort?
- How do you know you have counted correctly?
- How do we count in sequence?
- When do we know when to stop counting?
- How does number order help us figure out which number is missing?
- What does zero mean?
- What are some strategies (or things we can do) to help us count correctly, especially when objects are in different arrangements?
- Does sorting and counting the same group of objects in a different way change the number of objects?
- Why do we write numbers?
- How can/do numbers help us?
- What do you notice when we count forward from 1 to 10?
- What do you notice when we count backward from 10 to 0?

Topic E: ● I can use different strategies to count sets of (up to 10) objects correctly and tell how many there are. Topic F: ● I can count sets of (up to 10) objects (both concrete and abstract) and write the matching numeral. Topic G: ● I can recognize and show that 1 more relates to the next number in the forward count sequence. ● I can recognize and show that 1 less relates to the previous number in the backward count sequence. ● I can organize, count, and represent a collection of objects.	

Assessment Evidence

Assessments:
- Observational Assessment Recording Sheet
- Module Assessment

Benchmarks:
- Kindergarten Snapshots are administered three times per year.
- The iReady Assessment is administered in the fall and winter.

Learning Plans

Lesson #: Module 1, Topic A, Lesson 1

Standard: K.DL.A.1

Mathematical Practice: 6

Target: SWBAT compare objects based on their attributes

Learning Activities:

Fluency:

- Counting with Movement to 10 – Count with body movements to develop fluency with number names and one-to-one correspondence.
- Counting on the Number Glove within 3 – Count on the number glove to develop numeral recognition and familiarity with counting the math way.
- Beans and Hands Mat – Teach routines and procedures to prepare for distribution, care, and collection of materials.

Launch:

- Work together to identify attributes in a set of pictures and isolate one attribute to select what doesn't belong.

Learn:

- Exactly the Same or the Same But… – Use attributes to establish if two objects are exactly the same or the same but a little different.

Land:

- Debrief by facilitating a discussion that summarizes how to compare objects based on their attributes.

Daily Exit Ticket: None for this lesson. However, in its place, use the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – Right-hand number glove
- Student – Two-hands mat, two-color beans (5), Ziploc bag

Lesson #: Module 1, Topic A, Lesson 2

Standard: K.DL.A.1

Mathematical Practice: 2

Target: SWBAT classify objects into two categories

Learning Activities:

Fluency:

- Counting with Movement to 10 – Count with body movements to develop fluency with number names and one-to-one correspondence.
- Counting on the Number Glove within 3 – Count on the number glove to develop numeral recognition and familiarity with counting the math way.
- Beans and Hands Mat – Match 1 bean to 1 finger to develop one-to-one correspondence.

Launch:

- Work together to examine objects and consider their attributes.

Learn:

- Sort – Sort objects into two groups based on one attribute.
- Name a Way to Sort – Share and chart the attribute used to sort.

Land:

- Debrief by facilitating a discussion that summarizes how to classify objects into two categories.

Daily Exit Ticket: None for this lesson. However, in its place, use the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – Right-hand number glove, unifix cubes (5), chart paper, sorting bag, puppet/stuffed animal
- Student – Two-hands mat, two-color beans (3), sorting bag, work mat

Lesson #: Module 1, Topic A, Lesson 3

Standard: K..DL.A.1, K.CC.B.5

Mathematical Practice: 7

Target: SWBAT classify objects into two categories and count

Learning Activities:

Fluency:

- Counting on the Number Glove within 5 – Count on the number glove to develop numeral recognition and familiarity with counting the math way.
- Beans and Hands Mat – Match 1 bean to 1 finger and say the number of beans to develop one-to-one correspondence and an understanding of cardinality.
- Whisper-Shout Counting – Count to tell the number of objects with a focus on the last number name said to develop an understanding of cardinality.

Launch:

- Work together to sort by use, which is a new attribute.

Learn:

- Count Each Group – Count a group, focusing on using one-to-one correspondence and cardinality.
- Sort and Count – Sort objects into two groups and count each group.

Land:

- Debrief by facilitating a discussion that summarizes how to classify objects into two categories and count.

Daily Exit Ticket: None for this lesson. However, in its place, use the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – Right-hand number glove, unifix cubes (5), Number Path, Ways to Sort chart, puppet/stuffed animal, sorted objects
- Student – Two-hands mat, two-color beans (5), sorting bag, Number Path

Lesson #: Module 1, Topic A, Lesson 4

Standard: K.DL.A.1, K.CC.A.1

Mathematical Practice: 4

Target: SWBAT classify objects into three categories and count

Learning Activities:

Fluency:

- Counting on the Number Glove within 5 – Count on the number glove to develop numeral recognition and familiarity with counting the math way.
- Beans and Hands Mat – Match 1 bean to 1 finger and say the number of beans to develop one-to-one correspondence and an understanding of cardinality.
- Whisper-Shout Counting – Count to tell the number of objects with a focus on the last number name said to develop an understanding of cardinality.

Launch:

- Introduce sorting into three categories and encourage students to consider how objects are sorted.

Learn:

- Sort – Sort the class according to a single attribute (how they get home) and count each category.
- Name the Sort – Name the attribute used for the sort.
- Problem Set – Sorting bag.

Land:

- Debrief by facilitating a discussion that summarizes how to classify objects into three categories and count.

Daily Exit Ticket: None for this lesson. However, teachers may opt to use the Problem Set page in conjunction with the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – Right-hand number glove, unifix cubes (5), Ways to Sort chart, Transportation Pictures, chart paper
- Student – Two-hands mat, two-color beans (5), sorting bag, Student Book

Lesson #: Module 1, Topic A, Lesson 5

Standard: K.DL.A.1, K.CC.A.1

Mathematical Practice: 3

Target: SWBAT classify objects into three categories, count, and match to numeral

Learning Activities:

Fluency:

- Counting on the Number Glove within 5 – Count on the number glove to prepare for matching a numeral to a set.
- Beans and Hands Mat – Say and show how many fingers to develop numeral recognition and familiarity with counting the math way.
- Whisper-Shout Counting – Count to tell the number of objects with a focus on the last number name said to develop an understanding of cardinality.

Launch:

- Associate the counting word sequence with numerals on the number path.

Learn:

- Guess My Rule – Reason about a set of sorted objects to tell how they were sorted.
- Count and Match – Count each of the sorted groups and find the matching numeral.
- Problem Set – Hide Zero cards and sorting bags.

Land:

- Debrief by facilitating a discussion that summarizes how to classify objects into three categories, count, and match the numeral.

Daily Exit Ticket: None for this lesson. However, teachers may opt to use the Problem Set page in conjunction with the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – Right-hand number glove, unifix cubes (5), “I Can Count” song lyrics, I Can Count cutouts, classroom toys, Hide Zero cards (demonstration set; 1 – 5), puppet/stuffed animal, sorted objects
- Student – Two-hands mat, two-color beans (5), Hide Zero cards (1 set of 1 – 5 per student/pair), sorting bag, Student Book

Lesson #: Module 1, Topic B, Lesson 6

Standard: K.CC.A.1, K.CC.B.4a-b, K.CC.B.5

Mathematical Practice: 1

Target: SWBAT organize, count, and represent a collection of objects

Learning Activities:

Fluency:

- Finger Flash: The Math Way to 3 – Say how many fingers they see to develop the ability to subitize quantities shown the math way.
- Whisper-Shout Counting – Count to tell the number of objects with a focus on the last number name said to develop an understanding of cardinality.

Launch:

- Learn the procedure for and explore the features of a counting collection.

Learn:

- Organize, Count, and Record – Use their own strategies to count objects and record their process.
- Share, Compare, and Connect – Discuss counting strategies.
- Touch and Count – Allow students who used this strategy to demonstrate and confirm their correct counting process.
- Move and Count – Allow students who used this strategy to demonstrate and confirm their correct counting process.

Land:

- Debrief by facilitating a discussion that summarizes how to organize, count, and represent a collection of objects.

Daily Exit Ticket: None for this lesson. However, in its place, use the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – Unifix cubes (5)
- Student – Counting collection, organizing tools, work mat, Student book

Lesson #: Module 1, Topic B, Lesson 7

Standard: K.CC.A.3, K.CC.B.4a, K.CC.B.5, K.CC.C.6

Mathematical Practice: 2

Target: SWBAT practice counting accurately

Learning Activities:

Fluency:

- Counting on the Number Glove Within 5 – Count on the number glove to build numeral recognition and familiarity with counting the math way.
- Counting with Movement to 10 – Count with body movements to build fluency with number names and one-to-one correspondence.

Launch:

- Count to see if there are enough to emphasize the importance of counting accurately.

Learn:

- Bear Game – Practice counting sets to play a game.
- Match Game – Practice counting sets and matching a numeral to a set.

Land:

- Debrief by facilitating a discussion that summarizes how to practice counting accurately.

Daily Exit Ticket: None for this lesson. However, in its place, use the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – Right-hand number glove
- Student – Bag of teddy bear counters (1 per student group for “Launch”), Bear Game board (1 per student pair, in the Student book), teddy bear counters (2 per student pair for “Learn”), two-color beans (5 per students pair), cup (1 per student pair), Match Game cards (1 set per student pair)

Lesson #: Module 1, Topic B, Lesson 8

Standard: K.CC.B.5

Mathematical Practice: 2

Target: SWBAT count sets in linear, array, and scattered configurations

Learning Activities:

Fluency:

- Finger Flash: The Math Way to 5 – Say how many fingers they see to develop the ability to subitize quantities shown the math way.
- Number Path Parking Lot – Organize and count cubes on a number path to build fluency with one-to-one correspondence and numeral recognition.

Launch:

- Study a piece of artwork and notice the objects that can be counted.

Learn:

- Touch and Count – Count objects in linear configurations.
- Mark and Count – Count objects in scattered configurations.
- Problem Set – Use unifix cubes to assist with counting the sets of objects.

Land:

- Debrief by facilitating a discussion that summarizes how to count sets in linear, array, and scattered configurations.

Daily Exit Ticket: None for this lesson. However, teachers may opt to use the Problem Set page in conjunction with the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – Problem Set (digital download), unifix cubes (5)
- Student – Unifix cubes (5), Number Path, work mat, Student book

Lesson #: Module 1, Topic B, Lesson 9

Standard: K.CC.A.3, K.CC.B.4b

Mathematical Practice: 8

Target: SWBAT conserve number regardless of the arrangement of objects

Learning Activities:

Fluency:

- Match: Sets and Numerals – Count sets and match a numeral to a set to build fluency with one-to-one correspondence and understanding of cardinality.
- Counting with Movement to 10 – Count with body movements to build fluency with number names and one-to-one correspondence.

Launch:

- Count a set that is arranged in a line, and then consider how many there are after the set is rearranged.

Learn:

- Should We Count Again? – Count and use numeral cards to describe a set before and after it is arranged.
- Problem Set – Use unifix cubes to assist with counting the sets of objects in a variety of arrangements.

Land:

- Debrief by facilitating a discussion that summarizes how to conserve number regardless of the arrangement of objects.

Daily Exit Ticket: None for this lesson. However, teachers may opt to use the Problem Set page in conjunction with the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – Hide Zero cards (demonstration set; 1 – 5), unifix cubes (5)
- Student – Match cards (1 set per student pair), unifix cubes (5), Student book

Lesson #: Module 1, Topic C, Lesson 10

Standard: K.CC.B.5

Mathematical Practice: 2

Target: SWBAT count out a group of objects to match a numeral

Learning Activities:

Fluency:

- Show Me Beans to 3 – Hear a number or see a numeral and count out a set to prepare for associating a numeral with a set.
- Choral Response: Peek-a-Book Counting Within 3 – Subitize small quantities to prepare for efficiently answering "How many…?" questions to 3.

Launch:

- Remember a target number while multitasking.

Learn:

- Count Out a Set – Recognize numerals and count out a matching set.
- Problem Set – Use beans to assist with counting the sets of objects to match a numeral.

Land:

- Debrief by facilitating a discussion that summarizes how to count out a group of objects to match a numeral.

Daily Exit Ticket: None for this lesson. However, teachers may opt to use the Problem Set page in conjunction with the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – Hide Zero cards (demonstration set; 1 – 5), puppet/stuffed animal, two-color beans (10)
- Student – Two-hands mat (in Student book), two-color beans (11), Hide Zero cards 1 – 5 (1 per student group), plate (1 per student group), Student book

Lesson #: Module 1, Topic C, Lesson 11

Standard: K.CC.A.3

Mathematical Practice: 6

Target: SWBAT write numerals 1 – 3 to answer "How many…?" questions

Learning Activities:

Fluency:

- Show Me Beans to 3 – Hear a number or see a numeral and count out a set to prepare for associating a numeral with a set.
- Choral Response: Peek-a-Book Counting Within 5 – Subitize small quantities to prepare for efficiently answering "How many…?" questions to 5.

Launch:

- Discuss ways to count things that can be heard but not seen.

Learn:

- Air and Carpet Writing – Learn the basic strokes for writing numerals 1, 2, and 3.
- Numeral Writing – Trace and write numerals 1, 2, and 3.
- Beep Number – Sequence numbers to 3.

Land:

- Debrief by facilitating a discussion that summarizes how to write numerals 1 – 3 to answer "How many…?" questions.

Daily Exit Ticket: None for this lesson. However, teachers may opt to use the "Beep Number" page in conjunction with the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – Hide Zero cards (demonstration set; 1 – 5), assorted kitchen toys or counters, puppet/ball for number writing, chart paper
- Student – Two-hands mat (in Student book), two-color beans (3), personal whiteboard, dry-erase marker, Student book

Lesson #: Module 1, Topic C, Lesson 12

Standard: K.CC.A.1, K.CC.A.3

Mathematical Practice: 2

Target: SWBAT write numerals 4 & 5 to answer "How many…?" questions

Learning Activities:

Fluency:

- Feel the Number to 3 – Finger trace and guess a numeral to develop kinesthetic memory for numeral formation.
- Show Me Beans to 5 – Hear a number or see a numeral and count out a set to develop fluency with associating a numeral with a set.
- Finger Flash to 3 – Say how many fingers they see to develop the ability to subitize quantities in various configurations.

Launch:

- Find numbers in the classroom.

Learn:

- Air and Carpet Writing – Learn the basic strokes for writing numerals 4 and 5.
- Numeral Writing – Trace and write numerals 4 and 5.
- Beep Number – Sequence numbers to 5.
- Problem Set – Count a set of objects and write the matching numeral.

Land:

- Debrief by facilitating a discussion that summarizes how to write numerals 4 and 5 to answer "How many…?" questions.

Daily Exit Ticket: None for this lesson. However, teachers may opt to use both the "Beep Number" and Problem Set pages in conjunction with the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – Hide Zero cards (demonstration set; 1 – 5), puppet/ball for number writing, chart paper from Lesson 11
- Student – Two-hands mat (in Student book), two-color beans (5), personal whiteboard, dry-erase marker, Student book

Lesson #: Module 1, Topic C, Lesson 13

Standard: K.CC.A.3, K.CC.B.4a-b, K.CC.B.5, K.CC.C.6

Mathematical Practice: 3

Target: SWBAT count out enough objects and write the numeral

Learning Activities:

Fluency:

- Feel the Number to 5 – Finger trace and guess a numeral to develop kinesthetic memory for numeral formation.
- Show Me Beans to 5 – Hear a number or see a numeral and count out a set to develop fluency with associating a numeral with a set.
- Finger Flash to 5 – Say how many fingers they see to develop the ability to subitize quantities in various configurations.

Launch:

- Reason about whether there are enough objects in a set.

Learn:

- Are There Enough? – Count out enough plates to set the table.
- Count Out Enough – Practice counting and writing numerals to match.
- Problem Set – *(There is no official Problem Set for this lesson. But, if time allows, consider using copies of the numeral writing pages from Lessons 11 & 12 for practice.)*

Land:

- Debrief by facilitating a discussion that summarizes how to count out enough objects and write the numeral.

Daily Exit Ticket: None for this lesson. However, teachers may opt to use the “Menu & Order” pages in conjunction with the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – Hide Zero cards (demonstration set; 1 – 5)
- Student – Two-hands mat (in Student book), two-color beans (5), unifix cubes (10 per student pair), dot plate, menu and order pad (1 per student pair, in the student book), personal whiteboard, dry-erase marker, Student book

Lesson #: Module 1, Topic D, Lesson 14

Standard: K.CC.A.3, K.CC.B.5

Mathematical Practice: 2

Target: SWBAT understand the meaning of zero and write the numeral

Learning Activities:

Fluency:

- Counting the Math Way to 3 – Transition from counting on the Two-Hands Mat to counting the math way.
- Show Me Another Way: 2 and 3 – Represent a number on their fingers in different ways to prepare for work with decomposing numbers beginning in Lesson 16.

Launch:

- Learn that *zero* is the math word for none.

Learn:

- Balloon Story – Watch and act out a video that shows decomposing a number until there are 0 left.
- Air and Carpet Writing – Learn the basic strokes for writing the numeral 0.
- Numeral Writing – Trace and write the numeral 0.
- Beep Number – Practice sequencing numbers to 5, including 0.
- Problem Set – Count a set of objects and write the matching numeral.

Land:

- Debrief by facilitating a discussion that summarizes the meaning of zero and how to write the numeral.

Daily Exit Ticket: None for this lesson. However, teachers may opt to use the “Beep Number” and Problem Set pages in conjunction with the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – Puppet or ball, carrots (3), plate
- Student – Two-hands mat (in Student book), two-color beans (5), Student book

Lesson #: Module 1, Topic D, Lesson 15

Standard: K.CC.A.3, K.DL.A.1, K.OA.A.3

Mathematical Practice: 6

Target: SWBAT sort the same group of objects in more than one way and count

Learning Activities:

Fluency:

- Counting the Math Way to 3 – Construct a number line with their fingers while counting aloud to develop a sense of quantity and order.
- 5-Groups to 3 – Recognize a group of dots to develop the ability to subitize quantities shown with 5-groups.
- Counting with Movement to 10 – Count with a body movement to build fluency with number names and one-to-one correspondence.

Launch:

- Consider attributes that count be used to sort.

Learn:

- Bear Sort – Sort bears and count how many are in each group.
- Share, Compare, and Connect – Discuss ways to sort and learn to make a number sentence.
- Sort Another Way – Sort their bears in a new way and say the corresponding number sentence.
- Problem Set – Use a set of 5 unifix cubes to complete the 5-Stick Puzzles/activity pages.

Land:

- Debrief by facilitating a discussion that summarizes how to sort the same group of objects in more than one way and count.

Daily Exit Ticket: None for this lesson. However, teachers may opt to use the Problem Set pages in conjunction with the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – 5-group cards (demonstration set; 1 – 3), unifix cubes (5), 5-Stick Puzzle
- Student – Counting bears (5 per student pair), paper plates (3 per student pair), Hide-Zero cards (1 set of 1 – 5 per student pair), unifix cubes (5), Student book

Lesson #: Module 1, Topic D, Lesson 16

Standard: K.CC.A.3, K.DL.A.1, K.OA.A.3

Mathematical Practice: 5

Target: SWBAT decompose a set shown in a picture

Learning Activities:

Fluency:

- Counting the Math Way to 5 – Construct a number line with their fingers while counting aloud to develop a sense of quantity and order.
- Show Me Another Way: 3, 4 and 5 – Represent a number on their fingers in different ways to prepare for work with decomposing numbers.
- Counting with Movement to 10 – Count with a body movement to build fluency with number names and one-to-one correspondence.

Launch:

- Discuss what they notice about a picture.

Learn:

- Dog Picture – Analyze a picture of 4 and discuss more than one way to sort.
- Kia's Crayons – Draw a picture where both addends are unknown to reinforce that 4 can be decomposed in multiple ways.
- Problem Set – Color objects within a set to model/show decomposition and record the total number.

Land:

- Debrief by facilitating a discussion that summarizes how to decompose a set shown in a picture.

Daily Exit Ticket: None for this lesson. However, teachers may opt to use students' decomposition drawings (from "Kia's Crayon's"), as well as the Problem Set page, in conjunction with the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – None
- Student – Red and blue crayons, Student book

Lesson #: Module 1, Topic D, Lesson 17

Standard: K.OA.A.1

Mathematical Practice: 4, 5

Target: SWBAT model story problems

Learning Activities:

Fluency:

- Counting the Math Way to 5 – Construct a number line with their fingers while counting aloud to develop a sense of quantity and order.
- Feel the Number to 5 – Finger trace and guess a numeral to build kinesthetic memory for numeral formation.

Launch:

- Model joining and separating with actions.

Learn:

- Bigger or Smaller? – Notice what happens when quantities are joined and when they are separated.
- Model an Add to Story – Choose tools to model and solve an *add to* story problem.
- Modeling with Fingers (Jacob's Way) – Demonstrate how to solve the problem with fingers.
- Modeling with Cubes (Noah's Way) – Demonstrate how to solve the problem with unifix cubes.
- Model a Take from Story – Choose tools to model and solve a *take from* story problem.
- Modeling with Cubes (Vivi's Way) – Demonstrate how to solve the problem with unifix cubes.
- Modeling with a Drawing (Tilly's Way) – Demonstrate how to solve the problem with a drawing.
- Solving Story Problems – Use the provided number stories in the teacher's manual to guide students in solving a variety of story problems.

Land:

- Debrief by facilitating a discussion that summarizes how to solve number stories.

Daily Exit Ticket: None for this lesson. However, in its place, use the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – Hide-Zero cards (demonstration set; 1 – 5), chairs (5), unifix cubes (5), 5-Frame (in the teacher edition)
- Student – Unifix cubes (5), personal whiteboard *(optional – for story problem drawing)*, dry-erase markers *(optional – for story problem drawing)*

Lesson #: Module 1, Topic D, Lesson 18

Standard: K.OA.A.1

Mathematical Practice: 2

Target: SWBAT model story problems and identify the numeral referents

Learning Activities:

Fluency:

- Counting the Math Way to 7 – Construct a number line with their fingers while counting aloud to develop a sense of quantity and order.
- 5-Groups to 5 – Recognize a group of dots to develop the ability to subitize quantities shown in 5-groups.
- Counting with Movement to 10 – Count with body movement to build fluency with number names and one-to-one correspondence.

Launch:

- Use math tools to model, character, setting, and action abstractly.

Learn:

- Story Problem Referents – Relate numerals to story problems.
- Model Story Problems – Model story problems and identify the referents.

Land:

- Debrief by facilitating a discussion that summarizes how to model story problems and identify the numeral referents.

Daily Exit Ticket: None for this lesson. However, in its place, use the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – 5-group cards (demonstration set; 1 – 5), Hide-Zero cards (demonstration set), chart paper
- Student – Unifix cubes (5), work mat, 5-frame

Lesson #: Module 1, Topic E, Lesson 19

Standard: K.CC.A.1, K.CC.B.4a-b, K.CC.B.5

Mathematical Practice: 5

Target: SWBAT organize, count, and represent a collection of objects

Learning Activities:

Fluency:

- *None for this lesson.*

Launch:

- Associate the counting word sequence with numerals on the number path.

Learn:

- Prepare – Review procedures and prepare to count collections.
- Organize, Count, and Record – Use their own strategies to organize and count objects and record their process.
- Share, Compare, and Connect – Discuss strategies for counting and recording a collection.

Land:

- Debrief by facilitating a discussion that summarizes how to organize, count, and represent a collection of objects.

Daily Exit Ticket: None for this lesson. However, in its place, use the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – "I Can Count" song lyrics, I Can Count cutouts, Hide-Zero cards (demonstration set; 6 – 10)
- Student – Counting collection (1 per student pair), work mat, organizing tools, Student book

Lesson #: Module 1, Topic E, Lesson 20

Standard: K.CC.A.1, K.CC.B.4b, K.CC.B.5

Mathematical Practice: 7

Target: SWBAT count objects in 5-group and array configurations and match to a numeral

Learning Activities:

Fluency:

- Counting on the Number Glove Within 7 – Count on the number glove to prepare to unitize five and build familiarity with counting the math way.
- Counting the Math Way Within 7 – Construct a number line with their fingers while counting aloud to build a sense of quantity and order.
- 5-Groups to 5 – Recognize a group of dots to develop the ability to subitize quantities shown in 5-groups.

Launch:

- Find a unit of five in pictures of everyday objects and in mathematical models.

Learn:

- 5 Fingers – Find a unit of five in familiar linear configurations: their hands.
- Relate Counting the Math Way to 5-Groups – Model numbers 6 – 10 on their hands and with 5-groups.
- Build and Count Arrays – Build array configurations to match a picture and count.
- Problem Set – Complete the activity page to count objects in a 5-group and/or an array configuration, and then match the total to a numeral.

Land:

- Debrief by facilitating a discussion that summarizes how to count objects in 5-group and array configurations and match to a numeral.

Daily Exit Ticket: None for this lesson. However, teachers may opt to use the Problem Set page in conjunction with the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – Right-hand and left-hand number gloves, 5-group cards (demonstration set; 1 – 5), Hide-Zero cads (demonstration set; 6 – 10), unifix cubes (10), 5-Group Mat (digital download)
- Student – Unifix cubes (10), 5-Group Mat (in student book), Student book

Lesson #: Module 1, Topic E, Lesson 21

Standard: K.CC.A.3, K.CC.A.1, K.CC.B.5

Mathematical Practice: 6

Target: SWBAT count sets in circular configurations and match to a numeral

Learning Activities:

Fluency:

- Counting the Math Way to 10 – Construct a number line with their fingers while counting aloud to build a sense of quantity and order.
- 5-Groups to 7 – Recognize a group of dots to develop an understanding of numbers 6 – 10 as "5 and some more".

Launch:

- Recognize the need for tracking the count when objects are arranged in a circular configuration.

Learn:

- Mark and Count – Mark and count to find how many in a circular configuration.
- Mark the Start – Mark the starting place and count how many in a circular configuration.
- Problem Set – Complete the activity page to count objects in a circular configuration, and then match the total to a numeral.

Land:

- Debrief by facilitating a discussion that summarizes how to count objects in a circular configuration and match to a numeral.

Daily Exit Ticket: None for this lesson. However, teachers may opt to use the Problem Set page in conjunction with the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – Number gloves, 5-group cards (demonstration set; 5 – 7), sticky notes (8), puppet or stuffed animal
- Student – Student book

Lesson #: Module 1, Topic E, Lesson 22

Standard: K.CC.A.3, K.CC.B.5

Mathematical Practice: 2

Target: SWBAT count sets in scattered configurations and match to a numeral

Learning Activities:

Fluency:

- Counting the Math Way to 10 – Construct a number line with their fingers while counting aloud to build a sense of quantity and order.
- 5-Groups to 10 – Recognize a group of dots to develop an understanding of numbers 6 – 10 as "5 and some more".

Launch:

- Use different counting strategies to count a group of concrete objects and a group in a picture.

Learn:

- Number Match – Count sets of objects and match to a number card.
- Bingo – Recognize numbers in isolation and out of sequence.

Land:

- Debrief by facilitating a discussion that summarizes how to count sets in scattered configurations and match to a numeral.

Daily Exit Ticket: None for this lesson. However, in its place, use the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – Teddy bear counters (7), Hide-Zero cards (demonstration set), 5-group cards (demonstration set; 5 – 10)
- Student – Hide-Zero cards, Bingo board, personal whiteboard, unifix cubes or two-color beans (9)

Lesson #: Module 1, Topic E, Lesson 23

Standard: K.CC.A.3, K.CC.4b, K.CC.B.5

Mathematical Practice: 8

Target: SWBAT conserve number regardless of the order in which objects are counted

Learning Activities:

Fluency:

- Counting on the Number Glove Within 10 – Count on the number glove to develop fluency with unitizing five and to build familiarity with counting the math way.
- Show Me Another Way: 6 and 7 – Represent numbers on their fingers in different ways to prepare for work with conservation.

Launch:

- Analyze two pictures to determine whether they contain the same number of objects.

Learn:

- Starting Point – Use different counting paths and notice that the number of objects stays the same.
- Spill and Count – Test the idea that they can use different counting paths and find that the number of objects stays the same.
- Problem Set – Complete the activity page to count objects and then match the total to a numeral.

Land:

- Debrief by facilitating a discussion that summarizes how to conserve number regardless of the order in which objects are counted.

Daily Exit Ticket: None for this lesson. However, teachers may opt to use the Problem Set page in conjunction with the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – Right-hand and left-hand number gloves, demonstration page, crayon
- Student – Cup (1 per student pair), two-color beans (6 – 10 per student pair), work mat, Student book, crayon

Lesson #: Module 1, Topic F, Lesson 24

Standard: K.CC.B.5

Mathematical Practice: 4

Target: SWBAT count out a group of objects to match a numeral

Learning Activities:

Fluency:

- Show Me 5-Groups: 5 to 10 – Place cubes in 5-groups to develop an understanding of numbers 6 – 10 as "5 and some more".
- Match: Sets and Numerals – Count sets and match a numeral to a set to maintain fluency with one-to-one correspondence and an understanding of cardinality.

Launch:

- Remember a target number while multitasking.

Learn:

- Count Out a Set – Recognize numerals and count out a matching set.
- Problem Set – Complete the activity page to count objects that match a numeral.

Land:

- Debrief by facilitating a discussion that summarizes how to count out a group of objects that match a numeral.

Daily Exit Ticket: None for this lesson. However, teachers may opt to use the Problem Set page in conjunction with the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – Hide-Zero cards (demonstration set; 6 – 10)
- Student – 5-Group Mat, unifix cubes (10), Match cards (1 set per student pair), Hide-Zero cards (1 set of 6 – 10 per student pair), plate (1 per student pair), Student book

Lesson #: Module 1, Topic F, Lesson 25

Standard: K.CC.A.3, K.CC.A.1

Mathematical Practice: 2

Target: SWBAT write numerals 6 and 7

Learning Activities:

Fluency:

- Show Me 5-Groups – Place cubes in 5-groups to develop an understanding of numbers 6 – 10 as "5 and some more".
- Finger Flash: The Math Way with 5, 6, and 7 – Say how many fingers they see to develop the ability to recognize quantities 6 – 10 as "5 and some more".

Launch:

- Build a need to write numerals.

Learn:

- Air and Carpet Writing – Learn the basic strokes for writing numerals 6 and 7.
- Numeral Writing – Trace and write numerals 6 and 7.
- Beep Number – Sequence numbers to 7.

Land:

- Debrief by facilitating a discussion that summarizes how to write numerals 6 and 7.

Daily Exit Ticket: None for this lesson. However, teachers may opt to use the "Numeral Writing" page in conjunction with the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – Hide-Zero cards (demonstration set; 0 – 7), chart paper, puppet or ball, "Why Do We Write Numbers?" chart from Lesson 11
- Student – 5-Group Mat, unifix cubes (10), Student book

Lesson #: Module 1, Topic F, Lesson 26

Standard: K.CC.A.3, K.CC.A.1, K.CC.B.5

Mathematical Practice: 2

Target: SWBAT write numeral 8

Learning Activities:

Fluency:

- Show Me 5-Groups: 5 and 10 – Place cubes in 5-groups to develop an understanding of numbers 6 – 10 as "5 and some more".
- Feel the Number to 7 – Finger trace and guess a numeral to build kinesthetic memory for numeral formation.

Launch:

- Count animal legs and arms and tell how many.

Learn:

- Air and Carpet Writing – Learn the basic strokes for writing the numeral 8.
- Numeral Writing – Trace and write the numeral 8.
- Beep Number – Sequence numbers to 8.
- Problem Set – Count the objects and write the matching numeral.

Land:

- Debrief by facilitating a discussion that summarizes how to write the numeral 8.

Daily Exit Ticket: None for this lesson. However, teachers may opt to use the "Numeral Writing" and Problem Set pages in conjunction with the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – Hide-Zero cards (demonstration set; 0 – 7), chart paper, puppet or ball, "Why Do We Write Numbers?" chart from Lesson 11
- Student – 5-Group Mat, unifix cubes (10), Student book

Lesson #: Module 1, Topic F, Lesson 27

Standard: K.CC.A.3, K.CC.A.1

Mathematical Practice: 5

Target: SWBAT write numerals 9 and 10

Learning Activities:

Fluency:

- Show Me 5-Groups: Build from 5 – Place cubes in 5-groups to develop an understanding of numbers 6 – 10 as "5 and some more".
- Finger Flash: The Math Way to 10 – Say how many fingers they see to develop the ability to recognize 6 – 10 as "5 and some more".
- Feel the Number to 8 – Finger trace and guess a numeral to build kinesthetic memory for numeral formation.

Launch:

- Practice writing numerals 0 through 8 and establish purpose for writing numerals.

Learn:

- Air and Carpet Writing – Learn the basic strokes for writing numerals 9 and 10.
- Numeral Writing – Trace and write numerals 9 and 10.
- Problem Set – Sing and count the objects, and then write the matching numeral.

Land:

- Debrief by facilitating a discussion that summarizes how to write numerals 9 and 10.

Daily Exit Ticket: None for this lesson. However, teachers may opt to use the "Numeral Writing" and Problem Set pages in conjunction with the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – Hide-Zero cards (demonstration set; 0 – 8), puppet or ball, "I Can Count" song lyrics, "Why Do We Write Numbers?" chart
- Student – 5-Group Mat, unifix cubes (10), scoreboard, personal whiteboard, dry-erase marker, Student book

Lesson #: Module 1, Topic F, Lesson 28

Standard: K.CC.A.1

Mathematical Practice: 7

Target: SWBAT order numerals 1 – 10 and reason about an unknown number in the number sequence

Learning Activities:

Fluency:

- Show Me 5-Groups: 6 – 10 – Place cubes in 5-groups to develop an understanding of numbers 6 – 10 as "5 and some more".
- Feel the Number to 10 – Finger trace and guess a numeral to build kinesthetic memory for numeral formation.

Launch:

- Correct a sequence of numbers that is out of order.

Learn:

- Order Numbers 1 – 10 – Order numerals 1 – 10 and reason about an unknown number in the number sequence.
- Numeral Detective – Reason about numbers based on their placement in a sequence.
- Problem Set – Write numbers in order and draw the 5-group dots to match.

Land:

- Debrief by facilitating a discussion that summarizes how to order numerals 1 – 10 and reason about an unknown number in the number sequence.

Daily Exit Ticket: None for this lesson. However, teachers may opt to use the Problem Set page in conjunction with the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – Hide-Zero cards (demonstration set; 1 – 10), sticky notes (12), *Eureka Math*^{2} Numeral Cards 1 – 10
- Student – 5-Group Mat, unifix cubes (10)

Lesson #: Module 1, Topic G, Lesson 29

Standard: K.CC.B.4c

Mathematical Practice: 8

Target: SWBAT model the pattern of 1 more in the forward count sequence

Learning Activities:

Fluency:

- Show Me Beans to 7 – Hear a number or see a numeral and count out a set to build fluency with associating a numeral with a set.
- Number Detective – Sequence numbers to 10 to prepare for work with the pattern of 1 more.

Launch:

- Model the pattern of 1 more through movement and song.

Learn:

- Model "Dancing Cats Chant" – Use cubes to model the pattern of 1 more in the chant.
- Count 1 More – Build a tower to model the pattern of 1 more in the forward count sequence.
- Number Stairs – Analyze the pattern of 1 more by using the number stairs model.

Land:

- Debrief by facilitating a discussion that summarizes how to model the pattern of 1 more in the forward count sequence.

Daily Exit Ticket: None for this lesson. However, in its place, use the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – Hide-Zero cards (demonstration set; 1 – 7), unifix cubes (10), "Dancing Cats Chant" song lyrics
- Student – Two-Hands Mat, two-color beans (7), *Eureka Math*^{2} Numeral Cards (1 set of 1 – 10 per student pair), unifix cubes (10)

Lesson #: Module 1, Topic G, Lesson 30

Standard: K.CC.A.3, K.CC.B.4c, K.CC.B.5

Mathematical Practice: 7

Target: SWBAT build number stairs to show the pattern of 1 more in the forward count sequence

Learning Activities:

Fluency:

- Show Me Beans to 10 – Hear a number or see a numeral and count out a set to build fluency with associating a numeral with a set.
- Show Me the Math Way: 1 More – Show a number and 1 more the math way to develop fluency with the pattern of 1 more.

Launch:

- Model the growing pattern of 1 more with their bodies.

Learn:

- Count with Number Stairs – Use number stairs to count forward using the language of *1 more*.
- Build Number Stairs – Put numbers in order and build number stairs to match.
- Gallery Walk – Examine one another's work and learn protocols for a gallery walk.
- Problem Set – Write the numbers in order and color the number stairs to match.

Land:

- Debrief by facilitating a discussion that summarizes how to build number stairs to show the pattern of 1 more in the forward count sequence.

Daily Exit Ticket: None for this lesson. However, teachers may opt to use the Problem Set page in conjunction with the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – Hide-Zero cards (demonstration set; 1 – 10)
- Student – Two-Hands Mat, two-color beans (10), counters (55), Hide-Zero cards (1 – 10)

Lesson #: Module 1, Topic G, Lesson 31

Standard: K.CC.B.4c

Mathematical Practice: 8

Target: SWBAT model the pattern of 1 less in the backward count sequence

Learning Activities:

Fluency:

- Counting on the Number Glove – Count down on the number glove to prepare for work with the pattern of 1 less.
- Number Detective – Sequence numbers to 10 to prepare for work with the pattern of 1 less.

Launch:

- Count backward by singing a song and notice the pattern of 1 less.

Learn:

- Farmer Brown's Apples – Use cubes to model the pattern of 1 less in a song.
- Count 1 Less – Use cubes to model the pattern of 1 less in the backward count sequence.
- Number Stairs – Analyze the pattern of 1 less by using the number stairs model.

Land:

- Debrief by facilitating a discussion that summarizes how to model the pattern of 1 less in the backward count sequence.

Daily Exit Ticket: None for this lesson. However, in its place, use the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – Right-hand and left-hand number gloves, puppet or stuffed animal, "Farmer Brown Had Ten Red Apples" song lyrics, "Growing Up with Ella Jenkins" album, unifix cubes (10)
- Student – *Eureka Math*^{2} Numeral Cards (1 set of 1 – 10 per student pair)**,** unifix cubes (10), work mat

Lesson #: Module 1, Topic G, Lesson 32

Standard: K.CC.A.3, K.CC.B.4c, K.CC.B.5

Mathematical Practice: 7

Target: SWBAT build number stairs to show the pattern of 1 less in the backward count sequence

Learning Activities:

Fluency:

- Counting the Math Way Within 10 – Construct a number line with their fingers while counting aloud to develop fluency with the pattern of 1 less.
- Show Me the Math Way: 1 Less – Show a number and 1 less the math way to develop fluency with the pattern of 1 less.

Launch:

- Model the pattern of 1 more and the pattern of 1 less by counting forward and backward with movement.

Learn:

- Count with Number Stairs – Use number stairs to count back by using *1-less* language.
- Build Number Stairs – Order numbers from 10 to 1 and build number stairs to match.
- Gallery Walk – Examine one another's work and learn protocols for a gallery walk.
- Problem Set – Write the numbers in order and color the number stairs to match.

Land:

- Debrief by facilitating a discussion that summarizes how to build number stairs to show the pattern of 1 less in the backward count sequence.

Daily Exit Ticket: None for this lesson. However, teachers may opt to use the Problem Set page in conjunction with the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – None
- Student – Hide-Zero cards (1 – 10), counters (55)

Lesson #: Module 1, Topic G, Lesson 33

Standard: K.CC.A.1, K.CC.B.4a-b, K.CC.B.5

Mathematical Practice: 4

Target: SWBAT organize, count, and represent a collection of objects

Learning Activities:

Fluency:

- *None for this lesson.*

Launch:

- Review procedures and prepare to count collections.

Learn:

- Organize, Count, and Record – Use their own strategies to count objects and record their process.
- Share, Compare, and Connect – Discuss strategies for counting and recording a collection.
- Incomplete Recording (Ellie and Theo's Way) – Analyze/discuss sample recordings.
- Drawings and Numerals (Mila and Campbell's Way) – Analyze/discuss sample recordings.
- Gallery Walk – Do a gallery walk to examine one another's work.

Land:

- Debrief by facilitating a discussion that summarizes how to organize, count, and represent a collection of objects.

Daily Exit Ticket: None for this lesson. However, in its place, use the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – None
- Student – Counting collection (1 per student pair), work mat, organizing tools, Student book

Unit Modifications for Special Population Students	
Advanced Learners	● Topic A, Lesson 3 – Challenge students by asking them to consider other ways that the items in the bag are the same and different. In the sample shown in the Launch section, most of the objects have a similar shape (long and stick-like) and can be held in the hand. Additionally, in the Learn section ask students to show how move and count works without using the Number Path. ● Topic A, Lesson 5 – If students need a challenge, invite them to think of a new way to sort the toys. Their categories may be unique based on their personal experience (Ex: "This group has my favorite toys. These toys aren't my favorite.") They may also create more than three categories, as in the example in the teacher's manual where the student sorted by color. ● Topic B, Lesson 7 – In the "Bear Game", challenge students by adding the following rule: *Bears may move forward the number of red beans and backward the number of white beans.* Additionally, for the "Match Game", consider any of the following game adaptations to increase the challenge as students are ready: lay out eight cards in two rows of four to build students' ability to sort through more visual information, include 0, use two sets of cards for numbers 1–10 (but limit the deck to 20 cards for ease of use), and/or invite students to find cards that make 5. *(The "Match Game" reappears in the Fluency section of Lesson 9 as well.)* ● Topic B, Lesson 8 – For the Problem Set, and for those who need more of a challenge, ask students to count all the animals on the page. Challenge them to also represent their count. ● Topic B, Lesson 9 – For the Problem Set, encourage students who need a challenge to show several configurations for each problem. Ask them to share how they know the number of cubes without counting each time they change the configuration. ● Topic D, Lesson 16 – During the Learn section, challenge students to think about all the possible combinations of red and blue crayons. Kickstart the thinking by recording some of the combinations shared in class. Have we found all the possible ways that Kia's crayons could look? How do you know? ● Topic E, Lesson 20 – Arrays can be easily decomposed into parts. Challenge students to make number statements to match each array. The parts that make 10 may inspire any of the following number statements: 10 is 5 and 5, 5 and 5 make 10, 10 is 2 and 2 and 2 and 2 and 2, and/or 4 and 6 make 10. ● Topic E, Lesson 21 – Ask students how many would ride the Ferris wheel if 2 people are aboard each cabin. Invite students to strategize. Some possibilities may include: tracking on fingers, counting around the circle twice, counting by twos. As time permits, have them explore other options with numbers they know how to count by, such as fives or tens. ● Topic E, Lesson 22 – The bingo boards are grouped by complexity. The boards in the fifth level have no numerals and a few challenging configurations. ● Topic F, Lesson 24 – During the Fluency section, consider any of the following "Match Game" adaptations to increase the challenge as students are ready: lay out eight cards in two rows of four to build students' ability to sort through more visual information, and/or invite students to find two cards that make 5 or another target number. ● Topic F, Lesson 26 – In the Launch section, challenge students to sort animals by the number of arms and legs. Once they have sorted a dozen or more animals, encourage them to look for patterns. Symmetry is common in anatomy, and many animals have an even number of arms and legs. Encourage students to research and learn more about animal anatomy to better understand the patterns they find. Additionally, the pictures on the Problem Set can be used for decomposition or composition. Challenge students to make number statements about the pictures. *(Spider: 8 legs is 4 legs & 4 legs. Cows: 4 legs & 4 legs make 8 legs. Seagulls: 2 legs & 2 legs & 2 legs & 2 legs make 8 legs.)* ● Topic F, Lesson 28 – For the "Number Detective" activity in the Learn section of this lesson, you may wish to challenge students by using the 0 card, placing the cards in a decreasing sequence beginning with 10, and/or arranging the cards in a 5-group rather than in a linear formation. *(This activity reappears in subsequent lessons as well.)*

	● Topic G, Lesson 30 – If students have a clear understanding of the pattern of 1 more, advance their thinking by displaying variations of number stairs for analysis. (See photo/example in teacher manual.) Guide them to notice features such as the color change at 5, or how the model indicates 1 more. A simple and engaging way to call attention to those characteristics is through choral counting: *"Let's count the blue cubes in each stair."* Also, you may make blank copies of the Problem Set available for students to experiment with different representations at another time.
Struggling Learners	● Topic A, Lesson 3 – For those struggling to understand cardinality, provide support as they count their groups. Place a sticky note under the last object to remind students to shout that number. ● Topic B, Lesson 7 – Reduce the number of beans in "Bear Game" for students working within 3. ● Topic B, Lesson 8 – In the Learn section, consider providing multiple examples and nonexamples of objects in a straight line to ensure that students can differentiate between various configurations. Use thumbs-up and thumbs-down or a similar technique to gauge student understanding. Reinforce the touch and count strategy when things are in a line, and the mark and count strategy for keeping track when things are not in a line. ● Topic C, Lesson 11 – If students have trouble with the verbal sequencing in "Beep Number", consider having them follow along on the number path with their fingers. *(The "Beep Number" activity reappears in subsequent lessons as well.)* ● Topic C, Lesson 12 – In the Fluency section, if writers need support, they can say the numeral formation rhyme as they trace. If guessers need support, writers can write in the guessers' hands so that they can both feel and see the numeral. Adjust the seating arrangement as necessary. *(This activity reappears in subsequent lessons as well.)* ● Topic D, Lesson 14 – Students will not count, or show fingers, the math way at all times. Encourage them to continue by using fingers as they would naturally while adding counting the math way to their repertoire. Representing numbers on hands in a variety of ways supports work with decomposition and conservation of number. The Fluency activity "Show Me Another Way: 2 and 3" (from this lesson) is an example. ● Topic D, Lesson 15 – During the Fluency section of the lesson, if students need more support, return to the beans and hands mat used to introduce this activity in Lesson 14. ● Topic D, Lesson 17 – Number sentences, or equations, that include symbols like +, −, and = are introduced in Module 4. If students use a number sentence like 4 + 1 = 5 in this lesson, acknowledge their work, and probe to assess their understanding of the numbers and symbols, using language such as: *"You wrote a number sentence! Will you read it to me? What does the 4 tell us about? 1? 5? (Point to the plus sign.) What does this mean? (Point to the equal sign.) What does this mean?"* If many students use symbols, consider selecting an example to share after a concrete model is shared. If only one or two students attempt this type of number sentence or their understanding of the symbols is developing, stick to showing concrete and pictorial representations of the problem. ● Topic E, Lesson 22 – The bingo boards are grouped by complexity. The boards in the first level have 4 or 5 spaces with numerals and may be helpful for students who need more time to count. ● Topic F, Lesson 25 – If students have trouble with the verbal sequencing in "Beep Number", consider having them follow along on the number path with their fingers. ● Topic F, Lesson 28 – If students need support during the Fluency section of this lesson, refer to previous lessons for a more supported sequence. Observe to see which students are using the structure of the 5-group instead of counting from 1 each time. Additionally, for the "Number Detective" activity in the Learn section of this lesson, use fewer cards (1–5), the Hide Zero cards with dots on the back, and/or chorally say the number sequence before asking students to identify a hidden number. *(This activity reappears in subsequent lessons as well.)* ● Topic G, Lesson 31 – For the Launch section of this lesson, place a number path on the board for students to refer to while singing the song. Providing a number path gives

	students an opportunity to see what number comes next in the countdown sequence. Students may need to pause after Farmer Brown plucks each apple to assess how many apples are on the tree now.
English Language Learners	● Topic A, Lesson 1 – Consider using strategic, flexible pairings throughout the module based on students' mathematical and English language proficiency. As applicable, complement any of these options by pairing students who speak the same native language. ● Topic A, Lesson 2 – Action is key to helping students understand new terminology like *sort*. Do not explain the activity at length. Instead, help students understand sorting by encouraging them to watch and reason as you model. Then let them try their understanding and refine it through their own sorting activity. It is easier to use and define math terminology like *sort* after having the sorting experience. At the end of the lesson, make a list of various ways to sort. ● Topic B, Lesson 7 – The focus in the Launch section is on the word *enough*. However, there may be opportunities to use *not enough* and *more than*. Here are some examples: *"Not everyone got a bear. There are not enough bears."* Or *"Everyone got a bear, and we still have more. There are more bears than we need."* Students will have more time to develop language for these concepts in Lesson 13. ● Topic B, Lesson 8 – In the Launch section, this is the first use of the term *notice*. Support understanding by using the term *notice* to revoice what you see: *"You may notice, or see, the pink, yellow, and white flowers."* ● Topic C, Lesson 10 – Support the role-play in the Learn section with sentence frames that are appropriate for the student. Connect the mathematics to the context by modeling and encouraging natural dialogue that students would use in the real world. The length of the sentence stem can be modified to meet the student's language goals. (See examples in teacher's manual.) ● Topic C, Lesson 11 – The word *order* has multiple meanings in this lesson. In the restaurant context, the students take food orders. In this number-sequencing activity, students put numbers in order. If you use the word *order* in the sequencing activity, be mindful of student reactions. As needed, share both meanings, and invite students to think of other ways that we use order. ● Topic C, Lesson 13 – Connect the mathematics to the context by modeling and encouraging sentences that restaurant customers would use in the real world. Support this role play with sentence frames that are appropriate for the student. ● Topic D, Lesson 15 – Support language development by pointing to the bears when using words that students need to describe attributes. Do this when revoicing student ideas about how to sort. For example: *"This bear is blue. (Point.) This bear is green. (Point.) They are different colors."* Or *"This bear is big. (Point.) This bear is small. (Point.) They are different sizes."* ● Topic D, Lesson 17 – Precise comparison language like *more*, *less*, and *fewer* is taught in Module 3. For now, informal use of *bigger* and *smaller* allows students to consider how adding to or taking from a group changes its size. Avoid the mistake of teaching students to use key words like *more* and *less* when solving word problems. As students learn more mathematics in years to come, these words become unreliable ways to choose an operation. Additionally, this is the first use of the term *explain*. Support understanding by using the term *explain* to revoice ways to tell about student thinking: *"You can use words, numbers, drawings, or objects to explain, or tell about, your thinking."* Lastly, this is the first use of the term *solve*. Support understanding by using the term *solve* to revoice ideas about finding the answer: *"You can find the answer, or solve, by using cubes or drawing."* ● Topic E, Lesson 19 – Early in the year, student representations vary significantly. Some drawings clearly show individual objects in a collection, whereas others are hard to distinguish. With time and experience, students develop their understanding of numbers and what it means to represent a set, as well as their fine motor skills. Taking photographs as students work makes it easier to track that development. For example,

	in the sample in the teacher edition, the student traced around the entire collection. The photo taken during class shows how this representation relates to his collection. ● Topic E, Lesson 20 – To facilitate the use of 5-group mats, consider introducing position words *top*, *middle*, and *bottom*, which may be familiar from literacy or handwriting programs. Start with a simple "show me" activity. Use gestures to indicate positions in space and on the mat to support all learners in using the terms. Start with a predictable pattern: show me top, bottom, top, bottom. Then deviate and incorporate playful repetition: top, top, top, bottom! Use gestures throughout the lesson to reinforce language acquisition. ● Topic F, Lesson 24 – Support role-play with sentence frames that are appropriate for the student. Connect the mathematics to the context by modeling and encouraging natural dialogue that students would use in the real world. The length of the sentence stem can be modified to meet the student's language goals. For example: *"How many ____ would you like?", "How many ____?", "I'd like 8 ____ please.", "8 ____ please."* ● Topic G, Lesson 31 – During the Fluency section of this lesson, use actions to help students understand new vocabulary. For example, any time students hear the word *plucked*, encourage them to pretend to pick an apple off a tree. ● Topic G, Lesson 33 – This lesson introduces *record* as a new term. Support this term in future instances by revoicing and describing it as a way to show something on paper with a drawing, letters, or numbers: *"You can record, or draw, to show how you counted and how many are in your collection."*
Special Needs Learners	● Topic A, Lesson 1 – Adjust the "Counting with Movement to 10" activity to engage as many students as possible. Consider their physical abilities, cultural background, and interests when choosing movements. *(The "Counting with Movement to 10" activity reappears in the Fluency section throughout the module as well.)* ● Topic B, Lesson 6 – Some young students choose large collections and find them easy to count but harder to record. Fine motor development may not have caught up with counting skills. Consider giving these students a stamp and an ink pad to represent the objects in their collection. ● Topic C, Lesson 12 – In the Fluency section, for any student uncomfortable with touch, the "Feel the Number" game can be played by having the writer write in the air or on the rug. *(This activity reappears throughout the module as well.)* Additionally, in the Learn section, students may benefit from tracing numbers made from a variety of textures (e.g., puffy paint, sandpaper, or string) as they repeat the rhymes. This practice helps develop students' motor memory for each number formation. Constructing numerals with dough also supports numeral formation and builds fine motor strength. Provide each student with dough and a shallow rectangular tray (children's shoe box tops work well). The rectangular tray mimics the writing rectangle and helps prevent reversals. Show a numeral and encourage students to make it in the tray by using the dough. ● Topic D, Lesson 14 – Students with fine motor delays may find it easier to use their fingers when they lay their hands on the desk or floor. The flat surface helps them hold out the fingers they want raised and keep the others tucked. ● Topic F, Lesson 25 – Having students simulate writing numerals by using a straight arm in the air and by using fingers on the carpet, or another tactile surface, presents the information in multiple modes. This provides additional ways for students to process and retain information. ● Topic G, Lesson 29 – During the Launch section of this lesson, support students to express learning in flexible ways. Invite them to keep track of the count on their fingers during the chant. If they count the math way, they will see the quantity growing steadily from left to right. ● Topic G, Lesson 30 – Consider presenting the information in the Launch section of this lesson in another format. If a real staircase is available, invite students to take turns climbing while counting by using the language of 1 more. This can be done in place of this particular Launch activity or at another time of day. Additionally, consider the amount of scaffolding needed when selecting materials for building number stairs. Cubes provide the most structure and are easy to align at the bottom to clearly show

	the pattern of 1 more. Other linking materials may provide similar structure, although some, like chain links, may be harder to align on a horizontal surface. A preprinted number path can also provide support for students working to master the counting sequence. It may also help students organize and align their number stairs.
Learners with a 504	Refer to page four in the Parent and Educator Resource Guide to Section 504 to assist in the development of appropriate plans.

Interdisciplinary Connections

Standards:

- W.IW.K.2 – Use a combination of drawing, dictating, and writing to compose informative/explanatory texts to convey ideas.
    A. Introduce a topic.
    B. B. Develop the topic with at least two facts or other information and examples related to the topic, including pictures.
    - Lessons 6, 19, & 33 – During the "Organize, Count, and Record" portions of these lessons, students will complete the open-ended, collection organization activities and then record their rationales using a combination of drawing, dictation, and "writing".

- SL.PE.K.1 – Participate in collaborative conversations with diverse partners about *kindergarten topics and texts* with peers and adults in small and larger groups.
    - Lessons 6, 15, 19, & 33 – During the "Share, Compare, and Connect" activities of the above lessons, students will actively engage in a variety of types of discourse to communicate (and elaborate on) their mathematical thinking. ***(These activities repeat throughout the year.)***

- L.VI.K.3.a – Sort common objects into categories (e.g., shapes, foods) to gain a sense of the concepts the categories represent.
    - Lessons 2, 3, 4, & 5 – Students will sort a variety of objects in a variety of ways and describe their similar (and differing) defining attributes. ***(These activities repeat throughout the year.)***

- 6.1.2.HistoryCC.3 – Make inferences about how past events, individuals, and innovations affect our current lives.
    - Lesson 14 – The "Math Past" activities for this lesson will allow students to extend their knowledge of the number 0 by learning about its history.

Integration of 21st Century Skills

Standards:

- 8.1.2.DA.3 – Identify and describe patterns in data visualizations.
    - Lessons 29, 30, 31, & 32 – Students will begin to recognize the meanings of "one more" and "one less" through visual representations (Ex: number stairs, tape diagrams, manipulatives, etc.)

- 8.1.2.AP.1 – Model daily processes by creating and following algorithms (sequence of steps) to complete tasks.
    - Lessons 1 through 33 – Throughout this entire module, students are introduced to and will learn the structure and routines for many of "Fluency" activities that will reappear throughout this module and the modules that follow.

- 9.4.2.CI.1 – Demonstrate openness to new ideas and perspectives.
    - Lessons 30, 32, & 33 – During the "Gallery Walk" portions of these lessons, students will be able to explore (and praise) other students' work and ideas. ***(These activities repeat throughout the year.)***

- 9.4.2.CT.3 – Use a variety of types of thinking to solve problems.

- Lessons 5, 19, 27, 29, & 31 – During each of these lessons, students learn/recall a variety of songs and/or chants to bolster their mathematical understanding and assist them as they work towards their solutions.

Unit Title: Module 2 (Two- and Three-Dimensional Shapes)

Unit Description: Students analyze and describe two- and three-dimensional shapes by considering their attributes. This allows students to identify shapes in the world and create their own examples through building and drawing.

Unit Duration: 16 instructional days (+ a few days to administer the 1:1 end-of-module assessment)
(Please note that Lesson 16 is included in the total number of instructional days but is optional.)

Desired Results

Standard(s):

- **K.G.A.1 – Describe objects in the environment using names of shapes, and describe the relative positions of these objects using terms such as above, below, beside, in front of, behind, and next to.**
- **K.G.A.2 – Correctly name shapes regardless of their orientations or overall size.**
- **K.G.A.3 – Identify shapes as two-dimensional (lying in a plane, "flat") or three-dimensional ("solid").**
- **K.G.B.4 – Analyze and compare two- and three-dimensional shapes, in different sizes and orientations, using informal language to describe their similarities, differences, parts (e.g., number of sides and vertices/"corners") and other attributes (e.g., having sides of equal length).**
- **K.G.B.5 – Model shapes in the world by building shapes from components (e.g., sticks and clay balls) and drawing shapes.**
- K.G.B.6 – Compose simple shapes to form larger shapes. For example, "Can you join these two triangles with full sides touching to make a rectangle?".
- K.CC.A.1 – Count to 100 by ones and by tens.
- K.CC.B.4 – Understand the relationship between numbers and quantities; connect counting to cardinality.
- K.CC.B.4.a – When counting objects, say the number names in the standard order, pairing each object with one and only one number name and each number name with one and only one object.
- K.CC.B.4.b – Understand that the last number name said tells the number of objects counted. The number of objects is the same regardless of their arrangement or the order in which they were counted.
- K.CC.B.5 – Count to answer "how many?" questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1–20, count out that many objects.
- K.M.A.1 – Describe measurable attributes of objects, such as length or weight. Describe several measurable attributes of a single object.
- K.DL.A.1 – Classify objects into given categories; count the numbers of objects in each category and sort the categories by count. (Clarification: Limit category counts to be less than or equal to 10)
- K.M.B.3 – Understand that certain objects are coins and dollar bills, and that coins and dollar bills represent money. Identify the values of all U.S. coins and the one-dollar bill.

Understandings:	**Essential Questions:**
Topic A ● I can name and describe the attributes of flat, 2-dimensional shapes. ● I can describe positions of objects in the environment using positional vocabulary. Topic B	● What words can we use to describe shapes without using their names? ● How can you tell if a shape is a triangle? A circle? A hexagon? A rectangle? ● What makes a square a special type of rectangle?

● I can distinguish between flat, 2-dimensional shapes and solid, 3-dimensional shapes. ● I can name and describe the attributes of solid, 3-dimensional shapes. ● I can classify solid, 3-dimensional shapes according to their attributes. ● I can explain how flat and solid shapes are related. Topic C ● I can draw and build flat and solid shapes according to their attributes.	● What words can we use to describe the position of objects in the world? ● What is the same and what is different about flat and solid shapes? ● What are the names of solid shapes? ● Which solid shapes stack, slide, or roll? Why? ● How are flat and solid shapes related? ● What makes a circle different from other curved shapes? ● What do you have to know about a shape in order to build it? ● Which solid shapes can be made by using squares? Circles? Rectangles? ● Why do we draw shapes and what tools can we use to draw them? ● What happens when you put shapes together?

Assessment Evidence

Assessments:

- Observational Assessment Recording Sheet
- Module Assessment

Benchmarks:

- Kindergarten Snapshots are administered three times per year.
- The iReady Assessment is administered in the fall and winter.

Learning Plans

Lesson #: Module 2, Topic A, Lesson 1

Standard: K.DL.A.1, K.G.B.4

Mathematical Practice: 6

Target: SWBAT find and describe attributes of flat shapes

Learning Activities:

Fluency:

- Counting the Math Way Within 10 – Construct a number line with their fingers while counting aloud to build a sense of quantity and order.
- Counting on the Rekenrek within 3 – Count on the rekenrek to build fluency with counting by ones to 100.
- Work with Money – Identify the values of all US coins and one-dollar bill to build fluency with the understanding that coins and dollar bills are money and have value.

Launch:

- Describe shapes by using their attributes rather than their names.

Learn:

- Shape Sort – Sort shapes based on attributes that classify them.
- Open or Closed – Determine whether a figure is open or closed.

Land:

- Debrief by facilitating a discussion that summarizes how to find and describe attributes of flat shapes.

Daily Exit Ticket: None for this lesson. However, in its place, use the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – 20-bead demonstration rekenrek, Four Figures, 2D shapes, shape cards, chart paper, marker, puppet
- Student – None

Lesson #: Module 2, Topic A, Lesson 2

Standard: K.DL.A.1, K.G.A.1, K.G.A.2, K.G.B.4

Mathematical Practice: 3, 6

Target: SWBAT classify shapes as triangles or nontriangles

Learning Activities:

Fluency:

- Counting on the Rekenrek within 10 – Count on the rekenrek to build fluency with counting by ones to 100.
- Show Me the Math Way – Use the math way to model a given number to build fluency with representing numbers the math way.
- Show Me Attributes – Use body movements to show attributes to prepare for describing shapes.

Launch:

- Identify shapes in pictures of real-world scenes.

Learn:

- Triangle Attributes – Analyze the attributes of a triangle.
- Sit or Stand Sort – Identify figures as examples or nonexamples of triangles.
- Problem Set – Complete the activity pages to practice drawing and identifying triangles.

Land:

- Debrief by facilitating a discussion that summarizes how to classify shapes as triangles or nontriangles.

Daily Exit Ticket: None for this lesson. However, teachers may opt to use the Problem Set pages in conjunction with the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – 20-bead demonstration rekenrek, chart paper, marker, 2D shapes, shape cards
- Student – Student book, crayons

Lesson #: Module 2, Topic A, Lesson 3

Standard: K.DL.A.1, K.G.A.1, K.G.A.2, K.G.B.4

Mathematical Practice: 7

Target: SWBAT classify shapes as circles, hexagons, or neither

Learning Activities:

Fluency:

- Counting on the Rekenrek within 10 – Count on the rekenrek to build fluency with counting by ones to 100.
- Show Me the Math Way – Relate counting the math way to the rekenrek to build fluency with both representations.
- Show Me Attributes – Use body movements to show attributes to prepare for describing shapes.

Launch:

- Describe shapes using mathematical attributes.

Learn:

- Hexagon and Circle Attributes – Identify the attributes of hexagons and circles.
- Shape Sort – Sort shapes into three categories.
- Problem Set – Complete the activity pages to practice drawing and identifying hexagons and circles.

Land:

- Debrief by facilitating a discussion that summarizes how to classify shapes as circles, hexagons, or neither.

Daily Exit Ticket: None for this lesson. However, teachers may opt to use the Problem Set pages in conjunction with the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – 20-bead demonstration rekenrek, 2D shapes (2), Shapes chart
- Student – Sorting cards, Hexagon and Circle Sort, Student book, crayons

Lesson #: Module 2, Topic A, Lesson 4

Standard: K.DL.A.1, K.G.A.1, K.G.A.2, K.G.B.4

Mathematical Practice: 3, 6

Target: SWBAT classify shapes as rectangles or nonrectangles, with square rectangles as a special case

Learning Activities:

Fluency:

- Make 3 with Triangles and Beans – Compose 3 using a triangle to develop familiarity with triangles and their attributes.
- Choral Response: Shapes and Attributes – Identify attributes to develop fluency with analyzing and identifying two-dimensional shapes.

Launch:

- Describe shapes using mathematical attributes.

Learn:

- Rectangle Attributes – Identify the attributes of rectangles.
- Square Attributes – Identify the attributes of square rectangles.
- Shape Sort – Sort shapes into three categories.
- Problem Set – Complete the activity pages to practice drawing and identifying rectangles and square rectangles.

Land:

- Debrief by facilitating a discussion that summarizes how to classify shapes as rectangles or nonrectangles, with square rectangles as a special case.

Daily Exit Ticket: None for this lesson. However, teachers may opt to use the Problem Set pages in conjunction with the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – Two-color beans (3), 2D shapes (3), Shapes chart
- Student – Two-color beans (3), triangles removable, Rectangle Sort, Student book, crayons

Lesson #: Module 2, Topic A, Lesson 5

Standard: K.G.A.1, K.G.A.2

Mathematical Practice: 7

Target: SWBAT communicate the position of flat shapes by using position words

Learning Activities:

Fluency:

- Make 4 with Rectangles and Beans – Compose 4 using a rectangle to develop familiarity with rectangles and their attributes.
- Choral Response: Shapes and Attributes – Identify attributes to develop fluency with analyzing and identifying two-dimensional shapes.

Launch:

- Practice identifying shapes and their attributes.

Learn:

- Position Words – Move an object to show the meaning of position words.
- Shape Game – Practice listening and speaking with position words.

Land:

- Debrief by facilitating a discussion that summarizes how to communicate the position of flat shapes by using position words.

Daily Exit Ticket: None for this lesson. However, in its place, use the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – Two-color beans (4)
- Student – Two-color beans (4), rectangles removable, Simon Says Shapes, scissors, folder, duck removable

Lesson #: Module 2, Topic B, Lesson 6

Standard: K.DL.A.1, K.G.A.3, K.G.B.4

Mathematical Practice: 7

Target: SWBAT distinguish between flat and solid shapes

Learning Activities:

Fluency:

- Simon Says: Position Words – Use position words and place an object to develop familiarity with the terminology from Topic A.
- Show Me Shapes – Identify flat shapes to build fluency with analyzing and identifying two-dimensional shapes.

Launch:

- Describe shapes by using relevant attributes.

Learn:

- Sort and Count – Sort shapes into flats and solids and count each group.
- Sort Your Way – Choose an attribute to sort a set of flats and solids.
- Share, Compare, and Connect – Discuss strategies for sorting shapes.

Land:

- Debrief by facilitating a discussion that summarizes how to distinguish between flat and solid shapes.

Daily Exit Ticket: None for this lesson. However, in its place, use the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – 6-sided dot die, ball, paper circle
- Student – Pencil, Simon Says Shapes, bag of geometric solids (1 per student pair), 2D shapes, Hide-Zero cards (1 set per student pair), work mat (1 per student pair)

Lesson #: Module 2, Topic B, Lesson 7

Standard: K.G.A.1, K.G.A.2, K.G.B.4

Mathematical Practice: 2

Target: SWBAT name solid shapes and discuss their attributes

Learning Activities:

Fluency:

- Make 5 with 5-Groups – Compose 5 by placing beans in 5-groups to develop fluency with number compositions.
- Counting with Movement to 15 – Count with body movement to build fluency with number names and one-to-one correspondence.
- Simon Says: Position Words – Use position words to place an object to develop familiarity with the terminology from Topic A.
- Work with Money – Identify the values of all US coins and one-dollar bill to build fluency with the understanding that coins and dollar bills are money and have value.

Launch:

- Match a solid shape to objects in the world.

Learn:

- Solid Shapes – Name and describe solid shapes.
- Shape Hunt – Find real-world objects that look like solid shapes.

Land:

- Debrief by facilitating a discussion that summarizes how to name solid shapes and discuss their attributes.

Daily Exit Ticket: None for this lesson. However, in its place, use the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – 5-Group removable, two-color beans (5), Solid Shape Signs, box, paper bag, bag of geometric solids
- Student – 5-Group removable, two-color beans (5), bag of geometric solids

Lesson #: Module 2, Topic B, Lesson 8

Standard: K.G.A.2, K.G.B.4

Mathematical Practice: 7

Target: SWBAT classify solid shapes based on the ways they can be moved

Learning Activities:

Fluency:

- Counting on the Rekenrek within 10 – Count on the rekenrek to build fluency with counting by ones to 100.
- Show Me the May Way – Relate counting the math way to the rekenrek to build fluency with both representations.
- Show Me Shapes – Identify solid shapes to develop fluency with analyzing and identifying three-dimensional shapes.

Launch:

- Use attributes to identify a solid shape.

Learn:

- Roll, Slide, or Stack – Consider how to make solids roll, slide, or stack.
- Test the Solids – Test solid shapes based on if they roll, slide, or stack.
- Gallery Walk – Student their peers' work.

Land:

- Debrief by facilitating a discussion that summarizes how to classify solid shapes based on the ways they can be moved.

Daily Exit Ticket: None for this lesson. However, in its place, use the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – 20-bead demonstration rekenrek, paper bag, bag of geometric solids, classroom objects for ramp
- Student – Bag of geometric solids, classroom objects for ramp, Student book

Lesson #: Module 2, Topic B, Lesson 9

Standard: K.G.A.2, K.G.A.3, K.G.B.4

Mathematical Practice: 1

Target: SWBAT match solid shapes to their two-dimensional faces

Learning Activities:

Fluency:

- Make 5 with 5-Groups – Compose 5 by placing beans in 5-groups to develop fluency with number compositions.
- Show Me Shapes – Identify a solid shape to develop fluency with analyzing and identifying three-dimensional shapes.

Launch:

- Compare the attributes of solid shapes.

Learn:

- Solid Shape Faces – Identify and count the faces of solid shapes.
- Face Stamps – Explore relationships between flat shapes and the faces of solids.
- Shapes on the Farm – Match a flat shape to a solid shape base.

Land:

- Debrief by facilitating a discussion that summarizes how to match solid shapes to their two-dimensional faces.

Daily Exit Ticket: None for this lesson. However, in its place, use the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – 5-Group removable, two-color beans (5), bag of geometric solids, smiley face stickers (12)
- Student – 5-Group removable, two-color beans (5), bag of geometric solids, clay, farm removable

Lesson #: Module 2, Topic C, Lesson 10

Standard: K.G.A.1, K.G.B.4, K.G.B.5

Mathematical Practice: 7

Target: SWBAT construct a circle

Learning Activities:

Fluency:

- Match: Sets and Numerals – Match a numeral to a set to build fluency with one-to-one correspondence.

Launch:

- Make observations about different types of wheels.

Learn:

- Construct a Circle – Use equal length straws to create the outer points of a circle.
- Is It a Circle? – Reason about a shape to determine if it is a circle.
- Circle Test – Check curved shapes for defining attributes of a circle.

Land:

- Debrief by facilitating a discussion that summarizes how to construct a circle.

Daily Exit Ticket: None for this lesson. However, in its place, use the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – None
- Student – Match cards (1 set per student pair), straw-style plastic coffee stirrers (9), two-color counter, unifix cubes (16), Circle or Not? removable

Lesson #: Module 2, Topic C, Lesson 11

Standard: K.DL.A.1, K.G.A.2, K.G.B.4, K.G.B.5

Mathematical Practice: 3

Target: SWBAT construct and classify polygons

Learning Activities:

Fluency:

- Happy Counting within 5 – Count forward and backward by ones to develop familiarity with Happy Counting.
- Peek-a-Boo Shapes – Recognize flat shapes and answer questions about their attributes to prepare for constructing and classifying polygons.
- Work with Money – Identify the values of all US coins and one-dollar bill to build fluency with the understanding that coins and dollar bills are money and have value.

Launch:

- Explore 4-sided polygons.

Learn:

- Construct Polygons – Construct polygons based on a specified number of sides.
- Gallery Walk – Analyze and critique the work of others.
- Yarn Shapes – Collaborate to construct shapes by using a single piece of yarn.

Land:

- Debrief by facilitating a discussion that summarizes how to construct and classify polygons.

Daily Exit Ticket: None for this lesson. However, in its place, use the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – Puppet, straw-style plastic coffee stirrers, Hide-Zero cards (demonstration set)
- Student – Straw-style plastic coffee stirrers, yarn (8 feet per student group)

Lesson #: Module 2, Topic C, Lesson 12

Standard: K.G.A.3, K.G.B.4, K.G.B.5

Mathematical Practice: 6

Target: SWBAT construct solid shapes by using a square base

Learning Activities:

Fluency:

- Happy Counting within 10 – Count forward and backward by ones to develop familiarity with Happy Counting.
- Peek-a-Boo Shapes – Recognize solid shapes and answer questions about their attributes to prepare for constructing a solid shape from polygons.

Launch:

- Construct a model of a square.

Learn:

- Construct Solid Shapes – Construct a solid shape from a square base.
- Construct Faces, Edges, and Corners – Count the faces, edges, and corners of a cube, rectangular prism, and pyramid.

Land:

- Debrief by facilitating a discussion that summarizes how to construct solid shapes by using a square base.

Daily Exit Ticket: None for this lesson. However, in its place, use the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – Straw-style plastic coffee stirrers, modeling clay, Three Solids Pictures
- Student – Straw-style plastic coffee stirrers (50 – 100 per small group), modeling clay (a large ball per small group), bag of geometric solids (1 per student pair)

Lesson #: Module 2, Topic C, Lesson 13

Standard: K.G.B.4, K.G.B.5

Mathematical Practice: 5

Target: SWBAT draw flat shapes

Learning Activities:

Fluency:

- Counting with Movement to 20 – Count with body movements to build fluency with number names and one-to-one correspondence.
- Feel the Number to 10 – Finger trace and guess a numeral to build kinesthetic memory for numeral formation.

Launch:

- Notice and discuss how many they see in a picture.

Learn:

- Analyze Art – Analyze the Navajo blanket and compare what they see with what they know about shapes.
- Trace Shapes – Use a straightedge to trace polygons.
- Create Shapes – Draw and name polygons.
- Who Draws Shapes? – Make real-world connections to their work with building and drawing shapes.

Land:

- Debrief by facilitating a discussion that summarizes how to draw flat shapes.

Daily Exit Ticket: None for this lesson. However, in its place, use the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – Hide-Zero cards (demonstration set), straightedge, dot paper
- Student – Straightedge, dot paper

Lesson #: Module 2, Topic C, Lesson 14

Standard: K.G.A.1, K.G.A.2, K.G.B.6

Mathematical Practice: 6

Target: SWBAT compose flat shapes

Learning Activities:

Fluency:

- Happy Counting within 10 – Count forward and backward by ones to develop familiarity with Happy Counting.
- Whiteboard Exchange: Numeral Writing – Keep score by writing a number from 0 to 10 to build proficiency with numeral formation.

Launch:

- Explore by creating pictures with pattern blocks.

Learn:

- Shape Pictures – Listen to position words and place blocks to compose larger shapes.
- Shape Puzzles – Use pattern blocks to compose a shape.
- Problem Set – Complete the pattern block puzzles.

Land:

- Debrief by facilitating a discussion that summarizes how to compose flat shapes.

Daily Exit Ticket: None for this lesson. However, teachers may opt to use the Problem Set page in conjunction with the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – Puppet, pattern block puzzles, pattern blocks
- Student – Scoreboard removable, personal whiteboard, dry-erase marker, pattern blocks, work mat, pattern block puzzles

Lesson #: Module 2, Topic C, Lesson 15

Standard: K.G.B.4, K.G.B.6, K.M.A.1

Mathematical Practice: 1

Target: SWBAT compose solid shapes to create a structure (that can fit a small toy inside)

Learning Activities:

Fluency:

- *None for this lesson.*

Launch:

- Analyze and discuss what they notice about a house.

Learn:

- Pet Houses – Create a house that an animal can fit inside.
- Gallery Walk – Do a gallery walk to examine others' work and to hunt for shapes.

Land:

- Debrief by facilitating a discussion that summarizes how to compose solid shapes to create a structure (that can fit a small toy inside).

Daily Exit Ticket: None for this lesson. However, in its place, use the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – Blocks, stuffed animal
- Student – Blocks, stuffed animal, blank paper, crayon

Lesson #: Module 2, Topic C, Lesson 16 ***(OPTIONAL)***

Standard: K.CC.A.1, K.CC.B.4, K.CC.B.4a-b, K.CC.B.5

Mathematical Practice: 4

Target: SWBAT organize, count, and represent a collection of objects

Learning Activities:

Fluency:

- *None for this lesson.*

Launch:

- Review procedures and prepare to explore a counting collection

Learn:

- Organize, Count, and Record – Use their own strategies to count objects and record their process.
- Share, Compare, and Connect – Discuss strategies for counting and recording a collection.

Land:

- Debrief by facilitating a discussion that summarizes how to organize, count, and represent a collection of objects.

Daily Exit Ticket: None for this lesson. However, teachers may opt to use student drawings to informally assess student understanding of the lesson objective.

Resources:

- Teacher – None
- Student – Counting collection (1 per student pair), work mat, organizing tools, Student book

Unit Modifications for Special Population Students	
Advanced Learners	● Topic A, Lesson 2 – During the Debrief section of this lesson, challenge students to find the composite triangles in the flag. For example, the blue and yellow triangles make a larger triangle. The white and green triangles do the same. ● Topic A, Lesson 3 – During the Learn section of this lesson, invite students to draw new shapes that belong in each category. ● Topic A, Lesson 5 – If students have a strong grasp of position words, challenge them to describe the orientation of each shape as well as the position. Use questions to help them consider details, such as: "What is different about your hexagons right now?" and/or "What could you say to your partner, so their hexagon looks exactly the same as yours?" ● Topic B, Lesson 9 – During the Fluency section of this lesson, if students are ready, remove the beans. Ask them to circle the dots with their finger to visualize the number compositions. For example: "Circle 4 dots with your finger.", "How many more dots to make 5?" or, "Say the sentence to make 5. Start with 4." ● Topic C, Lesson 10 – During the Fluency section of this lesson, consider any of the following "Match" game adaptations to increase the challenge as students are ready: lay out eight cards in two rows of four to build students' ability to sort through more visual information, and/or invite students to find two cards that make 5, 10, or another target number. ● Topic C, Lesson 12 – Have students compare the number of faces, edges, and corners on the three solids. Ask them to think about why a pyramid has fewer edges and corners than the other shapes. ● Topic C, Lesson 13 – During the Learn section of this lesson, challenge students to draw a shape with 5 or 6 sides. ● Topic C, Lesson 14 – Kindergarten students who have experience with pattern block puzzles may move through the Problem Set quickly. Increase the challenge by asking students to fill in the puzzle without one of the suggested shapes. Tell them which shape to omit and ask them to choose other shapes to complete the puzzle. Avoid omitting the square until students successfully complete a puzzle without one of the other shapes. Mention that some of the puzzles cannot be completed without a square. Ask students, *"Can you find which ones?"* ● Topic C, Lesson 15 – Challenge students to design a multistory structure, using cardboard to serve as ceilings between each level. Invite them to use their imagination. Perhaps other pets are housed there, as in an apartment building.
Struggling Learners	● Topic A, Lesson 1 – For the Debrief section of the lesson, use the body movements learned during the lesson to help students generate the describing words used in the lesson. ● Topic A, Lesson 3 – During the Learn section of the lesson, if students place a card incorrectly, support them by rereading the category titles and asking: *"How many sides (or corners) do you count?"* and/or *"What is the name of the shape on the card?"* If students group the cards correctly, but place the group in the wrong category, help them to reread the titles and move their cards. Additionally, if students have difficulty keeping track of the number of sides as they count on their own, then suggest the mark and count strategy used to count sets of objects in Module 1. Invite them to track the count by tracing the sides with a highlighter. Have them pause after each side. ● Topic A, Lesson 4 – When a square is oriented with a corner pointed down, some students will call it a diamond. If this happens, try taking a common object like a marker and holding it one way and then another. The name of the marker doesn't change because it turns. The same is true of the square. It is still a square even when it is turned. ● Topic B, Lesson 8 – If students make mistakes, prompt them to check their work by asking the following question: *"Can you show how the ___ rolls, slides, or stacks?"* The difference between rolling and sliding may need clarification such as the following: *"Does it roll like a ball, turning as it goes?"* Or *"Does it move smoothly, like when you go down a slide? You don't turn around and around as you slide."*

	● Topic B, Lesson 9 – If students hesitate to find the shape based on its name alone, consider including the description of the common object. For example: *"Find the shape that looks like a ball, the sphere."* Or *"Find the shape that looks like a die, the cube."* Continue offering this language as support until students are familiar with the names of the solid shapes. ● Topic C, Lesson 10 – If students do not recognize that no matter where the straw is placed, the space from the center to the curve remains the same, consider using different-sized straws to support understanding. Make some straws the length of the radius of the circle. Make other straws the length of the longer and shorter radii of the oval. Have students observe that the oval requires different-length straws to reach from the center to the curve, but the circle uses the same-length straw all the way around. Ask students to rotate straws around the circle, like hands on a clock. Point out that no matter where the straw is placed, the space from the center to the outer part of the circle remains the same. Experiment with the oval by using a short straw and a long straw. Point out the places where the straw does not reach, or where it goes over the boundary of the oval. ● Topic C, Lesson 13 – During the Fluency section of this lesson, if writers need support, they can say the numeral formation rhyme as they trace. If guessers need support, writers can write in the guessers' hand so that they can both feel and see the numeral. Adjust the seating arrangement as necessary. Additionally, during the Learn section of this lesson, if students need support in drawing their own shapes, color 3 dots to highlight the corners of a triangle. Explain that connecting 2 dots makes 1 side of the shape. Encourage students to connect the dots by drawing lines to make a 3- or 4-sided shape. ● Topic C, Lesson 15 – Resist the urge to assist or engage in building with the students. Students may benefit from verbal suggestions such as "You could stack your blocks to make the wall taller," or invite students to look around at the work of others.
English Language Learners	● Throughout Module 2 – For discussions, consider using strategic, flexible grouping. Pairing suggestions include: pair students who have different levels of mathematical proficiency and/or who have different levels of English language proficiency. As applicable, complement any of these groupings by pairing students who speak the same native language. ● Topic A, Lesson 1 – This is the first use of the term *describe* as a verb. Use language such as *tell about* or *explain* to help students understand the meaning of the term. Support students in using precise language by prompting them for it. Consider the following examples: *"How can we describe this shape?"* (It has pointy parts.) *"What is another name for those pointy parts?"* (Corners) ● Topic A, Lesson 2 – Learning the names *triangle* and *rectangle* can be problematic for students because both words have the same ending, *-angle*. Hexagon may be unfamiliar. Until the names of flat shapes become part of students' vocabulary, reinforce their meaning by coupling the flat shape name with a descriptive term. For example: *"Is it still a 3-sided shape, a triangle?"* Continue scaffolding the language in subsequent lessons as students learn the names of other flat shapes: *"How do you know it's a 6-sided shape, a hexagon?"* ● Topic B, Lesson 7 – Support students during group talk by incorporating gestures. For example, when describing a cube as pointy, encourage students to reinforce the meaning of pointy by touching each corner. They might also trace the face of a solid shape when relating it to its flat counterpart. ● Topic B, Lesson 8 – The names of solid shapes can be difficult to master because some are tricky to pronounce and are not often heard or used in everyday speech. To promote command of the new terminology, consider delivering the Fluency activity, "Show Me Shapes", as a musical fluency, inviting students to hold up the corresponding shape when they hear it in a song. Choose from the many online options suitable for kindergarten learners. While it is well known that songs aid in memorization, they also lead students to incorporate new vocabulary into their productive language. When they hear a catchy song again and again in their mind, they have the opportunity to internally

	rehearse the new vocabulary. Additionally, use gestures to reinforce the meaning of roll, stack, and slide. (Ex: For roll, make a circular motion with fingers to resemble wheels. For stack, stack one hand on top of the other and alternate the hand that is on top. For slide, slide one palm across the other or down the arm, like a sliding board.) Encourage students to use the same gestures. Consider putting the new vocabulary into use immediately with a brief practice similar to the "Show Me Attributes" Fluency activity. Lastly, as students share their thoughts about stacked solids during the Land section of this lesson, encourage them to name the attributes and use position words. Revoice their explanations when necessary. For example, if a student says, while pointing, *"That stack has the cube here, and the other tower has the cube up here, "* revoice as, *"The cube is under the rectangular prism in this stack and on top of the rectangular prism in the other stack."* ● Topic C, Lesson 11 – As students work together to construct the shapes with yarn, encourage them to use precise language as they make suggestions to teammates. For example: *"Can you pull here so it will have a curve?"* Or *"If you pinch the yarn right here, it'll make a corner."* Or *"Let's pull the yarn tight so that it'll be straight."* ● Topic C, Lesson 13 – *Model* is a multiple-meaning word. Some students may be familiar with role models or fashion models. Explain that, in this context, a model is a miniature version of a real object. If you have toys in the classroom that resemble much larger objects, such as a playhouse or trucks, offer those as examples of models. ● Topic C, Lesson 14 - There are different ways to interpret the meaning of position words such as *above* and *on top*. To assist with this, you may opt to use hand signals to support understanding of positional terminology. ● Topic C, Lesson 15 – Students may be more precise with gestures or actions than with words. Encourage them to use blocks or their hands to explain what Puppet should do. For example, students may stretch out their arms wide to show that the house needs to be wider or reach their hands overhead to show that the house needs to be taller. Narrate their actions so that they can begin to expand their vocabulary. In Module 3, students will learn to use more precise words than *bigger* and *smaller* to describe measurable attributes. As you talk to students about their constructions, use words and phrases such as *taller*, *shorter*, *longer*, *wider*, and *more space* (area) to build foundational experiences for the next module.
Special Needs Learners	● Topic A, Lesson 4 – If students need more concrete experiences with shapes that have sides that go straight up and down, distribute the pattern blocks to provide practice. Ask students to place the 4 sides of each block on their desk to see if 2 sides go straight up and down. ● Topic B, Lesson 7 – Adjust the "Counting with Movement to 15" activity to engage as many students as possible. Consider their physical abilities, cultural background, and interests when choosing movements. *(The "Counting with Movement to 15" activity reappears throughout the module as well.)* ● Topic C, Lesson 10 – Consider providing precut straws and allowing students to work with a partner to minimize the fine motor demands of the task. ● Topic C, Lesson 13 – During the Fluency section of this lesson, for any student uncomfortable with touch, this game can be played by having the writer write in the air or on the rug. Additionally, during the Learn section, geoboards are another great visual/tactile tool that students can use to build shapes while attending to their attributes.
Learners with a 504	Refer to page four in the Parent and Educator Resource Guide to Section 504 to assist in the development of appropriate plans.

Interdisciplinary Connections

Standards:

- SL.II,K.2 – Confirm understanding of a text read aloud or information presented orally or through other media by asking and answering questions about key details and requesting clarification if something is not understood.
    - Lessons 5 & 10 – "The Secret Birthday Message" by Eric Carle and "Rosie's Walk" by Pat Hutchins are two suggested read alouds to further student knowledge of positional vocabulary in Lesson 5. Then, in Lesson 10, it is suggested that "Tangled" by Anne Miranda is read to further explore ellipses (ovals).

- SL.II,K.2 – Confirm understanding of a text read aloud or information presented orally or through other media by asking and answering questions about key details and requesting clarification if something is not understood.
    - Lesson 13 – During this lesson, students will learn that architects draw shapes for a living. It is suggested that K. L. Going's "The Shape of the World: A Portrait of Frank Lloyd Wright" and Jeanette Winter's "The World Is Not a Rectangle: A Portrait of Architect Zaha Hadid" are read aloud either before or after this lesson to connect shapes to the work of architects.

- SL.PI.K.4 – Describe familiar people, places, things, and events and, with prompting and support, provide additional detail.
    - Lesson 16 – Students are challenged with the task to organize shapes in whatever way they see fit. Once their shapes are organized, they will be asked to count and represent/describe those shapes and their groupings.

- 6.1.2.Geo.GI.2 – Use technology to understand the culture and physical characteristics of regions. *(The 2014 standard also aligns here: 6.1.4.A.14 – Describe how the world is divided into many nations that have their own governments, languages, customs, and laws.)*
    - Lessons 2 & 4 – These lessons offer students the opportunity to explore flags from around the world that have triangles and/or rectangles embedded into their design. Students will also engage in (developmentally appropriate) research, as a class, to learn facts about that country and locate them on the map.

- 6.1.2.HistorySE.1 – Use examples of folk heroes, stories, and/or songs and make inferences about how they have contributed to the development of a culture's history.
    - Lesson 13 – During the "Analyze Art" activity in the Learn section of this lesson, students will analyze a Navajo blanket and compare what they see with what they know about shapes. Additionally, they will learn a little of its background and history (see the *Teacher Note* in the teacher's manual for more details).

Integration of 21st Century Skills

Standards:

- 8.2.2.ED.2 – Collaborate to solve a simple problem, or to illustrate how to build a product using the design process.
    - Lesson 15 – During this lesson, students are posed with a scenario: build a house for a stuffed pet. They will be provided with a plethora of materials and tools in order to devise a plan and build a "just right" structure for their pet to live in.

- 8.2.2.ED.3 – Select and use appropriate tools and materials to build a product using the design process.
    - Lessons 11 & 12 – During these lessons, students will use a myriad of provided tools and materials to construct polygons and solid shapes based on their prior knowledge of their attributes.

- 9.4.2.CI.1 – Demonstrate openness to new ideas and perspectives.
    - Lesson 6 – During the "Sort Your Way" activity in the Learn section of this lesson, partners will take turns thinking aloud as they sort. (For example, partner A sorts first and while sorting and explains their decisions to partner B. Partner B listens and asks partner A questions. Then, they will switch roles.) Thinking aloud prompts students to focus on their reasoning and change course, as needed, as they talk through decisions. Taking turns ensures that each partner has an opportunity to determine the sorting strategy and describe their reasoning.

- 9.4.2.CI.2 – Demonstrate originality and inventiveness in work.
    - Lesson 16 – Students are challenged with the task to organize shapes in whatever way they see fit. Once their shapes are organized, they will be asked to count and represent/describe those shapes and their groupings.

- 9.4.2.CT.2 – Identify possible approaches and resources to execute a plan.
    - Lesson 8 – Students learn the meanings of the words *stack*, *roll*, and *slide*. Then, they will brainstorm ways that they can "test" a series of 3-dimensional/solid shapes and determine if they fit into those categories/have those attributes.

Unit Title: Module 3 (Comparison)

Unit Description: Students analyze and describe two- and three-dimensional shapes by considering their attributes. This allows students to identify shapes in the world and create their own examples through building and drawing.

Unit Duration: 22 instructional days (+ a few days to administer the 1:1 end-of-module assessment)
(Please note that Lesson 22 is included in the total number of instructional days but is optional.)

Desired Results

Standard(s):

- **K.CC.C.6 – Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group, e.g., by using matching and counting strategies. (Clarification: Include groups with up to ten objects.)**
- **K.CC.C.7 – Compare two numbers between 1 and 10 presented as written numerals.**
- **K.DL.A.1 – Classify objects into given categories; count the numbers of objects in each category and sort the categories by count. (Clarification: Limit category counts to be less than or equal to 10)**
- **K.M.A.1 – Describe measurable attributes of objects, such as length or weight. Describe several measurable attributes of a single object.**
- **K.M.A.2 – Directly compare two objects with a measurable attribute in common, to see which object has "more of"/"less of" the attribute and describe the difference.**
- K.CC.A.3 – Write numbers from 0 to 20. Represent a number of objects with a written numeral 0–20 (with 0 representing a count of no objects).
- K.G.B.5 – Model shapes in the world by building shapes from components (e.g., sticks and clay balls) and drawing shapes.
- K.G.B.6 – Compose simple shapes to form larger shapes. For example, "Can you join these two triangles with full sides touching to make a rectangle?"
- K.CC.A.1 – Count to 100 by ones and by tens.
- K.CC.B.4 – Understand the relationship between numbers and quantities; connect counting to cardinality.
- K.CC.B.5 – Count to answer "how many?" questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1–20, count out that many objects.
- K.OA.A.3 – Decompose numbers less than or equal to 10 into pairs in more than one way, e.g., by using objects or drawings, and record each decomposition by a drawing or equation (e.g., 5 = 2 + 3 and 5 = 4 + 1).

Understandings:

Topic A:

- I can compare lengths using the appropriate vocabulary: "taller", "longer than", "shorter than", and/or "about the same length as".

Topic B:

- I can compare weights using the appropriate vocabulary: "heavier than", "lighter than", and/or "about the same weight as".
- I can use a balance scale to compare the weights of objects.

Topic C:

- I can compare and describe sets of objects using numbers and/or the appropriate vocabulary: "more than", "less than", and "the same number/amount as".

Topic D:

Essential Questions:

- How can you tell if an object is *longer than*, *shorter than*, or *about the same length as* another object? How can you confirm?
- How can you tell whether an object is heavier or lighter than another object? How can you tell that it's about the same weight?
- What happens when you use different units to balance the same object?
- What happens to the weight of an object when you change its shape?
- How can we compare the number of objects in two groups to tell which group has more/less?
- How can we compare groups of objects that are different in size and shape?
- When you compare numbers, how do you know which number is greater? Less?

● I can compare the capacity of objects by using numerals and the appropriate vocabulary: “greater than”, “less than”, and/or “equal to”. ● I can compare and describe measurable attributes of shapes.	● When is it helpful to compare numbers? ● In what different ways can we compare objects?

Assessment Evidence

Assessments:
- Observational Assessment Recording Sheet
- Module Assessment

Benchmarks:
- Kindergarten Snapshots are administered three times per year.
- The iReady Assessment is administered in the fall and winter.

Learning Plans

Lesson #: Module 3, Topic A, Lesson 1

Standard: K.DL.A.1, K.M.A.1, K.M.A.2

Mathematical Practice: 6

Target: SWBAT align endpoints to compare lengths by using *taller than* and *shorter than*

Learning Activities:

Fluency:
- Sunrise, Sunset Counting to 10 – Count to 10 and back down to 0 to prepare to connect number to height.
- Counting the Math Way Within 10 – Construct a number line with their fingers while counting aloud to build a sense of quantity and order.
- Make Groups of 6 – Make a group of 6 people to build efficiency in counting objects in varied configurations.

Launch:
- Reason about pictures to notice the measurable attribute of length.

Learn:
- Taller and Shorter – Try to compare lengths of objects when endpoints are not aligned.
- Scavenger Hunt – Compare objects and make *taller than* and *shorter than* statements.
- Problem Set – Complete the activity pages to identify the objects that are taller or shorter.

Land:
- Debrief by facilitating a discussion that summarizes how to align endpoints to compare lengths by using *taller than* and *shorter than*.

Daily Exit Ticket: None for this lesson. However, teachers may opt to use the Problem Set page in conjunction with the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:
- Teacher – Music, colored pencils (4), length comparison cards, glue stick, marker
- Student – Length comparison cards, resealable plastic bag, glue stick, Learn book

Lesson #: Module 3, Topic A, Lesson 2

Standard: K.DL.A.1, K.M.A.1, K.M.A.2

Mathematical Practice: 6

Target: SWBAT compare lengths of simple straight objects by using *longer than*, *shorter than*, and *about the same length as*

Learning Activities:

Fluency:

- Sunrise, Sunset Counting to 12 – Count to 12 and back down to 0 to prepare to connect number to height.
- Make Groups of 7 – Make a group of 7 people to build efficiency in counting objects in varied configurations.
- Show Me Taller and Shorter – Use gestures for taller and shorter and compare the heights of objects to develop familiarity with terminology used for comparison.

Launch:

- Reason about the words *tall* and *long* as they relate to length.

Learn:

- Longer, Shorter, Same As – Compare lengths of objects and make comparative statements.
- Scavenger Hunt – Compare objects and make *longer than*, *shorter than*, and *about the same* length statements.
- Problem Set – Complete the activity pages to identify the objects that are longer, shorter, or about the same length.

Land:

- Debrief by facilitating a discussion that summarizes how to compare lengths of simple straight objects by using *longer than*, *shorter than*, and *about the same length as*.

Daily Exit Ticket: None for this lesson. However, teachers may opt to use the Problem Set page in conjunction with the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – Music, marker, crayon, classroom items, colored pencils (4)
- Student – Length comparison cards, resealable plastic bag, shoe

Lesson #: Module 3, Topic A, Lesson 3

Standard: K.DL.A.1, K.M.A.2

Mathematical Practice: 1

Target: SWBAT compare lengths of complex objects by using *longer than*, *shorter than*, and *about the same length as*

Learning Activities:

Fluency:

- Sunrise, Sunset Counting to 15 – Count to 15 and back down to 0 to prepare to connect number to height.
- Make Groups of 8 – Make a group of 8 people to build efficiency in counting objects in varied configurations.
- Show Me Longer and Shorter – Use gestures for longer and shorter and compare the heights of objects to develop familiarity with terminology used for comparison.

Launch:

- Compare pieces of yarn and make *longer than*, *shorter than*, and *about the same length* statements.

Learn:

- Station Introduction – Learn procedures for station rotations.
- Sort by Length – Compare objects and make *longer than*, *shorter than*, and *about the same* length statements.
- Make It Long Enough – Create a ring and a bracelet long enough to fit around their finger and wrist, respectively.
- Compare the Yarn – Compare the length of pieces of yarn and make a comparison statement.

Land:

- Debrief by facilitating a discussion that summarizes how to compare lengths of complex objects by using *longer than*, *shorter than*, and *about the same length as*.

Daily Exit Ticket: None for this lesson. However, in its place, use the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – Music, marker, crayon, classroom items, chart paper (3 sheets), masking tape, yarn, bracelet or necklace
- Student – Yarn, resealable plastic bag, dough or clay, unifix cubes, scissors

Lesson #: Module 3, Topic A, Lesson 4

Standard: K.G.B.5, K.M.A.2

Mathematical Practice: 6

Target: SWBAT compare lengths of cube sticks to flat shapes

Learning Activities:

Fluency:

- Build Cube Sticks – Build a cube stick to match a number to prepare for comparing lengths.
- Choral Response: Which Step Is Missing? – Name the number on the missing step to build fluency with relating number to length.

Launch:

- Apply length comparison to a situation.

Learn:

- Compare Side Lengths – Compare side lengths of shapes.
- Conservation of Length – Compare the same object with different parts of a cube stick to observe that the length remains the same.
- Problem Set – Complete the activity to compare the lengths of objects with others.

Land:

- Debrief by facilitating a discussion that summarizes how to compare lengths of cube sticks to flat shapes.

Daily Exit Ticket: None for this lesson. However, teachers may opt to use the Problem Set page in conjunction with the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – 2D shape (triangle), unifix cubes (26), sticky note
- Student – Unifix cubes (16), 6-sided dot die (1 per student pair), 2D shape (1 per student pair), Frames removable, crayons

Lesson #: Module 3, Topic A, Lesson 5

Standard: K.CC.A.3, K.CC.B.4c, K.M.A.2

Mathematical Practice: 4

Target: SWBAT compare the lengths of two cube sticks

Learning Activities:

Fluency:

- Counting the Math Way Within 10 – Construct a number line with their fingers while counting aloud to build a sense of quantity and order.
- Show Me Taller and Shorter, Longer and Shorter – Use gestures for taller, longer, and shorter and compare the heights or lengths of objects to develop familiarity with terminology used for comparison.
- Build Cube Sticks – Build a cube stick to match a number to prepare for comparing lengths.

Launch:

- Apply length comparison to a situation.

Learn:

- Compare Cube Lengths – Determine whether their cube stick is longer, shorter, or the same as their partner's cube stick.
- Record Comparisons – Record whether their cube stick is longer, shorter, or the same as their partner's cube stick.
- Problem Set – Complete the activity to compare the lengths of the cube sticks.

Land:

- Debrief by facilitating a discussion that summarizes how to compare the lengths of two cube sticks.

Daily Exit Ticket: None for this lesson. However, teachers may opt to use the Problem Set page in conjunction with the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – Marker or crayon, classroom items, recording sheet, number path, unifix cubes (8)
- Student – Unifix cubes, resealable plastic bag, 6-sided dot die (1 per student pair), River Scene, Hide-Zero card, recording sheet, marker or crayon, Student book

Lesson #: Module 3, Topic A, Lesson 6

Standard: K.OA.A.3, K.M.A.2

Mathematical Practice: 2

Target: SWBAT compose cube sticks that are the same length

Learning Activities:

Fluency:

- Build and Compare: Height – Build and compare cube sticks to prepare for comparing lengths.
- Build Cube Sticks – Build a cube sticks of various lengths to develop fluency with counting, composing, and subitizing.

Launch:

- Find more than one way to make a cube stick a designated length.

Learn:

- Relate Equal Length to Number – See that cube sticks of equal length can be composed of different parts.
- Build and Compare – Add or remove cubes to make sticks of equal length.

Land:

- Debrief by facilitating a discussion that summarizes how to compose cube sticks that are the same length.

Daily Exit Ticket: None for this lesson. However, in its place, use the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – Unifix cubes (8), 6-sided dot die
- Student – Unifix cubes, resealable plastic bag, 6-sided dot die (1 per student pair), River Scene, Student book

Lesson #: Module 3, Topic B, Lesson 7

Standard: K.M.A.1, K.M.A.2

Mathematical Practice: 5

Target: SWBAT compare weights by using *heavier than*, *lighter than*, and *about the same weight as*

Learning Activities:

Fluency:

- Choral Response: Which Step Is Missing? – Name the number of the missing step to build fluency with relating number to length.
- Building Up to the Sprint Routine: What Is a Sprint? – Learn about the procedure and goals of a Spring to develop familiarity with the Sprint Routine.

Launch:

- Engage in a series of demonstration to investigate weight.

Learn:

- Scavenger Hunt – Compare objects and make *heavier than* and *lighter than* statements.
- Heavier Than and Lighter Than – Use a balance scale to compare the weights of two objects.

Land:

- Debrief by facilitating a discussion that summarizes how to compare weights by using *heavier than*, *lighter than*, and *about the same weight as*.

Daily Exit Ticket: None for this lesson. However, in its place, use the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – Unifix cube number stairs to 10, marker, music, stapler, school rocker scale, puppet, weight comparison cards
- Student – Yarn, Student book, weight comparison cards

Lesson #: Module 3, Topic B, Lesson 8

Standard: K.DL.A.1, K.M.A.2

Mathematical Practice: 3

Target: SWBAT use a balance scale to compare two objects

Learning Activities:

Fluency:

- Show Me Heavier and Lighter – Use gestures for heavier and lighter and compare the weights of objects to develop fluency with terminology used for comparison.
- Building Up to the Sprint Routine: Start and Stop at the Signal – Practice starting and stopping at the signal to develop familiarity with the Sprint routine.

Launch:

- Analyze sorted pictures to find a rule that applies.

Learn:

- Heavier, Lighter, and the Same As – Compare the weights of two objects and comparative statements.
- Scavenger Hunt – Compare objects and make *heavier than* and *lighter than* statements.

Land:

- Debrief by facilitating a discussion that summarizes how to use a balance scale to compare two objects.

Daily Exit Ticket: None for this lesson. However, in its place, use the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – Heavier or Lighter Recording Sheet, bell, school rocker scale, pencil, book, classroom items, weight comparison cards, music, stapler, scissors
- Student – Heavier or Lighter Recording Sheet, weight comparison cards, school rocker scale (1 per student group), Student book

Lesson #: Module 3, Topic B, Lesson 9

Standard: K.M.A.2

Mathematical Practice: 2

Target: SWBAT use a balance scale to compare an object to a group of cubes

Learning Activities:

Fluency:

- Green Light, Red Light – Count from different numbers to build fluency counting forward and backward from a given number.
- Happy Counting by Ones Within 15 – Visualize a number line while counting aloud to build fluency counting within 100.

Launch:

- Physically experience the concept of balance.

Learn:

- Balance the Scale – Watch how a balance scale moves as weight changes.
- Compare and Record – Compare and record the weight of an object.
- Problem Set – Complete the activity page to indicate how much each object weighs.

Land:

- Debrief by facilitating a discussion that summarizes how to use a balance scale to compare an object to a group of cubes.

Daily Exit Ticket: None for this lesson. However, teachers may opt to use the Problem Set page in conjunction with the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – School rocker scale, unifix cubes (20), glue stick
- Student – Student book, classroom objects (per student group), bag of unifix cubes (1 per student group), school rocker scale (1 per student group), Balance Scale Recording Sheet

Lesson #: Module 3, Topic B, Lesson 10

Standard: K.M.A.2

Mathematical Practice: 4

Target: SWBAT use a balance scale to compare an object to different units

Learning Activities:

Fluency:

- Green Light, Red Light – Count from different numbers to build fluency counting forward and backward from a given number.
- Happy Counting by Ones Within 20 – Visualize a number line while counting aloud to build fluency counting within 100.

Launch:

- Reason about the relationship between number and weight.

Learn:

- Same Unit, Different Color – Consider whether color affects weight.
- Different Units – Compare sets of units to a glue stick.
- Balance and Record – Weigh a single object and compare its weight by using different units.
- Reason About Units – Compare sets of units to a glue stick and reason about the units in each set.

Land:

- Debrief by facilitating a discussion that summarizes how to use a balance scale to compare an object to different units.

Daily Exit Ticket: None for this lesson. However, in its place, use the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – Resealable plastic bag (2), cotton balls (10), similar sized rocks (10), school rocker scale, chart paper, unifix cubes (20), glue stick, bag of units
- Student – School rocker scale (1 per student group), classroom object (1 per student group), bag of units (1 per student group), Comparing Weights Recording Sheet, Student book

Lesson #: Module 3, Topic B, Lesson 11

Standard: K.M.A.2

Mathematical Practice: 8

Target: SWBAT observe conservation of weight on the balance scale

Learning Activities:

Fluency:

- Build Equal Balls of Clay – Make clay balls of equal weight to develop the skill of using the balance scale.

Launch:

- Reason about the weight of one object compared to a set of objects.

Learn:

- Bakery – Manipulate balls of clay and weigh them.
- Problem Set – Complete the activity page to show how they balanced the scale.

Land:

- Debrief by facilitating a discussion that summarizes how to observe conservation of weight on the balance scale.

Daily Exit Ticket: None for this lesson. However, teachers may opt to use the Problem Set page in conjunction with the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – School rocker scale, plates (2), cookies (2)
- Student – Clay or dough (1 per student group), school rocker scale (1 per student group), Student book

Lesson #: Module 3, Topic C, Lesson 12

Standard: K.CC.C.6, K.M.A.1

Mathematical Practice: 6

Target: SWBAT relate *more* and *fewer* to length

Learning Activities:

Fluency:

- Choral Response: Which Step Is Missing – Name the number of the missing step to build fluency with relating number to length.
- Building Up to the Spring Routing: Start and Stop at the Signal – Practice starting and stopping at the signal to develop familiarity with the Sprint routine.
- Beep Counting – Determine the missing number in a sequence to prepare for comparison.

Launch:

- Discuss different ways to compare.

Learn:

- Make Name Trains – Use measurement concepts to create name trains.
- Compare Name Trains – Use *longer than*, *more than*, *shorter than*, and *fewer than* to compare names.
- Problem Set – Complete the activity page to compare the lengths of given names and/or objects.

Land:

- Debrief by facilitating a discussion that summarizes how to relate *more* and *fewer* to length.

Daily Exit Ticket: None for this lesson. However, teachers may opt to use the Problem Set page in conjunction with the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – Unifix cube number stairs 6 to 10, bell, Name Train Engine, chart paper
- Student – Sentence strip, 3”x3” construction paper squares (at least 5), Student book, marker, glue stick

Lesson #: Module 3, Topic C, Lesson 13

Standard: K.DL.A.1, K.CC.C.6

Mathematical Practice: ***Not listed***

Target: SWBAT compare sets by using *more than, fewer than,* and *the same number as*

Learning Activities:

Fluency:

- Which Step Is Missing? – Name the number of the missing step to build fluency with relating number to length.
- Building Up to the Spring Routine: Start and Stop at the Signal – Practice starting and stopping at the signal to develop familiarity with the Sprint Routine.
- Beep Counting – Determine the missing number in a sequence to build fluency counting within 10.

Launch:

- Brainstorm strategies to compare the number of objects in two groups.

Learn:

- Compare Sets – Compare the number of objects in two groups.
- Share Strategies – Share their comparison strategies.
- Choose a Strategy – Choose a strategy and compare the number of objects in two groups.
- Problem Set – Complete the activity to identify if a set has *more than*, *fewer than*, or *the same number as*.

Land:

- Debrief by facilitating a discussion that summarizes how to compare sets by using *more than, fewer than,* and *the same number as*.

Daily Exit Ticket: None for this lesson. However, teachers may opt to use the Problem Set page in conjunction with the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – Unifix cube number stairs 3 to 8, bell, Comparison Strategies chart, puppet, unifix cubes (6 green and 8 blue)
- Student – Resealable plastic bag (1 per student)

Lesson #: Module 3, Topic C, Lesson 14

Standard: K.DL.A.1, K.CC.C.6

Mathematical Practice: 5

Target: SWBAT use number to compare sets with like units

Learning Activities:

Fluency:

- Which Step Is Missing? – Name the number of the missing step to build fluency with relating number to length.
- Building Up to the Spring Routine: Start and Stop at the Signal – Practice starting and stopping at the signal to develop familiarity with the Sprint Routine.
- Beep Counting – Determine the missing number in a sequence to build fluency counting within 10.

Launch:

- Brainstorm strategies to compare the number of objects in two groups.

Learn:

- Compare Sets – Compare the number of objects in two groups.
- Share Strategies – Share their comparison strategies.
- Choose a Strategy – Choose a strategy and compare the number of objects in two groups.
- Problem Set – Complete the activity to identify if a set has *more than*, *fewer than*, or *the same number as*.

Land:

- Debrief by facilitating a discussion that summarizes how to use number to compare sets with like units.

Daily Exit Ticket: None for this lesson. However, teachers may opt to use the Problem Set page in conjunction with the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – Unifix cubes (55), More Than, Less Than digital download, Number Path, Comparison Strategies chart
- Student – Unifix cubes (55 per student pair), resealable plastic bag (1 per student), 6-sided dot die (1 per student pair), More Than, Less Than (1 per student pair), Number Path, Name train

Lesson #: Module 3, Topic C, Lesson 15

Standard: K.DL.A.1, K.G.B.6, K.CC.C.6

Mathematical Practice: 3

Target: SWBAT classify flat shapes into groups and compare the number of shapes in each group

Learning Activities:

Fluency:

- Counting on the Rekenrek by Ones Within 20 – Associate a number word with a quantity to build fluency with counting to 100 by ones.
- Choral Response: Name the Shape – Identify a two-dimensional shape to build fluency with naming shapes from Module 2 and to prepare for classifying shapes into groups.

Launch:

- Compare the number of shapes in a series of hexagons.

Learn:

- Compare Hexagons – Use multiple strategies to compare sets with different units.
- Sort and Compare – Sort, compare, and order groups of shapes.
- Problem Set – Complete the activity to show how to classify flat shapes into groups and compare the number of shapes in each group.

Land:

- Debrief by facilitating a discussion that summarizes how to classify flat shapes into groups and compare the number of shapes in each group.

Daily Exit Ticket: None for this lesson. However, teachers may opt to use the Problem Set page in conjunction with the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – 100-bead rekenrek, Comparison Strategies chart, pattern blocks, puppet
- Student – Geometry card or 2D shape, index card (1 per student group, 5 total), Student book, scissors, glue

Lesson #: Module 3, Topic C, Lesson 16

Standard: K.CC.C.7, K.CC.C.6

Mathematical Practice: 2

Target: SWBAT count and compare sets with unlike units

Learning Activities:

Fluency:

- Choral Response: Name the Shape – Identify a three-dimensional shape to build fluency with naming shapes from Module 2.
- Counting on the Rekenrek by Ones From 20 to 30 – Associate a number word with a quantity to build fluency with counting to 100 by ones.
- Build and Compare: Cube Sticks – Build and compare cube sticks and make their cube sticks the same length to prepare for comparing sets.

Launch:

- Discuss ways to compare sets with unlike units to determine which has more or less.

Learn:

- Compare Sets – Compare different sets of objects (units) by using self-selected strategies.
- Share, Compare, and Connect – Discuss strategies for comparing the number of objects in two groups.
- Matching Items One by One (Desi and Andrei's Way) – Discuss and review this strategy.
- Lining Up Objects on a Number Path (Sterling and Ryan's Way) – Discuss and review this strategy.
- Filling in a 10-Frame (Alonda and Demetric's Way) – Discuss and review this strategy.

Land:

- Debrief by facilitating a discussion that summarizes how to count and compare sets with unlike units.

Daily Exit Ticket: None for this lesson. However, in its place, use the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – 100-bead rekenrek, resealable plastic bags (24), paper (3 sheets), paper clips, Hide Zero cards, sorting bag, Comparison Strategies chart, puppet, 10-frames
- Student – Unifix cubes (12 per student pair), 6-sided dot die (1 per student pair), classroom objects (1 bag per student pair, see lesson preparation), Hide Zero cards (1 set per student pair), Number Path

Lesson #: Module 3, Topic C, Lesson 17

Standard: K.CC.A.3, K.CC.C.6

Mathematical Practice: 1

Target: SWBAT count and compare sets in pictures

Learning Activities:

Fluency:

- Counting on the Rekenrek by Ones Within 30 – Associate a number word with a quantity to build fluency with counting to 100 by ones.
- Beep Counting – Determine the missing number in a sequence to build fluency counting within 10.
- Build and Compare: Cube Sticks – Build and compare cube sticks and make their cube sticks the same length to prepare for comparing sets.

Launch:

- Use number to record a fleeting event.

Learn:

- Recreate a Context – Use math tools to recreate the video context.
- Count and Compare Pictures – Select strategies for counting and comparing collections.
- Share, Compare, and Connect – Discuss strategies for comparing collections.
- Compare Length (Karter's Way) – Discuss and review this strategy.
- Count Sequence (Celeste's Way) – Discuss and review this strategy.
- Align Karter's Cube Sticks with Celeste's Number Paths – Discuss and review this strategy.

Land:

- Debrief by facilitating a discussion that summarizes how to count and compare sets in pictures.

Daily Exit Ticket: None for this lesson. However, in its place, use the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – 100-bead rekenrek, puppet, Comparison Strategies chart
- Student – Bag of unifix cubes (1 per student pair), 6-sided dot die (1 per student pair), Video Recording Sheet, assorted math tools, Birds Nest Recording Sheet, Student book

Lesson #: Module 3, Topic D, Lesson 18

Standard: K.CC.C.7, K.M.A.1

Mathematical Practice: 2

Target: SWBAT compare the capacity of containers by using numerals

Learning Activities:

Fluency:

- Building Up to the Sprint Routine: Check Answers – Practice checking answers to develop familiarity with the Sprint routine.
- Dot Cards – Tell how many dots to build fluency with subitizing and part-whole thinking.

Launch:

- Count scoops to determine the capacity of a container.

Learn:

- Capacity Stations – Count scoops to determine the capacity of different containers.
- Comparison of Capacities – Use numbers to make comparison statements.
- Problem Set – Complete the activity pages to complete the number sequences.

Land:

- Debrief by facilitating a discussion that summarizes how to compare the capacity of containers by using numerals.

Daily Exit Ticket: None for this lesson. However, teachers may opt to use the activity pages and the Problem Set pages in conjunction with the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – Puppet, Circle and Count How Many Sample Sprint, dot cards, container (6), scoop (6), plastic tubs of water (6), food coloring, sticky notes
- Student – Circle and Count How Many Sample Sprint, Student book, crayon, scoop (per student group), tub (per student group), container (per student group)

Lesson #: Module 3, Topic D, Lesson 19

Standard: K.CC.C.7

Mathematical Practice: 6

Target: SWBAT compare numbers by using *greater than*, *less than*, and *equal to*

Learning Activities:

Fluency:

- Building Up to the Sprint Routine: My First Sprint – Complete one side of a Sprint to develop familiarity with the Sprint routine.
- Dot Cards – Tell how many dots to build fluency with subitizing and part-whole thinking.

Launch:

- Informally compare numbers to answer questions.

Learn:

- Listen and Compare – Listen and count sounds to compare.
- Which is Greater? – Find the number that is greater by playing a game.
- Problem Set – Complete the activity pages to identify the numbers that are one more and one less.

Land:

- Debrief by facilitating a discussion that summarizes how to compare numbers by using *greater than*, *less than*, and *equal to*.

Daily Exit Ticket: None for this lesson. However, teachers may opt to use the activity pages and the Problem Set pages in conjunction with the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – Dot cards, Comparison Strategies chart
- Student – Circle and Count How Many Sprint Side A, Hide Zero cards

Lesson #: Module 3, Topic D, Lesson 20

Standard: K.CC.C.7, K.M.A.1

Mathematical Practice: 3

Target: SWBAT compare two numbers in story situations

Learning Activities:

Fluency:

- Building Up to the Sprint Routine: Beat Your Score – Complete a familiar Sprint and note improvement to develop familiarity with the Sprint routine.

Launch:

- Compare numbers to find who is older or younger.

Learn:

- Comparison Stories – Compare numbers that are embedded in stories.
- Julie's Pennies – Strategize to compare numbers and solve.
- Problem Set – Complete the activity pages to identify the greater number of runs/winning team.

Land:

- Debrief by facilitating a discussion that summarizes how to compare two numbers in story situations.

Daily Exit Ticket: None for this lesson. However, teachers may opt to use the activity pages and the Problem Set pages in conjunction with the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – None
- Student – Count and Circle How Many Sprint, unifix cubes (20 per student pair), 10-frame, number path, Student path

Lesson #: Module 3, Topic D, Lesson 21

Standard: K.CC.C.7, K.CC.C.6, K.M.A.1, K.M.A.2

Mathematical Practice: 1

Target: SWBAT describe and compare several measurable attributes of objects and sets

Learning Activities:

Fluency:

- Build and Compare: Number – Build sticks of cubes and compare the number of cubes to prepare for comparing two numerals.
- Dot Cards – Tell how many dots in order to build fluency with subitizing and part-whole thinking.

Launch:

- Compare two objects and identify the measurable attribute they used to compare.

Learn:

- Comparison Bags – Select measurable attributes to compare objects and sets.
- Gallery Walk – Compare objects by using numbers and make comparison statements about their work.

Land:

- Debrief by facilitating a discussion that summarizes how to describe and compare several measurable attributes of objects and sets.

Daily Exit Ticket: None for this lesson. However, in its place, use the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – Dot cards
- Student – 10-sided die (per student pair), unifix cubes (20 per student pair), mystery bag (1 per table or group), Student book, Hide Zero cards, paper (1 sheet per student pair)

Lesson #: Module 3, Topic D, Lesson 22 ***(OPTIONAL)***

Standard: K.CC.B.4, K.CC.B.4a-c, K.CC.B5

Mathematical Practice: 5

Target: SWBAT organize, count, and represent a collection of objects

Learning Activities:

Fluency:

- *None for this lesson.*

Launch:

- Review procedures for and explore a counting collection.

Learn:

- Organize, Count, and Record – Use their own strategies to count objects and record their process.
- Share, Compare, and Connect – Discuss tools for counting and recording a collection.
- 10-Frame Carton (Lincoln and Che's Way) – Discuss and review this strategy.
- Number Path (Grace and Jacoby's Way) – Discuss and review this strategy.

Land:

- Debrief by facilitating a discussion that summarizes how to organize, count, and represent a collection of objects.

Daily Exit Ticket: None for this lesson. However, in its place, use the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – Number Path to 100
- Student – Counting collection (1 per student pair), work mat, organizing tools, Student book

Unit Modifications for Special Population Students	

Advanced Learners	● Topic A, Lesson 2 – During the Learn section of this lesson, challenge students to compare the length of two objects in a different way. They might turn one object and compare (e.g., turn the clipboard from horizontal to vertical) or turn both objects and compare.
	● Topic A, Lesson 3 – Challenge students to order all four of their pieces of yarn by length. Students may also find it interesting to count the cubes in the stick. This is an opportunity to count a group of objects beyond 10. The picture shows a color change at 10 because the class stores their cubes in sticks of 10.
	● Topic A, Lesson 4 – If students make comparison statements with ease, challenge them to adjust the shape so that the opposite comparison statement becomes true. For instance, if the first side of the rectangle is longer than the cube stick, find a way to turn the rectangle so that it is shorter than the cube stick. This variation won't be possible in all cases.
	● Topic C, Lesson 12 – Students who are ready to delve deeper into comparison, conservation, and unit size may enjoy manipulating the names to make them appear longer or shorter. Encourage them to test out ideas such as leaving gaps between squares, overlapping the squares, or using different-size squares.
	● Topic C, Lesson 15 – During the Learn portion of this lesson, listen to students' comparison statements. Build on their statements to ask how many more or how many fewer shapes there are: *"There are more circles than squares. How many more circles are there?"* While students are not required to master these questions until Grade 1, many kindergarten students can answer easily with direct modeling or by using the number path.
	● Topic C, Lesson 16 – Although kindergarten standards call for work within 10, offer bags that contain up to 20 items to students who find it very easy to compare sets to 10. Encourage them to use a 10-frame to compare the items. This supports place value understanding, which is the focus of Module 6.
	● Topic C, Lesson 17 – If students easily make the comparison during the Learn section of this lesson, then use any combination of the following suggestions to extend the activity:
	  ○ *Find the total: How many birds altogether?*
	  ○ *Find the difference: How many more blue birds than red birds? How many fewer red birds than blue birds?*
	  ○ *"If–then" scenarios: If 5 red birds fly away, then how many red birds are there? If 10 yellow birds join, then what is the new total number of birds?*
	● Topic D, Lesson 19 – During the Learn section of the lesson, challenge students to consider the difference between the two numbers. They may need to model the numbers with objects or drawings to answer these questions, even if they are able to compare the numerals without that support: *"You said 5 is greater than 3. How much greater? You said 3 is less than 5. How much less?"*
	● Topic D, Lesson 20 – During the Launch section of this lesson, challenge students to consider how much older Jack is than his sister. Invite them to use objects or drawings to help them solve. *(In Grades 1 and 2, students will encounter this type of question in comparison word problems.)* Additionally, during the Learn section, challenge students by asking what Julie could buy if she had 10 pennies. How many pennies would she need to buy all three items?
	● Topic D, Lesson 21 – During the Fluency portion of the lesson, challenge students to eliminate the step of making the cube stick. Instead, they could simply roll the 10-sided die and make the comparison statement based on the numbers rolled.

Struggling Learners	● Topic B, Lesson 9 – During the Learn Section of the lesson, allow students to choose their recording method. Students may prefer to draw, write, or trace depending on their interests and abilities. Emergent writers may use combinations of numbers and letters, inventive spelling, or words from the environment to record the selected object and corresponding number of cubes. Others may opt for a detailed representational drawing

	or trace around each object to capture its shape. Though recordings may not be realistic in appearance, they hold valuable meaning to the recorder. ● Topic B, Lesson 10 – If students are not convinced that the weight of the glue stick did not change during the Learn section of the lesson, engage them in a kinesthetic activity. Have them pretend to be the balance scale. Place the glue stick in one hand, and the sets of objects in the other. Focus their attention on the weight of the glue stick. Help them notice that it does not change. ● Topic C, Lesson 12 - Provide a number path for students who need more support with the count sequence. Students can touch each number on their number path as you count. ● Topic C, Lesson 15 – Students may not readily identify the 7 beads during the Fluency portion of the lesson. Consider counting each bead to verify there are 7 beads to the left side before continuing the count. Point out the color change at 5. Then, if students hesitate to say the next number in the sequence, present the familiar pattern of 1 more for support: *"7 and 1 more is?"* ● Topic D, Lesson 19 – Provide tools for students to use if they need support to compare the numbers. Support is built into the Hide Zero cards. Students can turn them over to compare dots in a 5-group formation. Cubes may be more helpful if the student needs to match up objects to compare. ● Topic D, Lesson 20 – During the Fluency section of the lesson, offer a number path or cube sticks to facilitate the comparison of scores on Sprint A and Sprint B. Additionally, during the Learn section, provide a personal whiteboard or manipulatives (such as a number path, 10-frame, or cubes) for students who need to directly compare the groups. Students may be able to use their fingers to compare the numbers.
English Language Learners	● Throughout Module 3 – For discussions, consider using strategic, flexible grouping. Pairing suggestions include: pair students who have different levels of mathematical proficiency and/or who have different levels of English language proficiency. As applicable, complement any of these groupings by pairing students who speak the same native language. ● Topic A, Lesson 1 – Support students in making the comparison statement by breaking it down: *"Which is taller? The … is taller than the …? Now put it altogether. The marker is … Ready?"* Additionally, this is the first use of the term *compare*. Support understanding by using the term *compare* to revoice ideas about how items are the same or different: *"You can compare or tell how two items are the same or different." (Apply this strategy in future comparison lessons as well.)* ● Topic A, Lesson 3 - If students need visual support to make comparison statements, provide the comparison cards used in earlier lessons. *(Apply this strategy in future comparison lessons as well.)* ● Topic B, Lesson 7 – Support students in making the comparison statement by breaking it down: *"Which is heavier? The … is heavier than the …? Now put it all together. The … is … Ready?"* ● Topic B, Lesson 9 – Stating the number of units in the comparison statement presents a new challenge. Support students in making accurate comparison statements by offering sentence frames that use a combination of words and objects. ● Topic C, Lesson 12 – Clarify the meaning of *fewer* by coupling it with the more familiar term less: "*Are there fewer, or less, letters in this name?"* Reinforce with a gesture to indicate a small amount of something. ● Topic C, Lesson 13 – Support students to make the comparison statement by breaking it down: *"Which color has more cubes? Orange has more cubes than …? Now put it all together. Orange has … Ready?"* Additionally, pre-teach the meaning of *agree* and *disagree* so that students can engage in the discussion. Consider creating a chart with images to remind students of the meanings for future reference. ● Topic C, Lesson 16 – Encourage students to compare groups by using the following sentence frames: *"____ is more than ____. ____ is less than ____. ____ is the same as ____."* Invite students to point to the materials mentioned as they say each sentence frame.

	● Topic D, Lesson 18 – Number comparison statements are linguistically challenging. Support students to make the statements by breaking them down. *"Which is more, 5 or 6? Let's hear a 'more than' sentence. Start with '6 is …' Now try by using 'greater than'. '6 is …?' 6 is greater than 5."*
Special Needs Learners	● Topic A, Lesson 1 – Have students trace the letters on the taller and shorter cards with a finger. This provides a tactile experience of height, and it can help students relate the font size on each card to the meaning of the word. ● Topic A, Lesson 5 – Drawing dots before coloring supports students in planning and remembering. Kindergarten students are accustomed to coloring a picture in its entirety. The dots remind them where to stop coloring. ● Topic B, Lesson 7 – Consider presenting the information in another format. When using the comparison cards, tap into kinesthetic learning. Make the card for heavier actually feel heavier than the card for lighter by attaching it to a pack of cards or similar object. Every time the student picks up the card, it will feel heavier, reinforcing the meaning of the term through touch. ● Topic C, Lesson 12 - Consider providing alternative materials to minimize fine motor demands of the task. Draw vertical lines on the sentence strips to mark a space for each square. This reduces the occurrence of gaps and overlapping squares. Just as each space on the number path is reserved for 1 number, each space holds 1 letter on the name train. Additionally, while charting during the Land section of this lesson, you may want to incorporate language that meets the needs of any student who responds well to tactile learning because they may benefit from holding the name trains and noticing how the shorter ones just cover the hand, whereas the longer ones drape over the side. Use student perception to guide which strategies to chart. ● Topic D, Lesson 19 – For the Learn portion of the lesson, some students may benefit from having two number paths in a personal whiteboard so they can color in each number and compare the length. Others may prefer to use the dots on the back of the Hide Zero cards, using the structure of rows to guide the comparison.
Learners with a 504	Refer to page four in the Parent and Educator Resource Guide to Section 504 to assist in the development of appropriate plans.

Interdisciplinary Connections

Standards:

- SL.II,K.2 – Confirm understanding of a text read aloud or information presented orally or through other media by asking and answering questions about key details and requesting clarification if something is not understood.
    - Lessons 8 & 21 – In Lesson 8, to help make the connection between a balance scale and seesaw, especially since seesaws are not available in every community, consider showing a video to demonstrate how it works. Then, follow it up with Ann Tompert's "Just a Little Bit" and Ellen Stoll Walsh's "Balancing Act" before proceeding with the Land section of the lesson. Additionally, in Lesson 21, Loreen Leedy's "Measuring Penny" is an engaging story about identifying multiple measurable attributes of a beloved pet. Consider using the book as a read aloud before or after that lesson.

- W.SE.K.6 – With guidance and support from adults, recall information from experiences or gather information from provided sources to answer a question.
    - Lesson 9 – During the "Compare and Record" activity of this lesson, students must work together to recall how to properly use/"read" a balance scale and then determine how to accurately compare the weights of two sets of objects. Once they have done that, they must fill in the blanks of the following sentence frame to accurately convey their mathematical observations: *"The ____ is about the same weight as ____."*

- SL.II.K.2 – Confirm understanding of a text read aloud or information presented orally or through other media by asking and answering questions about key details and requesting clarification if something is not understood.
    - Lesson 17 – During the initial stages of this lesson, students will view a wordless video. At different stopping points, the teacher will ask a variety of comprehension questions to confirm student understanding and then connect it to the lesson's objective.

- SL.AS.K.6 – Speak audibly and express thoughts, feelings, and ideas clearly.
    - Lesson 19 – In an effort to continue practicing number comparison, students will play "Would You Rather…?" as part of the Launch of this lesson. After sharing their choice, students are then invited to further explain their rationale.

- L.WF.K.1B – Write upper and lowercase letters, with reference to a model.
    - Lesson 12 – Students create "Name Trains" in this lesson by writing each letter of their names on small squares of paper to prepare for the subsequent name-length comparison activity.

- L.WF.K.3.B – Write simple sentences.
    - Lesson 20 – Once students have solved the "Julie's Pennies" problem, they will then be encouraged to share the way in which they solved it. They will also be encouraged to further connect their work to the work of others and to the mathematical ideas. (For example: *"How is ____'s work like ____'s work? How is it different? Can someone put ___'s idea in their own words? How many agree with what ___ just said?"*)

- L.WF.K.1.E – Write a common grapheme (letter or letter group) for each phoneme. ***AND***
  L.WF.K.2.E – Attempting phonetic spelling of unknown words.
    - Lesson 8 – During the "Scavenger Hunt" activity of this lesson, students are encouraged, for the first time, to apply their new phonetic knowledge as they record their mathematical observations.

- L.VI.K.3 With guidance and support from adults, explore word relationships and nuances in word meanings.
    - Lesson 4 – During this lesson, students will be asked to apply and use the new comparison vocabulary they have learned over the last two lessons. To do this, in addition to completing

the “Problem Set” activity, they will be asked to explain their process for drawing a shape with a longer or shorter side than the one provided.

- 6.1.2.HistoryCC.3 – Make inferences about how past events, individuals, and innovations affect our current lives.
    - Lesson 9 – The “Math Past” activities for this lesson will allow students to extend their knowledge of the use of balance scales in ancient Egypt.

- 1.5.2.Re8a – Categorize and describe works of art, by identifying subject matter, details, mood, and formal characteristics.
    - Lesson 10 – During the Land portion of this lesson, students with analyze a work of art titled *Woman Holding a Balance*, 1664, by Johannes Vermeer. During that time, the teacher will guide the conversation to discuss Vermeer’s painting style and how it includes intentional use of light and balance. In *Woman Holding a Balance*, light highlights key features of the scene, including the woman’s face and hands. Even the reflection in the mirror above the table brings more light to the scene. The darker parts of the image are less important to the story but serve to balance the parts of the scene that are important. The teacher will also direct students to also notice the balance of shapes in opposite corners of the painting: the rectangles of the painting and the table, the triangles formed behind and in front of the woman, and the round shapes of the woman’s jacket and the blue cloth.

Integration of 21st Century Skills

Standards:

- 8.1.2.AP.4 – Break down a task into a sequence of steps.
    - Lesson 8 – Students are encouraged to plan how to execute the comparison task, which is quite complex and requires multiple steps. Have students turn to a partner and repeat or confirm directions before getting started. You may wish to streamline the steps into a few easy-to-remember words or phrases, such as: *find, compare, draw*.

- 8.1.2.AP.5 – Describe a program’s sequence of events, goals, and expected outcomes.
    - Lesson 3 – This is one of the first times that students will be introduced to Stations, so it is important to support students in remembering information. While going over the tasks for each station, provide an example for students to refer to later. (For example: Placing a clay ring and bracelet at the “Make It Long Enough” station would help students recall what they need to accomplish.)

- 9.4.2.IML.2 – Represent data in a visual format to tell a story about the data.
    - Lesson 2 – In this lesson, students learn to compare lengths of simple straight objects by using the vocabulary *longer than*, *shorter than*, and *about the same length as*. To do this, there are a myriad of physical (body movements) and visual tools that the teacher can use to introduce and reinforce this vocabulary.

Unit Title: Module 4 (Composition and Decomposition)

Unit Description: Students explore part-total relationships as they compose and decompose shapes and numbers in more than one way. They represent the quantities and relationships in story problems with objects, fingers, drawings, and number bonds.

Unit Duration: 18 instructional days (+ a few days to administer the 1:1 end-of-module assessment)
(Please note that Lessons 17 & 18 are included in the total number of instructional days but are optional.)

Desired Results

Standard(s):

- **K.G.B.6 – Compose simple shapes to form larger shapes.**
- **K.OA.A.1 – Represent addition and subtraction with objects, fingers, mental images, drawings, sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations.**
- **K.OA.A.2 – Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem.**
- **K.OA.A.3 – Decompose numbers less than or equal to 10 into pairs in more than one way, e.g., by using objects or drawings, and record each decomposition by a drawing or equation (e.g., 5 = 2 + 3 and 5 = 4 + 1).**
- K.DL.A.1 – Classify objects into given categories; count the numbers of objects in each category and sort the categories by count. (Clarification: Limit category counts to be less than or equal to 10)
- K.G.A.2 – Correctly name shapes regardless of their orientations or overall size.
- K.CC.A.1 – Count to 100 by ones and by tens.
- K.CC.B.4 – Understand the relationship between numbers and quantities; connect counting to cardinality.
- K.CC.B.5 – Count to answer "how many?" questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1–20, count out that many objects.

Understandings:

Topic A:

- I can use smaller parts to build larger groups (*compose*), count each part, and then name the total.*
- I can break larger groups down into smaller parts (*decompose*), count each part, and then name the total.*

**As the unit progresses, feel free to substitute the verbiage in parenthesis with the underlined phrase.*

Topic B:

- I can decompose a number in more than one way and record with a number bond.
- I can name 5- and 10-partners.
- I can compose shapes in more than one way.

Topic C:

- I can draw, model, and solve a variety of story problems.

Essential Questions:

- What is the same/different about the composite shapes?
- What are the parts?
- What is the total?
- Why do we use number bonds?
- How does a number bond help us see the parts and total?
- How can the same total be broken into different parts?
- Why do we use number bonds?
- Which numbers are partners of 5? 10?
- Why can different parts be used to make the same whole shape?
- Why can different parts be used to make the same total?
- How do you find the total and the parts in a number bond?
- How can math drawings help us solve problems?
- What math tools can you use to show your thinking when solving a story problem? How do they help you show your thinking?
- What is different about *add to with result unknown* and *take apart with both addends unknown* situations/story problems?

	● Can we use the same math tools to show/model/solve different types of situations/story problems? ● What math tools can you use to show your thinking about parts and totals, or wholes?

Assessment Evidence

Assessments:
- Observational Assessment Recording Sheet
- Module Assessment

Benchmarks:
- Kindergarten Snapshots are administered three times per year.
- The iReady Assessment is administered in the fall and winter.

Learning Plans

Lesson #: Module 4, Topic A, Lesson 1

Standard: K.G.A.2, K.G.B.6

Mathematical Practice: 3

Target: SWBAT compose flat shapes and count the parts

Learning Activities:

Fluency:
- Counting on the Rekenrek by Tens to 40 – Associate a number word with a quantity to develop fluency with counting to 100 by tens.
- Choral Response: Shapes and Attributes – Identify two-dimensional shapes and their attributes to build fluency with analyzing and identifying shapes from Module 2.

Launch:
- Apply prior knowledge about attributes of shapes to composition of shapes.

Learn:
- Shape Creators – Use simple shapes to create larger shapes.
- Puzzles – Compose shapes and count the parts.
- Gallery Walk – Notice that there are different ways to compose a shape.

Land:
- Debrief by facilitating a discussion that summarizes how to compose flat shapes and count the parts.

Daily Exit Ticket: None for this lesson. However, in its place, use the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:
- Teacher – 100-bead rekenrek, plastic pattern blocks, puppet
- Student – Plastic pattern blocks, Shape Creators Puzzles, pattern block puzzles, Learn book

Lesson #: Module 4, Topic A, Lesson 2

Standard: K.G.A.2, K.G.B.6

Mathematical Practice: 6

Target: SWBAT decompose flat shapes and count the parts

Learning Activities:

Fluency:

- Counting on the Rekenrek by Ones from 30 to 40 – Associate a number word with a quantity to develop fluency with counting to 100 by tens.
- Make 4 with Rectangles and Beans – Compose 4 by using a rectangle to prepare for making connections between geometry and numbers.

Launch:

- Study a piece of artwork and locate embedded shapes.

Learn:

- Parts of a Whole – Decompose a square in more than one way and count the parts.
- Decompose Squares – Cut paper to decompose a square.
- Compose Squares – Trade pieces and reassemble the square by using different parts.
- Problem Set – Complete the activity pages to tell how many parts of a shape there are.

Land:

- Debrief by facilitating a discussion that summarizes how to decompose flat shapes and count the parts.

Daily Exit Ticket: None for this lesson. However, teachers may opt to use the activity pages and the Problem Set pages in conjunction with the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – 100-bead rekenrek, two-color beans (4)
- Student – Two-color beans (4), Rectangles removable, Color Squares removable, glue, scissors, Student book

Lesson #: Module 4, Topic A, Lesson 3

Standard: K.OA.A.1

Mathematical Practice: 4

Target: SWBAT decompose a group to identify parts and total

Learning Activities:

Fluency:

- Sprint: Counting on the Rekenrek – Circle the total number of beads to build fluency with counting to 5.

Launch:

- Identify parts and the total in a group of dots.

Learn:

- How Many? – Sort to identify the parts and total.
- Animal Scenes – Work with a partner to identify parts and the total in pictures.
- Problem Set – Complete the activity pages to identify the parts and total in pictures.

Land:

- Debrief by facilitating a discussion that summarizes how to decompose a group to identify parts and total.

Daily Exit Ticket: None for this lesson. However, teachers may opt to use the activity pages and the Problem Set pages in conjunction with the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – Story cards
- Student – Counting on the Rekenrek Sprint, story cards (1 per student pair), personal whiteboard, dry-erase marker, Student book

Lesson #: Module 4, Topic A, Lesson 4

Standard: K.OA.A.1, K.OA.A.3

Mathematical Practice: 5

Target: SWBAT decompose a group and record parts and total by using a number bond

Learning Activities:

Fluency:

- Make 3, 4, and 5, Finger Combinations – Complete a total with their fingers to prepare for using number bonds to model decompositions of 3, 4, and 5.
- Choral Response: Part or Whole – Identify a part or the whole in a picture to prepare for work with number bonds.

Launch:

- Share part-total thinking and see it recorded as a number bond.

Learn:

- Number Bond Writing – Record their part-total thinking in a number bond.
- Number Bond Hunt – Partner to find the parts and total in pictures and record using a number bond.

Land:

- Debrief by facilitating a discussion that summarizes how to decompose a group and record parts and total by using a number bond.

Daily Exit Ticket: None for this lesson. However, in its place, use the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – Story cards
- Student – Number Bond removable, personal whiteboard, dry-erase marker, Number Bond Hunt removable, Student book

Lesson #: Module 4, Topic B, Lesson 5

Standard: K.DL.A.1, K.OA.A.3

Mathematical Practice: 4

Target: SWBAT sort to decompose a number in more than one way

Learning Activities:

Fluency:

- Counting on the Rekenrek by Ones to 40 – Associate a number word with a quantity to build fluency with counting to 100 by ones.
- Choral Response Part or Total – Identify a part or the total in a picture to prepare for work with number bonds.

Launch:

- Consider different ways to represent a situation using a number bond.

Learn:

- Sort and Record – Decompose a number in more than one way and represent the decompositions with number bonds.
- Analyze Decompositions – Analyze three number bonds and see that the same total may have different parts.
- Problem Set – Complete the activity page to fill in the number bonds.

Land:

- Debrief by facilitating a discussion that summarizes how to sort to decompose a number in more than one way.

Daily Exit Ticket: None for this lesson. However, teachers may opt to use the activity pages and the Problem Set pages in conjunction with the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – 100-bead rekenrek, teddy bear counters (5), paper plates (3), chart paper
- Student – Student book

Lesson #: Module 4, Topic B, Lesson 6

Standard: K.OA.A.3

Mathematical Practice: 8

Target: SWBAT sort to decompose a number in more than one way and record

Learning Activities:

Fluency:

- Sprint: Number Order to 5 – Write the missing number in the sequence to build fluency with number order within 5.

Launch:

- Identify different parts within an underwater scene.

Learn:

- Game Demonstration – Play a game to find partners to 6.
- Shake Those Disks – Play a game to find partners to 5, 6, 7, 8, and 9.

Land:

- Debrief by facilitating a discussion that summarizes how to sort to decompose a number in more than one way and record.

Daily Exit Ticket: None for this lesson. However, in its place, use the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – Chart paper, marker, Shake Those Disks, personal whiteboard, two-color counters (41), cups (6)
- Student – Number Order to 5 Sprint, marker, Shake Those Disks removable, personal whiteboard, Student book

Lesson #: Module 4, Topic B, Lesson 7

Standard: K.OA.A.3

Mathematical Practice: 6

Target: SWBAT find partners to 5

Learning Activities:

Fluency:

- Make 5 Finger Combinations – Complete the total with their fingers to prepare for finding partners to 5.
- Shake Those Disks – Record a total and parts in a number bond to develop familiarity with decomposing 5 in more than one way.

Launch:

- Analyze various decompositions of 5 and find the one thing that is missing.

Learn:

- Decompose 5 and Record – Decompose 5 by spilling counters and recording the parts.
- Partners to 5 – Say number sentences for all partners to 5.
- Problem Set – Complete the activities to sort in two different ways and write the corresponding number bond.

Land:

- Debrief by facilitating a discussion that summarizes how to find partners to 5.

Daily Exit Ticket: None for this lesson. However, teachers may opt to use the activity pages and the Problem Set pages in conjunction with the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – Two-color counters (5), cup, blue unifix cubes (10), yellow unifix cubes (10), 5-Dot paper, red and yellow crayons, chart paper, puppet
- Student – 5-Dot paper, two-color counters (5), cup, Shake Those Disks removable, marker, red and yellow crayons, Student book

Lesson #: Module 4, Topic B, Lesson 8

Standard: K.OA.A.3

Mathematical Practice: 4

Target: SWBAT find partners to 10

Learning Activities:

Fluency:

- Make 10 Finger Combinations – Complete the total with their fingers to prepare for finding partners to 10.

Launch:

- Study pictures to find various decompositions of 10.

Learn:

- Super Sort – Sort a collection of 10 shapes in multiple ways.
- Problem Set – Complete the activities to sort in two different ways and write the corresponding number bond.

Land:

- Debrief by facilitating a discussion that summarizes how to find partners to 10.

Daily Exit Ticket: None for this lesson. However, teachers may opt to use the activity pages and the Problem Set pages in conjunction with the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – Chart paper, Number Path
- Student – Two-color counters (10), cup, crayons, Student book

Lesson #: Module 4, Topic B, Lesson 9

Standard: K.G.B.6, K.OA.A.3

Mathematical Practice: 6, 7

Target: SWBAT compose shapes in more than one way

Learning Activities:

Fluency:

- Counting on the Rekenrek by Tens to 50 – Associate a number word with a quantity to build fluency with counting to 100 by tens.
- Shakes Those Disks – Record a total and parts in a number bond to develop familiarity with decomposing a number in more than one way.

Launch:

- Study a composite shape to find a missing shape, or part.

Learn:

- Flower Puzzles – Analyze a shape puzzle composed in two different ways.
- Compose Shapes in Two Ways – Use pattern blocks to compose a shape in more than one way.

Land:

- Debrief by facilitating a discussion that summarizes how to compose shapes in more than one way.

Daily Exit Ticket: None for this lesson. However, in its place, use the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – 100-bead rekenrek, Hexagon puzzle removable, plastic pattern blocks
- Student – Two-color counters (10), cup, marker, Shake Those Disks removable, Pattern Block Parts removable, plastic pattern blocks, Student book

Lesson #: Module 4, Topic B, Lesson 10

Standard: K.DL.A.1, K.OA.A.1

Mathematical Practice: 4

Target: SWBAT sort and record the decomposition with a number bond

Learning Activities:

Fluency:

- Counting on the Rekenrek by Ones from 40 to 50 – Associate a number word with a quantity to build fluency with counting to 100 by ones.
- 5-Groups to 10 – Recognize a group of dots to build fluency with subitizing quantities with 5-groups and to build an understanding of numbers 6-10 as 5 and some more.

Launch:

- Analyze a picture to find a matching number bond.

Learn:

- Sort and Record – Sort a group and represent their sort by using a number bond.
- Share, Compare, Connect – Discuss strategies for sorting and recording.
- Gallery Walk – Do a gallery walk to examine others' work.

Land:

- Debrief by facilitating a discussion that summarizes how to sort and record the decomposition with a number bond.

Daily Exit Ticket: None for this lesson. However, in its place, use the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – 100-bead rekenrek, 5-group cards (demonstration set), chart paper (1 sheet), puppet
- Student – Sorting bags, work mat, Student book

Lesson #: Module 4, Topic C, Lesson 11

Standard: K.OA.A.1, K.OA.A.2

Mathematical Practice: 5

Target: SWBAT model put together with total unknown story problems

Learning Activities:

Fluency:

- Dot Cards – Identify parts and total in a group of dots to prepare for work with number bonds.
- Whiteboard Exchange: Draw 5-Groups – Draw a number in 5-group formation to develop efficiency and organization with drawing and identifying quantities 6-10.

Launch:

- Sort and count the objects in a picture.

Learn:

- Marker Story – Choose tools to model a *put together* story.
- Model a Put Together Story – Choose tools to model and solve a *put together* story.
- Number Bond Hunt – Find parts and total in pictures and record by using a number bond.

Land:

- Debrief by facilitating a discussion that summarizes how to model put together with total unknown story problems.

Daily Exit Ticket: None for this lesson. However, in its place, use the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – Dot Cards, 5-group cards (demonstration set), chart paper (2 sheets), paper bags (2), unifix cubes (10), thick markers (4), thin markers (3), puppet, 10-Frame, Number Bond Hunt Scenes removable, story cards, personal whiteboard
- Student – Unifix cubes (10), 10-Frame, personal whiteboard, personal whiteboard eraser, dry-erase marker, Student book

Lesson #: Module 4, Topic C, Lesson 12

Standard: K.OA.A.1, K.OA.A.2

Mathematical Practice: 4

Target: SWBAT draw to represent put together with total unknown story problems

Learning Activities:

Fluency:

- Whiteboard Exchange: Draw 5-Groups – Draw a number in 5-group formation to develop efficiency and organization with drawing and identifying quantities 6-10.

Launch:

- Make a detailed art drawing and a math drawing.

Learn:

- Duck Story – Make math drawings to model and solve a math story.
- Model with Math Drawings – Make math drawings and solve math stories.
- Solving Story Problems – Create math drawings to solve story problems.

Land:

- Debrief by facilitating a discussion that summarizes how to draw to represent put together with total unknown story problems.

Daily Exit Ticket: None for this lesson. However, in its place, use the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – 5-group cards (demonstration set), personal whiteboard, personal whiteboard eraser, dry-erase marker, puppet
- Student – Personal whiteboard, personal whiteboard eraser, dry-erase marker, Student book

Lesson #: Module 4, Topic C, Lesson 13

Standard: K.OA.A.1, K.OA.A.2

Mathematical Practice: 4, 5

Target: SWBAT choose a math tool to solve put together with total unknown story problems

Learning Activities:

Fluency:

- Line Up and Compare: Beans – Line up beans by using one-to-one matching and then add or remove beans to make the same amount to build fluency with comparing numbers.
- Dot Cards – Identify parts and total in a group of dots to prepare for work with number bonds.
- Counting on the Rekenrek by Ones Within 50 – Associate a number word with a quantity to build fluency with counting to 100 by ones.

Launch:

- Watch a video to prepare to model a *put together* story problem.

Learn:

- Model a Story Problem – Choose tools to model and solve a *put together with total unknown* story.
- Share, Compare, and Connect – Discuss problem-solving strategies.
- Model with Math Drawings – Make math drawings and solve math stories.

Land:

- Debrief by facilitating a discussion that summarizes how to choose a math tool to solve put together with total unknown story problems.

Daily Exit Ticket: None for this lesson. However, in its place, use the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – 100-bead rekenrek, Dot Cards (2), Number Path removable
- Student – 10-sided die (1 per student pair), bag of two-color beans (1 per student pair), Math Drawing removable, personal whiteboard, dry-erase marker, unifix cubes (10), 10-frame, Number Path

Lesson #: Module 4, Topic C, Lesson 14

Standard: K.OA.A.2, K.OA.A.3

Mathematical Practice: 1

Target: SWBAT model take apart with both addends unknown situations

Learning Activities:

Fluency:

- Line Up and Compare: Beans – Line up beans by using one-to-one matching and then add or remove beans to make the same amount to build fluency with comparing numbers.
- Match: Make 5 – Practice making 5 with numerals and pictures to build fluency with finding partners to 5.

Launch:

- Decompose a total in more than one way.

Learn:

- Crayon Story – Listen to a story and use direct modeling to represent it.
- Decompose a Total – Decompose the same total in a different ways.
- Model Stories – Listen to a story and model it.
- Problem Set – Complete the activity pages to decompose a total and write the matching number bond.

Land:

- Debrief by facilitating a discussion that summarizes how to model take apart with both addends unknown situations.

Daily Exit Ticket: None for this lesson. However, teachers may opt to use the activity pages and the Problem Set pages in conjunction with the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – Match cards, bean bags (7), box, chart paper (1 sheet)
- Student – 10-sided die (1 per student pair), bag of two-color beans (1 per student pair), unifix cubes (10), Number Bond removable, personal whiteboard, Student book

Lesson #: Module 4, Topic C, Lesson 15

Standard: K.OA.A.1, K.OA.A.2, K.OA.A.3

Mathematical Practice: 2

Target: SWBAT choose a math tool to solve take apart with both addends unknown situations

Learning Activities:

Fluency:

- Match: Make 5 – Practice making 5 with numerals and pictures to build fluency with finding partners to 5.

Launch:

- Decompose a group by performing one of two actions.

Learn:

- Partners to 8 – Find partners to 8 on a number path.
- Zoo Story – Choose tools to model a *take apart with both addends unknown* story.
- Share, Compare, and Connect – Discuss problem-solving strategies.
- Problem Set – Complete the activities to model a *take apart with both addends unknown* scenario.

Land:

- Debrief by facilitating a discussion that summarizes how to choose a math tool to solve take apart with both addends unknown situations.

Daily Exit Ticket: None for this lesson. However, teachers may opt to use the activity pages and the Problem Set pages in conjunction with the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – None
- Student – Match cards (1 set per student pair), Number Bond removable, Number Path, personal whiteboard, dry-erase marker, unifix cubes (8), Student book

Lesson #: Module 4, Topic C, Lesson 16

Standard: K.OA.A.1, K.OA.A.2, K.OA.A.3, K.G.B.6

Mathematical Practice: 7

Target: SWBAT compose and decompose numbers and shapes

Learning Activities:

Fluency:

- *None for this lesson.*

Launch:

- Reason about examples and nonexamples to find all the partners to 9.

Learn:

- Introduce Stations – Learn procedures for station rotations.
- Story Problems – Choose tools to model and solve *put together with total unknown* and *take apart with both addends unknown* story problems.
- Number Bond Hunt – Find parts and total in pictures and record by using a number bond.
- Pattern Block Puzzles – Compose shapes by using pattern blocks.

Land:

- Debrief by facilitating a discussion that summarizes how to compose and decompose numbers and shapes.

Daily Exit Ticket: None for this lesson. However, in its place, use the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – Number Bond Hunt Scenes, story cards
- Student – Unifix cubes (10), personal whiteboard, pattern block puzzles, plastic pattern blocks, Student book

Lesson #: Module 4, Topic C, Lesson 17 ***(OPTIONAL)***

Standard: K.CC.A.1, K.CC.B.4, K.CC.4a-c, K.CC.B.5

Mathematical Practice: 7

Target: SWBAT organize, count, and represent a collection of objects

Learning Activities:

Fluency:

- *None for this lesson.*

Launch:

- Review procedures for and explore a counting collection.

Learn:

- Organize, Count, and Record – Use their own strategies to count objects and record their process.
- Share, Compare, and Connect – Discuss strategies for counting and recording a collection.

Land:

- Debrief by facilitating a discussion that summarizes how to organize, count, and represent a collection of objects.

Daily Exit Ticket: None for this lesson. However, in its place, use the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – None
- Student – Counting collection (1 per student), work mat, organizing tools, Student book

Lesson #: Module 4, Topic C, Lesson 18 ***(OPTIONAL)***

Standard: K.CC.B.5

Mathematical Practice: 7

Target: SWBAT use the structure of 5 and 10 to build a rekenrek

Learning Activities:

Fluency:

- *None for this lesson.*

Launch:

- Study and discuss different counting tools.

Learn:

- Rekenrek Factory – Notice color change patterns to create rekenrek rows.
- Show Me – Use the structure of 5 and 10 to show numbers efficiently on the rekenrek.

Land:

- Debrief by facilitating a discussion that summarizes how to use the structure of 5 and 10 to build a rekenrek.

Daily Exit Ticket: None for this lesson. However, in its place, use the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – 100-bead rekenrek
- Student – Red pony beads (50), white pony beads (50), elastic pieces (10), cardboard, container (1 per student group or table)

Unit Modifications for Special Population Students	
Advanced Learners	● Topic A, Lesson 3 – During the Learn section of the lesson, some students may be familiar with number sentences, or equations, that include symbols such as +, -, and =. If students want to use a number sentence such as 3 = 2 + 1 in this lesson, acknowledge their work and ask questions to assess their understanding of the numbers and symbols. *(See question examples in teacher's manual.)* ● Topic A, Lesson 4 – Challenge partners to find different ways to sort the pictures into parts. This can be used as an individual or class challenge to motivate creative, flexible thinking. ● Topic B, Lesson 5 – During the Learn section, invite students to find a way to break the candies into three parts. Complete the number bond to match. ● Topic B, Lesson 7 – During the Learn portion of the lesson, and after posting three or four work samples, invite students to share which parts they think will come next. They may use the visual pattern to anticipate the next partners to 5. Continue to have them share their thoughts about what will come next before posting each work sample. ● Topic B, Lesson 8 – During the Learn section, specifically the Problem Set, challenge students to find more than two parts by mixing colors or using additional crayons. Demonstrate how to add a part to the number bond if needed. ● Topic C, Lesson 11 – During the Launch, guide students to see part–total relationships. They are likely to focus on the color of the markers. Invite students to put together the purple, orange, and blue markers. Make a number bond to model the relationship between the parts and the total. Additionally, during the Learn section, challenge partners to find as many ways as possible to sort the picture into parts. This activity can be used as an individual or class challenge to motivate creative, flexible thinking. ● Topic C, Lesson 13 – If students can easily add 4 and 5 to answer the question during the Launch, share the challenge at the end of the video, which includes 4 items with different prices. Invite students to come up with combinations of school supplies that the characters could buy with their 9 pennies. There are many possibilities. Challenge students to consider: "*What could the children buy?"* Then, during the Learn section of the lesson, challenge students to think beyond what is shown in the picture: *"How many would there be if the family had 1 more baby? 2 more babies? How many would there be if another family of 4 (or another number) came along? How many would there be if the family had 1 less baby? 2 less babies?"* ● Topic C, Lesson 15 – Students who are ready can make 5 with three or more cards. ● Topic C, Lesson 17 – Challenge students who showed understanding of number sentences during recent lessons to write a number sentence to represent their collection.
Struggling Learners	● Topic A, Lesson 1 – During the Fluency section of the lesson, support students in noticing the pattern of 10 beads in each row in one or more of the following ways: Use length to compare the rows of beads, have students track the count on their fingers, offer more repetition by continuing the process of counting 10 beads in each row up to 100. Additionally, during the Launch, revisit the work of examining and naming shapes from Module 2. As needed, activate prior knowledge by directing students to analyze the shape with questions. (Ex: *"Is the shape open or closed? Does it have curved sides or straight sides? How many sides does it have? Corners?"*) ● Topic A, Lesson 3 – During the Fluency activity, if students need support with writing a numeral greater than 10 as the number of problems correct, consider providing a model. Write the numeral on a sticky note for the student to copy. ● Topic A, Lesson 4 – During the Learn section, think about who uses drawings and who uses numerals to represent the dot cards and flower scene. Consider pairing a student who draws with a student who writes numerals. After they find a few pictures, have them relate pictorial representations to abstract representations by comparing their parts and totals.

	● Topic B, Lesson 5 – During the Learn portion of the lesson, gather a small group of students for additional support with their work on the first page while the rest of the class works independently. Continue to use systematic modeling to guide students in the small group to sort objects and record in the number bond. ● Topic B, Lesson 6 – During the Learn section, if students do not recognize that the total is 6 after each shake, count as you move the disks to the number path. Ask students who do know that there are 6 to explain how they know. Conservation develops over time, and this game is a good way to promote it. ● Topic B, Lesson 8 – During the Learn section, if students need help generating sorting categories, prompt them to consider the attributes: color, size, shape, and pattern. If students are still unclear, offer more support: *"These shapes are all …."* (Point to indicate circles.) *"But these shapes are …."* (Point to indicate triangles.) ● Topic C, Lesson 12 – If students need support in finding the parts and total in the photos, ask the following questions while the picture is displayed: *"How many adults? How many babies? How many in total?"* Then, stop questioning as soon as students are able to see parts and total independently. ● Topic C, Lesson 15 – During the Fluency section of the lesson, invite students who need more support to lay out their cards with only sets of objects facing up. This will allow them to easily count all. ● Topic C, Lesson 18 – Have students use the rekenrek to practice decomposing totals within 10. Select a number such as 7. Show students how to keep 7 beads in view while hiding the rest behind the cardboard. With 7 as the total, the beads can be moved apart to show decompositions. A partner could hide one part with their hand and ask, *"7 is 5 and …?"*
English Language Learners	● Throughout Module 4 – For discussions, consider using strategic, flexible grouping. Pairing suggestions include: pair students who have different levels of mathematical proficiency and/or who have different levels of English language proficiency. As applicable, complement any of these groupings by pairing students who speak the same native language. ● Topic A, Lesson 1 – Decade words such as *thirty* and *forty* are often confused with teen number words such as *thirteen* and *fourteen*. While it is helpful to acknowledge similarities (e.g., you can hear the *four* in *forty* or see the 4 rows on the rekenrek), take time to distinguish between number words as well. Exaggerate the pronunciation, especially the final sounds (e.g., thir-teeee versus thir-teennnn) and encourage students to do the same. ● Topic A, Lesson 2 – During the Fluency activities, if students hesitate to say the next number in the sequence, present the familiar pattern of 1 more for support. Then, during the Launch, invite students to outline the shapes if they are still learning the language needed to describe them. Use this as an opportunity to build vocabulary related to shape, color, size, and position. ● Topic B, Lesson 7 – During the Launch section of this lesson, if students share ideas that are incorrect, support the class with sentence starters that allow for constructive disagreement. ● Topic C, Lesson 11 – To support language learners, consider adding a drawing under the labels thick and thin. Encourage students to use words with similar meanings, such as fat and skinny, to build understanding.
Special Needs Learners	● Topic A, Lesson 4 – Provide two options of number bonds (see teacher's manual for images) and allow students to choose which number bond they would like to use and place their choice on their personal whiteboard. ● Topic B, Lesson 7 – During the Launch, provide loose blue and yellow cubes for students to test their ideas about how the missing 5-stick might look. Use the students' 5-sticks to help them verbalize their ideas. It may be helpful to make the pictured sticks and place them as shown under a document camera. ● Topic B, Lesson 8 – To make relationships more apparent and offer a more concrete experience during the Launch section, do the following: When a student shares a rationale, post an X on or cover the picture that does not belong, so that the similarities

	of the remaining pictures stand out. And/or, present the pictures as cards that can be manipulated or sorted (e.g., three grouped on one side and one that doesn't belong on the other). ● Topic B, Lesson 9 – Consider differentiating the Fluency activity by assigning different numbers of counters. Students can be given anywhere from 3 to 10 counters to support or challenge them as needed. ● Topic C, Lesson 11 – Consider using a bag of markers instead of the picture in the Launch. That way the class can physically sort the objects, and volunteers can touch them as the class counts. This option allows you to choose the right number of markers for your class. The picture purposely uses a large total to challenge students and provide an opportunity for counting through the teen numbers as a class. ● Topic C, Lesson 14 – Connect the number bond to the story context by using pictures or labels. Emerging readers may recognize I as a label for in the box, and O as a label for out of the box. If letter-sound correspondence is not yet secure, a simple sketch will do. When in close proximity to the parts of the number bond, these labels underscore the meaning of the referents, that is, understanding what each number refers to in the real-world context. ● Topic C, Lesson 15 – If some misunderstanding lingers, provide a stick of cubes to verify which numbers can and cannot be part of the total. *(Ex: Write numbers on the cube stick. Break the stick into all the partners to "x".)*
Learners with a 504	Refer to page four in the Parent and Educator Resource Guide to Section 504 to assist in the development of appropriate plans.

Interdisciplinary Connections

Standards:

- SL.II,K.2 – Confirm understanding of a text read aloud or information presented orally or through other media by asking and answering questions about key details and requesting clarification if something is not understood.
    - Lessons 4 & 6 - Greg Tang's "Math Fables" and "Math Fables Too" playfully invite students to see parts inside a number. Consider using portions of the book as a read aloud in Lesson 4, and throughout the module. Encourage students to use the rhymes and illustrations to say number sentences. Additionally, Molly Coxe's "6 Sticks" explores multiple ways to make 6 using popsicle sticks and some imagination. Consider using the book as a read aloud before or after Lesson 6.

- SL.PE.K.1 – Participate in collaborative conversations with diverse partners about *kindergarten topics and texts* with peers and adults in small and larger groups. ***AND***
  SL.PE.K.1B – Continue a conversation through multiple exchanges.
    - Lesson 16 – Each lesson in this module (and the series, as a whole) allows for critical and constructive mathematical discourse to occur. However, during this lesson, students will visit stations that will allow them to learn through discovery and have the opportunity to apply what they have learned thus far. Then, at the conclusion of this lesson, the teacher will guide the class in a discussion to share new mathematical observations and/or discoveries.

- L.KL.K.1.c – Understand and use question words (interrogatives) (e.g., who, what, where, when, why, how).
    - Lesson 3 – Kindergarten word problem questions generally begin with how many. In this lesson, teachers begin to teach students to ask how many questions on their own, which encourages them to think about the world mathematically. Students are often intensely interested in finding the best way to answer their own questions. Asking questions is linguistically challenging because of the change in subject-verb order. Calling them "how many" questions scaffolds their thinking and supports students by providing the first two words of the question.

- 1.5.2.Re8a – Categorize and describe works of art, by identifying subject matter, details, mood, and formal characteristics.
    - Lesson 2 – During the Launch portion of this lesson, students will analyze a work of art titled *Composition with Large Red Plane, Yellow, Black, Gray, and* Blue, 1921, by Piet Mondrian. During that time, the teacher will guide the conversation to discuss Mondrian's painting and his inclusion of shapes and colors. Additionally, students will be invited to analyze other early landscape paintings of his and observe how they are consistent with the Impressionist movement (that was drawing to a close as he began his career). Furthermore, students will discuss how Mondrian was fascinated by the lines and shapes he found in nature. In his work, he reduced objects, lines, and spaces to their simplest forms. Over time, his paintings became more geometrical until the original subject was abstracted beyond immediate recognition. This will help students make connections between art and real-world shapes.

Integration of 21st Century Skills

Standards:

- 8.1.2.DA.3 – Identify and describe patterns in data visualizations. ***AND***
  8.1.2.DA.4 – Make predictions based on data using charts or graphs.
  - Lessons 7 & 8 – During these lessons, students will learn the combinations to 5 and 10. In both lessons, students will be challenged to use the initial "number stair combinations" to make predictions about other numbers combinations that equal 5 or 10.

- 8.1.2.AP.2 – Model the way programs store and manipulate data by using numbers or other symbols to represent information.
  - Lessons 11, 12, & 14 – In these lessons, students begin exploring how to represent number stories in mathematical terms/using numbers and symbols. They take and analyze the information presented in each of the word problems and then work through how to show that information mathematically using drawings, number bonds, numbers, and/or symbols (for those who are ready).

- 8.2.2.ED.3 – Select and use appropriate tools and materials to build a product using the design process.
  - Lesson 18 – Students are challenged with the task of creating their own Rekenrek tool to assist them in counting. This activity requires patience, planning, persistence, fine motor skills, and more.

- 9.4.2.CT.2 – Identify possible approaches and resources to execute a plan.
  - Lessons 13 & 15 – In these lessons, students are challenged with the task of identifying which tools they should use to effectively solve two different types of story problems: *put together* and *take apart with both addends unknown*.

- 9.4.2.CT.3 – Use a variety of types of thinking to solve problems.
  - Lessons 1 & 9 – Completing the shape puzzles in these lessons requires trial and error and may be frustrating for students. Remind them that when we struggle or make mistakes, we are learning. Discuss strategies for dealing with frustration and persevering, such as: using positive self-talk with statements, having a growth mindset, pausing to take deep breaths and calm down before trying to work again, and/or choosing a different approach to your work.

Unit Title: Module 5 (Addition and Subtraction)

Unit Description: Students develop a conceptual understanding of addition and subtraction. They represent situations with number sentences and model story problems in various ways.

Unit Duration: 27 instructional days (+ a few days to administer the 1:1 end-of-module assessment)
(Please note that Lesson 27 is included in the total number of instructional days but is optional.)

Desired Results

Standard(s):

- **K.CC.A.2 – Count forward beginning from a given number within the known sequence (instead of having to begin at 1).**
- **K.OA.A.1 – Represent addition and subtraction with objects, fingers, mental images, drawings, sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations.**
- **K.OA.A.2 – Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem.**
- **K.OA.A.3 – Decompose numbers less than or equal to 10 into pairs in more than one way, e.g., by using objects or drawings, and record each decomposition by a drawing or equation (e.g., 5 = 2 + 3 and 5 = 4 + 1).**
- **K.OA.A.4 – For any number from 1 to 9, find the number that makes 10 when added to the given number, e.g., by using objects or drawings, and record the answer with a drawing or equation.**
- **K.OA.A.5 – Demonstrate accuracy and efficiency for addition and subtraction within 5.**
- **K.G.B.6 – Compose simple shapes to form larger shapes.**
- K.CC.A.1 – Count to 100 by ones and by tens.
- K.CC.B.4 – Understand the relationship between numbers and quantities; connect counting to cardinality.
- K.CC.B.4.a – When counting objects, say the number names in the standard order, pairing each object with one and only one number name and each number name with one and only one object.
- K.CC.B.4.b – Understand that the last number name said tells the number of objects counted. The number of objects is the same regardless of their arrangement or the order in which they were counted.
- K.CC.B.4.c – Understand that each successive number name refers to a quantity that is one larger.
- K.CC.B.5 – Count to answer “how many?” questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1–20, count out that many objects.
- K.M.A.2 – Directly compare two objects with a measurable attribute in common, to see which object has “more of” or “less of” the attribute and describe the difference. For example, directly compare the heights of two children and describe one child as taller/smaller.
- K.M.B.3 – Understand that certain objects are coins and dollar bills, and that coins and dollar bills represent money. Identify the values of all U.S. coins and the one-dollar bill.

Understandings:

Topic A

- I can create & solve a variety of addition story problems by using drawings, numerals, number sentences, and number bonds.
- I can create and tell addition story problems starting from/using number sentence models.
- I can find the total in an addition number sentence.

Topic B

- I can recognize that “taking away” is a type of subtraction.
- I can create & solve a variety of subtraction story problems by using drawings, numerals, number sentences, and number bonds.

Essential Questions:

- What happens when we put things together, or add?
- How do number sentences and number bonds help us tell math stories?
- How are number sentences and number bonds the same?
- How can a number sentence help us tell a story?
- How can the same total be made of different parts?
- Why can the same total have different parts?
- What happens to the total when zero is a part?
- How do you know when a number sentence matches a story or a picture?

● I can relate parts to total in subtraction situations. ● I can create and tell subtraction story problems starting from/using number sentence models. ● I can find the difference in a subtraction number sentence. Topic C ● I can identify the action in a problem to represent and solve it. ● I can relate addition and subtraction through word problems. ● I can reason about different units to solve story problems. ● I can count starting from a number other than 1 to find the total. ● I can represent and solve take from with change unknown problems. ● I can find the number that makes 10 and record with a number sentence. ● I can organize drawings to solve problems efficiently. Topic D ● Identify, extend, and predict linear and growing patterns. ● I can solve story problems by using repeated reasoning. ● I can reason about numbers to add and subtract. ● I can organize, count, and represent a collection of objects.	● How can you add when there is no story? ● What happens when we take things away, or subtract? ● Why do we use number sentences? ● Where is the total in the subtraction sentence? Where are the parts? ● How do the parts in a number sentence tell about the story? ● How do you know when a subtraction sentence matches a story or a picture? ● How do you subtract when there is no story? ● How do you decide whether to write an addition sentence or a subtraction sentence for a story? ● How are addition and subtraction alike? Different? ● How can we use groups to help us count or solve problems? ● What does it mean to count on? ● Why can some problems be solved by using either addition or subtraction? ● What are some ways to find partners to 10? ● Why is it helpful to organize drawings? ● How can you tell when something is a pattern? ● What is a pattern and why is it helpful? ● How do we describe a pattern? ● What is the same about number patterns and other kinds of patterns? ● How can a number sentence help us explain how we counted?

Assessment Evidence

Assessments:
- Observational Assessment Recording Sheet
- Module Assessment

Benchmarks:
- Kindergarten Snapshots are administered three times per year.
- The iReady Assessment is administered in the fall and winter.

Learning Plans

Lesson #: Module 5, Topic A, Lesson 1

Standard: K.OA.A.1, K.OA.A.2

Mathematical Practice: 2

Target: SWBAT represent *add to with result unknown* story problems by using drawings and numbers

Learning Activities:

Fluency:

- Sprint: Count and Write How Many – Find the total number of objects to prepare for finding the total in addition situations.

Launch:

- Visualize and represent a numberless math story.

Learn:

- Read and Write Number Sentences – Write equations to match a story and read or interpret them in various ways.
- Represent Stories – Represent a story by using drawings and number sentences.
- Problem Set – Complete the activity pages by telling a story and writing a number sentence.

Land:

- Debrief by facilitating a discussion that summarizes how to represent *add to with result unknown* story problems by using drawings and numbers.

Daily Exit Ticket: None for this lesson. However, teachers may opt to use the activity pages and the Problem Set pages in conjunction with the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – Puppet's work, puppet, Hide Zero cards (demonstration set)
- Student – Count and Write How Many Sprint, crayon (1), blank paper (1 sheet), Hide Zero cards, personal whiteboard, dry-erase marker, Learn Book

Lesson #: Module 5, Topic A, Lesson 2

Standard: K.OA.A.1, K.OA.A.2

Mathematical Practice: 7

Target: SWBAT relate number sentences and number bonds through story problems

Learning Activities:

Fluency:

- Ready, Set, Count – Represent two parts and find the total to prepare for understanding addition as putting together.
- Shake Those Disks – Record a total and parts in number bond to build fluency with decomposing a number in more than one way.
- Work with Money – Identify the values of all US coins and one-dollar bill to build fluency with the understanding that coins and dollar bills are money and have value.

Launch:

- Visualize and represent a math story by making a drawing and using numbers.

Learn:

- Relate Representations – Make connections about how number bonds and number sentences represent a math story.
- Represent Pictures – Tell a story about a picture, and then represent it with a number sentence and a number bond.
- Problem Set – Complete the activity pages to tell a number story and write a number bond and a number sentence.

Land:

- Debrief by facilitating a discussion that summarizes how to relate number sentences and number bonds through story problems.

Daily Exit Ticket: None for this lesson. However, teachers may opt to use the activity pages and the Problem Set pages in conjunction with the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – Sticky notes (2)
- Student – Shake Those Disks removable, two-color counters (10 per student pair), cup (1 per student pair), blank paper, crayons, personal whiteboard, dry-erase marker, Student book

Lesson #: Module 5, Topic A, Lesson 3

Standard: K.OA.A.1, K.OA.A.2

Mathematical Practice: 5

Target: SWBAT represent and solve *add to with result unknown* story problems

Learning Activities:

Fluency:

- Ready, Set, Compare – Compare values within 10 to prepare for understanding how parts and total are related in addition.
- Shake Those Disks – Record a total and parts in a number bond to build fluency with decomposing a number in more than one way.

Launch:

- Watch a video and tell a math story to match.

Learn:

- Roller Coaster Story – Choose tools and solve a story problem.
- Represent and Solve – Solve a story problem and represent with a number sentence.
- Number Sentence Hunt – Partner to tell a story from a picture and record a matching number sentence.

Land:

- Debrief by facilitating a discussion that summarizes how to represent and solve *add to with result unknown* story problems.

Daily Exit Ticket: None for this lesson. However, in its place, use the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – Chart paper, story cards
- Student – Shake Those Disks removable, two-color counters (10 per student pair), cup (1 per student pair), personal whiteboard, dry-erase marker, Student book

Lesson #: Module 5, Topic A, Lesson 4

Standard: K.OA.A.1, K.OA.A.3

Mathematical Practice: 6

Target: SWBAT represent decomposition situations by using number bonds and addition sentences

Learning Activities:

Fluency:

- Ready, Set, Add – Find the total and say an addition sentence to develop fluency with solving *add to with result unknown* problems.
- Make It Equal with Beans – Add or remove objects to create sets with the same number to develop an understanding of equality.

Launch:

- Share total-part thinking and record with a number bond.

Learn:

- Number Sentences – Use number bonds to write addition sentences.
- Sorting Bears – Write a number bond and an addition sentence to represent a sort.
- Problem Set – Complete the activity pages to find the parts and fill in the number sentences.

Land:

- Debrief by facilitating a discussion that summarizes how to represent decomposition situations by using number bonds and addition sentences.

Daily Exit Ticket: None for this lesson. However, teachers may opt to use the activity pages and the Problem Set pages in conjunction with the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – Dot cards, 10-sided die, teddy bear counters (10), recording sheet, paper plates (2)
- Student – 10-sided die, two-color beans (20 per student pair), teddy bear counters (10), paper plates (2), recording sheet, Student book

Lesson #: Module 5, Topic A, Lesson 5

Standard: K.OA.A.1, K.OA.A.2, K.OA.A.3

Mathematical Practice: 2

Target: SWBAT represent *take apart with both addends unknown* situations with a number sentence

Learning Activities:

Fluency:

- Sprint: Make It Equal – Draw equal sets to develop and understanding of the equal sign.

Launch:

- Represent a story to decompose a group starting with the total.

Learn:

- *Both Addends Unknown* Stories – Represent a story by using drawings and number sentences.
- Analyze Decompositions – Analyze work to see that the same total may have different parts.
- Represent Stories – Represent a story by using drawings and number sentences.
- Problem Set – Complete the activity pages to identify different parts and write the number sentence.

Land:

- Debrief by facilitating a discussion that summarizes how to represent *take apart with both addends unknown* situations with a number sentence.

Daily Exit Ticket: None for this lesson. However, teachers may opt to use the activity pages and the Problem Set pages in conjunction with the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – Puppet's work
- Student – Make It Equal Sprint, personal whiteboard, dry-erase marker, Student book, crayons (3 different colors)

Lesson #: Module 5, Topic A, Lesson 6

Standard: K.OA.A.1, K.OA.A.2

Mathematical Practice: 3

Target: SWBAT tell addition story problems starting from number sentence models

Learning Activities:

Fluency:

- Show Me the Math Way: Pop Up More – Show a number the math way, pop up some more, then say an addition sentence to build addition fluency.
- Match: Make 5 – Make 5 to build fluency with writing addition sentences.

Launch:

- Select a number sentence to match a picture or story.

Learn:

- Tell a Story – Use numbers in a number sentence to generate a story context.
- Whiteboard Exchange – Draw pictures to match number sentences.
- Number Sentence Hunt – Match number sentences to pictures.

Land:

- Debrief by facilitating a discussion that summarizes how to tell addition story problems starting from number sentence models.

Daily Exit Ticket: None for this lesson. However, in its place, use the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – Story cards, containers (5), Number Sentence Strips
- Student – Match cards (1 set per student pair), Number Sentence Strips, personal whiteboard, dry-erase marker

Lesson #: Module 5, Topic A, Lesson 7

Standard: K.OA.A.1, K.OA.A.5

Mathematical Practice: 5

Target: SWBAT find the total in an addition sentence

Learning Activities:

Fluency:

- Show Me the Math Way: Pop Up More – Show a number the math way, pop up some more, then say an addition sentence to build addition fluency within 5.
- Match: Make 5 – Make 5 to build fluency with writing addition sentences.

Launch:

- Select an expression to match a picture or story.

Learn:

- Find the Total – Choose tools and strategies to find the total of an expression.
- Compare and Connect – Discuss strategies for finding the total of a 2-part expression.
- Try a Different Way – Choose a different tool to find the total of a 2-part expression.
- Problem Set – Complete the activity pages to find the total of the number sentences.

Land:

- Debrief by facilitating a discussion that summarizes how to find the total in an addition sentence.

Daily Exit Ticket: None for this lesson. However, teachers may opt to use the activity pages and the Problem Set pages in conjunction with the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – Story cards
- Student – Match cards (1 set per student pair), Student book

Lesson #: Module 5, Topic B, Lesson 8

Standard: K.OA.A.1, K.OA.A.3

Mathematical Practice: 8

Target: SWBAT understand taking away as a type of subtraction

Learning Activities:

Fluency:

- Counting on the Rekenrek by Ones Within 50 – Associate a number word with the quantity to build fluency with counting to 100 by ones.
- Show Me the Math Way: Hide and Show – Hide fingers the math way to prepare to understand taking away as a type of subtraction.
- Work with Money – Identify the values of all US coins and one-dollar bill to build fluency with the understanding that coins and dollar bills are money and have value.
-

Launch:

- Associate taking away with subtraction.

Learn:

- Farmer Brown – Cross out to show subtraction.
- Take Away Apples – Take away and say subtraction number sentences.
- Problem Set – Complete the activity pages to show how taking objects away represents subtraction.

Land:

- Debrief by facilitating a discussion that summarizes how to understand taking away as a type of subtraction.

Daily Exit Ticket: None for this lesson. However, teachers may opt to use the activity pages and the Problem Set pages in conjunction with the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – 100-bead rekenrek, “Farmer Brown Had Ten Red Apples” song lyrics
- Student – Apple Tree removable, 6-sided dot die, personal whiteboard, dry-erase marker, Student book

Lesson #: Module 5, Topic B, Lesson 9

Standard: K.OA.A.1, K.OA.A.2

Mathematical Practice: 2

Target: SWBAT represent *take from with result unknown* story problems by using drawings and numbers

Learning Activities:

Fluency:

- Counting on the Rekenrek by Ones Within 60 – Associate a number word with a quantity to build fluency with counting to 100 by ones.
- Show Me the Math Way: How Many Are Left? – Show a number the math way, hide some, then say how many are left to build kinesthetic memory and develop subtraction fluency within 5.

Launch:

- Visualize and discuss a numberless math story.

Learn:

- Represent a Subtraction Situation – Draw to show taking away.
- Read and Write Number Sentences – Write equations to match a story and read or interpret them in various ways.
- Represent Stories – Represent a story by using drawings and number sentences.
- Problem Set – Complete the activity pages to tell a story using the pictures and then write the matching number sentences.

Land:

- Debrief by facilitating a discussion that summarizes how to represent *take from with result unknown* story problems by using drawings and numbers.

Daily Exit Ticket: None for this lesson. However, teachers may opt to use the activity pages and the Problem Set pages in conjunction with the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – 100-bead rekenrek, Hide Zero cards (demonstration set), Puppet's work
- Student – Blank paper, crayons, Hide Zero cards, personal whiteboard, dry-erase marker, Student book

Lesson #: Module 5, Topic B, Lesson 10

Standard: K.OA.A.1, K.OA.A.2, K.G.A.2

Mathematical Practice: 5

Target: SWBAT represent and *solve take from with result unknown* story problems

Learning Activities:

Fluency:

- Sprint: Take Away 1 – Cross out 1 and count how many are left to prepare for solving *take from with result unknown* problems.

Launch:

- Watch a video and tell a math story to match.

Learn:

- Edwin's Cookies – Choose all tools and solve a story problem.
- Represent and Solve – Solve a story problem and represent it with a number sentence.
- Share, Compare, Connect – Gather the class for a discussion.
- Problem Set – Complete the activity pages to represent and show how to solve *take from with result unknown* problems.

Land:

- Debrief by facilitating a discussion that summarizes how to represent and solve t*ake from with result unknown* story problems.

Daily Exit Ticket: None for this lesson. However, teachers may opt to use the activity pages and the Problem Set pages in conjunction with the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – Chart paper (2 pieces), marker
- Student – Take Away 1 Sprint, Student book

Lesson #: Module 5, Topic B, Lesson 11

Standard: K.OA.A.1, K.OA.A.2

Mathematical Practice: 7

Target: SWBAT represent decomposition situations by using number bonds and subtraction sentences

Learning Activities:

Fluency:

- Happy Counting by Ones Within 30 – Visualize a number line while counting aloud to build fluency counting within 100.
- Dot Cards Number Bonds – Identify parts and the total in a group of dots, then write a number bond to represent the dot card to prepare for decomposition by using number bonds.
- Work with Money – Identify the values of all US coins and one-dollar bill to build fluency with the understanding that coins and dollar bills are money and have value.

Launch:

- Listen to a story problem and solve.

Learn:

- Crayon Story – Create a number sentence and a number bond that match the crayon story.
- Sorting Bears – Write a number bond and a number sentence to represent a sort.
- Problem Set – Complete the activity pages to represent decomposition situations and then write the matching number sentence and number bond.

Land:

- Debrief by facilitating a discussion that summarizes how to represent decomposition situations by using number bonds and subtraction sentences.

Daily Exit Ticket: None for this lesson. However, teachers may opt to use the activity pages and the Problem Set pages in conjunction with the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – Dot cards, 10-sided die, teddy bear counters, recording sheet
- Student – Number Bond removable, 10-sided die (1 per student pair), teddy bear counters (10 per student pair), cup, personal whiteboard, dry-erase marker, Student book

Lesson #: Module 5, Topic B, Lesson 12

Standard: K.OA.A.1, K.OA.A.2, K.OA.A.3

Mathematical Practice: 4

Target: SWBAT relate parts to total in subtraction situations

Learning Activities:

Fluency:

- Counting on the Rekenrek by Ones Within 70 – Associate a number word with a quantity to build fluency with counting to 100 by ones.
- Dot Cards: Imagine 1 Less – Recognize a group of dots and imagine 1 less to prepare for work with images that represent subtraction.
- Show Me the Math Way: Subtract – Show a number the math way, hide some, then say a subtraction sentence to develop subtraction fluency within 5.

Launch:

- Reason about a total shape based on its parts.

Learn:

- How Many? – Analyze an image to find the parts and total.
- Egg Carton Story – Write a subtraction number sentence to match a story problem.
- Represent and Solve – Choose tools and solve a story problem.
- Bowling Game – Write subtraction number sentences by using a consistent total.

Land:

- Debrief by facilitating a discussion that summarizes how to relate parts to total in subtraction situations.

Daily Exit Ticket: None for this lesson. However, in its place, use the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – 100-bead rekenrek, dot cards, construction paper
- Student – Bowling recording sheet, Student book

Lesson #: Module 5, Topic B, Lesson 13

Standard: K.OA.A.1, K.OA.A.2

Mathematical Practice: 3

Target: SWBAT tell subtraction story problems starting from number sentence models

Learning Activities:

Fluency:

- Ready, Set, Compare with Cards – Compare sets or numerals to build fluency with comparing numbers from Module 3.
- Happy Counting by Ones Within 40 – Visualize a number line while counting aloud to build fluency counting within 100.
- Show Me the Math Way: Subtract – Show a number the math way, hide some, and then say a subtraction sentence to develop fluency within 5.

Launch:

- Select a number sentence to match a picture or story.

Learn:

- Tell a Story – Use numbers in an equation to generate a story context.
- Whiteboard Exchange – Draw pictures to match number sentences.
- Subtraction Match – Match pictures to number sentences.

Land:

- Debrief by facilitating a discussion that summarizes how to tell subtraction story problems starting from number sentence models.

Daily Exit Ticket: None for this lesson. However, in its place, use the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – Story cards, Subtraction Match cards
- Student – Match cards (1 set per student pair), Subtraction Match cards, scissors, personal whiteboard, dry-erase marker, Student book

Lesson #: Module 5, Topic B, Lesson 14

Standard: K.OA.A.1, K.OA.A.5

Mathematical Practice: 5

Target: SWBAT find the difference in a subtraction sentence

Learning Activities:

Fluency:

- Ready, Set, Compare with Cards – Compare sets or numerals to build fluency with comparing numbers from Module 3.
- Happy Counting by Ones Within 50 – Visualize a number line while counting aloud to build fluency counting within 100.
- Show Me the Math Way: Subtract – Show a number the math way, hide some, and then say a subtraction sentence to develop fluency within 10.

Launch:

- Select an expression to match a picture or story.

Learn:

- Find the Difference – Choose strategies and tools to find the difference.
- Compare and Connect Strategies – Discuss various ways to find the difference.
- Try a Different Way – Select a new way to find the difference.
- Problem Set – Complete the activity pages to draw and solve the number sentences.

Land:

- Debrief by facilitating a discussion that summarizes how to find the difference in a subtraction sentence.

Daily Exit Ticket: None for this lesson. However, teachers may opt to use the activity pages and the Problem Set pages in conjunction with the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – Story cards
- Student – Match cards (1 set per student pair), Student book

Lesson #: Module 5, Topic C, Lesson 15

Standard: K.OA.A.1, K.OA.A.2

Mathematical Practice: 1

Target: SWBAT identify the action in a problem to represent and solve it

Learning Activities:

Fluency:

- Sprint: Take Away 2 – Cross out 2 and count how many are left to prepare for relating the action of crossing out to subtraction.

Launch:

- Reason about the action in a story problem.

Learn:

- Act It Out – Act out story problems and write a matching number sentence.
- Rock Story – Represent a story by using tools and number sentences.
- Rock Story Problems – Use tools to solve and write number sentences to match each story.

Land:

- Debrief by facilitating a discussion that summarizes how to identify the action in a problem to represent and solve it.

Daily Exit Ticket: None for this lesson. However, in its place, use the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – Puppet, cardstock (10 sheets)
- Student – Take Away 2 Sprint, assorted math tools, personal whiteboard, dry-erase marker

Lesson #: Module 5, Topic C, Lesson 16

Standard: K.OA.A.1, K.OA.A.2

Mathematical Practice: 7

Target: SWBAT relate addition and subtraction through word problems

Learning Activities:

Fluency:

- Shape Tap: Flat Shapes – Find and name a shape based on its attributes to build fluency with shape terminology from Module 2.
- Birthday Candles – Create a set by adding or removing candles on a cake to prepare for moving flexibly between addition and subtraction.

Launch:

- Number Path Game – Relate movement on the number path to increasing or decreasing quantity.

Learn:

- Bunnies in the Garden – Act out addition and subtraction by using a number path.
- Martza's Cakes – Relate addition and subtraction stories.
- Problem Set – Complete the activity pages to tell a story to match the picture. Then, complete the number bonds and number sentences appropriately.

Land:

- Debrief by facilitating a discussion that summarizes how to relate addition and subtraction through word problems.

Daily Exit Ticket: None for this lesson. However, teachers may opt to use the activity pages and the Problem Set pages in conjunction with the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – Flat Shapes Set, Big Number Path, puppet
- Student – Birthday Candle removable, crayons (6 per student pair), 6-sided dot die (1 per student pair), Number Path removable, unifix cube, personal whiteboard, dry-erase marker, Student book

Lesson #: Module 5, Topic C, Lesson 17

Standard: K.OA.A.2

Mathematical Practice: 1

Target: SWBAT reason about different units to solve story problems

Learning Activities:

Fluency:

- Shape Tap: Solid Shapes – Find and name a shape based on its attributes to build fluency with shape terminology from Module 2.
- Count on the Rekenrek by Tens and Fives – Count by tens and fives to prepare for unitizing.

Launch:

- Answer different *how many* questions about the same picture.

Learn:

- Bouncy House Story – Visualize and use tools to represent a story involving groups of two.
- Share, Compare, and Connect – Discuss different ways to represent and solve a problem.
- Represent Stories – Represent a story by using drawings or manipulatives.

Land:

- Debrief by facilitating a discussion that summarizes how to reason about different units to solve story problems.

Daily Exit Ticket: None for this lesson. However, in its place, use the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – Geometric solids set, 100-bead rekenrek
- Student – Assorted math tools

Lesson #: Module 5, Topic C, Lesson 18

Standard: K.CC.A.2, K.OA.A.2

Mathematical Practice: 8

Target: SWBAT count starting from a number other than 1 to find the total

Learning Activities:

Fluency:

- 5-Group Hands – Represent 5-groups with their hands to prepare for counting on from a number other than 1.
- Green Light, Red Light – Count from different number to prepare for counting on from a number other than 1.
- Counting on the Rekenrek by Tens – Count by tens to build fluency counting to 100 by tens.

Launch:

- Find how many by counting on from numbers other than 1.

Learn:

- Baseball Bears – Count on from a number other than 1 in a real-world situation.
- Problem Set – Complete the activity pages by starting at a number other than 1 to name each total.

Land:

- Debrief by facilitating a discussion that summarizes how to count starting from a number other than 1 to find the total.

Daily Exit Ticket: None for this lesson. However, teachers may opt to use the activity pages and the Problem Set pages in conjunction with the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – 100-bead rekenrek, counters (9), Hide Zero cards (demonstration set), Number Path, puppet
- Student – Baseball Bears Scoreboard, personal whiteboard, dry-erase marker, Student book

Lesson #: Module 5, Topic C, Lesson 19

Standard: K.OA.A.1, K.OA.A.2, K.OA.A.4

Mathematical Practice: 4

Target: SWBAT represent and solve *take from with change unknown* problems

Learning Activities:

Fluency:

- Birthday Candles – Create a set by adding or removing candles on a cake to prepare for moving flexibly between addition and subtraction.
- Green Light, Red Light – Count from different number to prepare for counting on from a number other than 1.
- Counting on the Rekenrek by Tens – Count by tens to build fluency counting to 100 by tens.

Launch:

- Reason about an unknown change.

Learn:

- Chicken Coop – Represent and solve a story problem involving a hidden part.
- Share, Compare, and Connect – Share and discuss solution pathways for finding a hidden part.
- How Many Are Hiding? – Hide part of the total and represent and tell a story about the situation.

Land:

- Debrief by facilitating a discussion that summarizes how to represent and solve *take from with change unknown* problems.

Daily Exit Ticket: None for this lesson. However, in its place, use the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – 100-bead rekenrek
- Student – Birthday Candles removable, crayons (6 per student pair), 6-sided dot die (1 per student pair), teddy bear counters (10 per student pair), cup (1 per student pair), assorted math tools, personal whiteboard, dry-erase marker

Lesson #: Module 5, Topic C, Lesson 20

Standard: K.OA.A.1, K.OA.A.2, K.OA.A.4

Mathematical Practice: 3

Target: SWBAT find the number that makes 10 and record with number sentences

Learning Activities:

Fluency:

- Say Ten Push-Up – Represent teen numbers to prepare for work with place value beginning in Module 6.
- Snap: Partners to 10 – Decompose a number in more than one way to build fluency with partners to 10.

Launch:

- Use weight as a way to visually compare the relationship between 10 and partners to 10.

Learn:

- How Many More? – Compare lengths to find an unknown partner to 10.
- Ten and Tuck – Use their fingers efficiently to find partners to 10.
- Find Partners to 10 – Compare lengths to find an unknown partner to 10 and write a number sentence to match.

Land:

- Debrief by facilitating a discussion that summarizes how to find the number that makes 10 and record with a number sentence.

Daily Exit Ticket: None for this lesson. However, in its place, use the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – Unifix cubes, rocker scale, sticky notes (2)
- Student – Unifix cubes (per student pair), Student book

Lesson #: Module 5, Topic C, Lesson 21

Standard: K.OA.A.1, K.OA.A.2, K.OA.A.4

Mathematical Practice: 2, 4

Target: SWBAT organize drawings to solve problems efficiently

Learning Activities:

Fluency:

- Ten and Tuck – Use their hands to represent a partner to 10 and say a related addition sentence to build fluency with partners to 10.
- Snap: Partners to 10 – Decompose a number in more than one way to build fluency with partners to 10.

Launch:

- Find the total number of dots for different configurations.

Learn:

- Jamel's Stickers – Draw to represent a story problem.
- Share, Compare, and Connect – Discuss different ways to represent a story.
- Represent Stories – Represent a story by using drawings and number sentences.
- Problem Set – Complete the activity pages to draw more dots to make 10 and fill in the number bond appropriately

Land:

- Debrief by facilitating a discussion that summarizes how to organize drawings to solve problems efficiently.

Daily Exit Ticket: None for this lesson. However, teachers may opt to use the activity pages and the Problem Set pages in conjunction with the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – None
- Student – Unifix cubes (10 per student pair), paper, crayons, Student book

Lesson #: Module 5, Topic D, Lesson 22

Standard: K.CC.A.2

Mathematical Practice: 7

Target: SWBAT identify and extend linear patterns

Learning Activities:

Fluency:

- Sprint: 5-Groups – Recognize 5-groups to build fluency with subitizing and counting from a number other than 1.

Launch:

- Isolate different attributes to describe and extend a pattern.

Learn:

- Recreate a Pattern with Movement – Use movement and sound to recreate visual patterns.
- Recreate a Pattern with Materials – Use new materials to recreate a pattern.
- Problem Set – Complete the activity pages to build and finish a pattern with cubes.

Land:

- Debrief by facilitating a discussion that summarizes how to identify and extend linear patterns.

Daily Exit Ticket: None for this lesson. However, teachers may opt to use the activity pages and the Problem Set pages in conjunction with the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – Unifix cubes, pennies, beans
- Student – 5-Groups Sprint, assorted pattern materials, sentence strip, unifix cubes, Student book

Lesson #: Module 5, Topic D, Lesson 23

Standard: K.CC.A.2

Mathematical Practice: 2, 7, 8

Target: SWBAT use a pattern to make a prediction

Learning Activities:

Fluency:

- Say Ten Push-Ups – Represent teen numbers to prepare for work with place value beginning in Module 6.
- 5-Group Hands – Represent 5-groups with their hands to build fluency counting from a number other than 1.
- Happy Counting by Ones Within 80 – Visualize a number line while counting aloud to build fluency counting within 100.

Launch:

- Notice and wonder about the path of a toy car travelling down a set of 3 ramps.

Learn:

- Ramp Pattern – Record data and recognize patterns.
- Pattern Partners – Work in pairs to create and extend patterns.

Land:

- Debrief by facilitating a discussion that summarizes how to use a pattern to make a prediction.

Daily Exit Ticket: None for this lesson. However, in its place, use the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – Recording sheet, crayons
- Student – Recording sheet, crayons, unifix cubes

Lesson #: Module 5, Topic D, Lesson 24

Standard: K.OA.A.1, K.OA.A.2

Mathematical Practice: 7, 8

Target: SWBAT solve story problems using repeated reasoning

Learning Activities:

Fluency:

- Coin Drop – Track the count mentally to prepare for adding and subtracting within 5 beginning in Module 6.
- Happy Counting by Ones Within 100 – Visualize a number line while counting aloud to build fluency counting within 100.
- Circle Groups of 2 – Circle embedded groups of 2 to prepare for working with units of 2.

Launch:

- Find embedded groups of 2 in pictures and write number sentences to match.

Learn:

- Bouncy House Story – Use repeated reasoning about groups of 2 to solve story problems.
- Problem Set – Complete the activity pages to circle groups of 2 and write the matching number sentence.

Land:

- Debrief by facilitating a discussion that summarizes how to solve story problems using repeated reasoning.

Daily Exit Ticket: None for this lesson. However, teachers may opt to use the activity pages and the Problem Set pages in conjunction with the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – Empty can, pennies (5), chart paper
- Student – Circle Groups of 2, assorted math tools, personal whiteboard, dry-erase marker, Student book

Lesson #: Module 5, Topic D, Lesson 25

Standard: K.G.B.6, K.CC.B.4c

Mathematical Practice: 7

Target: SWBAT extend growing patterns

Learning Activities:

Fluency:

- Circle Sets of 3 – Circle embedded groups of 3 to build fluency with part-total relationships.
- Say Ten Push-Ups – Represent teen numbers to prepare for work with place value beginning in Module 6.

Launch:

- Find and discuss different patterns in an image.

Learn:

- Rosario's Birthday – Associate numbers with the passing of time and developmental growth.
- How Many Triangles? – Use pattern block triangles to discover a growth pattern.

Land:

- Debrief by facilitating a discussion that summarizes how to extend growing patterns.

Daily Exit Ticket: None for this lesson. However, in its place, use the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – Plastic pattern blocks (10)
- Student – Circle Groups of 3, Quilt, plastic pattern blocks

Lesson #: Module 5, Topic D, Lesson 26

Standard: K.OA.A.1, K.OA.A.4

Mathematical Practice: 8

Target: SWBAT reason about numbers to add and subtract

Learning Activities:

Fluency:

- *None for this lesson.*

Launch:

- Reason about numbers to find a pattern.

Learn:

- Introduce Stations – Learn procedures for station rotations.
- Find Robot's Pattern – Find a pattern in a series of numbers and apply the pattern to extend a sequence.
- Write Number Sentences – Use a collection of numeral cards and symbols to make true number sentences.
- Match: Make Ten – Combine different parts to make 10.

Land:

- Debrief by facilitating a discussion that summarizes how to reason about numbers to add and subtract.

Daily Exit Ticket: None for this lesson. However, in its place, use the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – Match cards, Hide Zero cards (demonstration set)
- Student – Assorted math tools, Match cards (1 set per student pair), Number Sentence Recording Sheet, Hide Zero cards, Student book

Lesson #: Module 5, Topic D, Lesson 27 ***(OPTIONAL)***

Standard: K.CC.A.1, K.CC.A.2, K.CC.B.4, K.CC.B.4a-c, K.CC.B.5

Mathematical Practice: 7

Target: SWBAT organize, count, and represent a collection of objects

Learning Activities:

Fluency:

- *None for this lesson.*

Launch:

- Practice recording from a given count.

Learn:

- Organize, Count, and Record – Use their own strategies to count objects and record their process.
- Share, Compare, and Connect – Discuss strategies for counting and recording a collection.

Land:

- Debrief by facilitating a discussion that summarizes how to organize, count, and represent a collection of objects.

Daily Exit Ticket: None for this lesson. However, in its place, use the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – Student work
- Student – Counting collection (1 per student pair), work mat, organizing tools, personal whiteboard, dry-erase marker, Student book

Unit Modifications for Special Population Students	
Advanced Learners	• Topic A, Lesson 1 – If students find it easy to tell a story about the picture, challenge them to answer the following questions: *"How many question does your story answer? How many birds are in the picture?"* • Topic A, Lesson 2 – For the first Fluency activity of the lesson, students who demonstrate fluency with totals within 10 can be placed into triads. This challenges them to find a total with three parts and increases the complexity by extending to totals within 15. Also, during the other Fluency activity, consider differentiating the activity by assigning different numbers of counters. Students can be given anywhere from 3 to 10 counters to support or challenge them as needed. • Topic A, Lesson 3 – For the second Fluency activity, consider differentiating the activity by assigning different numbers of counters. Students can be given anywhere from 3 to 10 counters to support or challenge them as needed. Additionally, during the Learn section of the lesson, if students solve the roller coaster problem quickly, challenge them with any of the following questions: *"Can 3 more children get on the roller coaster? Why? How many children would have to get off the roller coaster to make room for 3 children? 4 children?"* • Topic A, Lesson 4 – Students who demonstrate fluency with totals within 10 during the first Fluency activity can be placed into triads. This will challenge them to find a total with three parts and will increase the complexity to totals within 15. Likewise, partners can be challenged to show any number of fingers using both hands, increasing the complexity to totals within 20. • Topic A, Lesson 5 – During the Sprint activity, checking the answers may present a challenge for some students. Display the additional dot(s) for each problem and read the answers by asking students the question: *"Did you draw ___ more?"* (For example, with 3 = 3, draw/display the additional dot and ask, *"Did you draw 1 more?"*) • Topic A, Lesson 6 – During the Fluency activity, students who are ready can make 5 with three or more cards and write the corresponding addition sentence. For example: 2 + 2 + 1 = 5. • Topic B, Lesson 9 – For a challenge during the Fluency activity, consider showing a subtraction sentence on the board and asking students to find the difference by using their fingers behind their backs. • Topic B, Lesson 12 – During the Learn section, give the story as a numberless word problem. For example: *"The chef bought eggs. She cooked some eggs to make breakfast."* Give students time to consider the possible number of eggs the chef had at first and the number that she might have used. The problem has many possible answers. • Topic C, Lesson 16 – For the first Fluency activity, provide a pair of dice for students who are ready to work with larger numbers. **(This reappears in Topic C, Lesson 19.)** Then, for the Launch activity, consider having students record a number sentence on their personal whiteboard each time they roll. They may write an addition or subtraction number sentence depending on whether they move their cube forward or backward. Lastly, for the Problem Set, the muffin picture can be interpreted as an addition or subtraction situation. After students have written their number bond and number sentence, ask them to consider the other operation.
Struggling Learners	• Topic A, Lesson 2 – For the second Fluency activity, consider differentiating the activity by assigning different numbers of counters. Students can be given anywhere from 3 to 10 counters to support or challenge them as needed. Additionally, during the Learn section of the lesson, support students with number formation or number sentence structure by writing in highlighter and having them trace. Give every student the opportunity to write a number sentence independently at least once on each Problem Set to build independence and assess their progress. • Topic A, Lesson 3 – During the first Fluency activity of this lesson, students need support with comparing, they can use the one-to-one matching strategy of touching

	fingertips to compare their numbers. Consider also having students say their counts as they touch fingertips, so that they experience the greater number as being said last. Also, during the other Fluency activity, consider differentiating the activity by assigning different numbers of counters. Students can be given anywhere from 3 to 10 counters to support or challenge them as needed. ● Topic A, Lesson 5 – During the first Learn activity, allow students to use counters to solve the problems as needed. Additionally, during the Problem Set, gather a small group of students for additional support on the first page while the rest of the class works independently. Continue to use systematic modeling to guide students in the small group to represent *both addends unknown* problems and record with a number sentence beginning with the total. ● Topic A, Lesson 6 – During the Fluency activity, have students who need more support lay out their cards with only sets of objects facing up. This will allow them to easily count all. ● Topic B, Lesson 8 – Mixing up the order of numbers in a subtraction sentence is a common error. Support students as they structure their sentences by asking them the following questions: *"How many apples were there at the beginning? Then what happened? How many apples were left? 10 apples take away 3 apples is …"* ● Topic B, Lesson 9 – If students find it difficult to count fingers they cannot see during the Fluency activity, encourage them to tap their fingers on their back or on their lap under the table to build confidence. ● Topic B, Lesson 11 – If students have difficulty finding the total in a subtraction sentence, refer them back to the image of the crayons by using the following questions: *"How many total crayons are there? How many crayons were taken away? How many crayons are left?"* ● Topic B, Lesson 12 – During the Fluency activity, encourage students to use their hand to hide one of the dots. This way they can see what the dot card would look like with one less dot. ● Topic B, Lesson 13 – During the Learn section, some students may initially respond that 6 and 2 are the parts and 4 is the total. This is because they are accustomed to the structure of addition sentences, where the total appears most often to the right of the equal sign. To address this misconception, ask the following questions that help students to lightly consider context: *"How many were there at first? How many are taken away? How many are left?"* Summarize in terms of part–total relationships by saying the following statement: *"To subtract, we start with the total, take away a part, and the other part is left."* ● Topic C, Lesson 17 – After describing the shape's attribute, during the Fluency activity, provide the name of an everyday object example of that shape. ● Topic C, Lesson 20 – To build confidence during the second Fluency activity, select a total with fewer decompositions. Students can work with a 4-stick or a 5-stick at first. As they grow accustomed to the routine, and the decompositions, they can build up to 10. ● Topic C, Lesson 21 – During the Learn portion of the lesson, make additional tools available for students to use to model the problem concretely before drawing. For example, a student might represent the story with cubes or by using the rekenrek and then match their drawing to the concrete representation. ● Topic D, Lesson 22 – During the Learn section of the lesson, work up to the idea of substitution, progressively exchanging one material at a time. Consider the sequences that are included in the teacher's manual. ● Topic D, Lesson 25 – During the Learn portion of the lesson, consider providing a template to support students with visual motor perception so that they can replicate the towers from the display. ● Topic D, Lesson 26 – If students need to count all during the Learn portion of the lesson, have them lay their cards out so that only sets of objects and no numerals are faceup.

English Language Learners	• Throughout Module 5 – For discussions, consider using strategic, flexible grouping. Pairing suggestions include: pair students who have different levels of mathematical proficiency and/or who have different levels of English language proficiency. As applicable, complement any of these groupings by pairing students who speak the same native language.
	• Topic A, Lesson 3 – During the Launch section, structure partners for success with storytelling by pairing students strategically. Students who speak the same native language might opt to retell the story in that language. Alternatively, a language learner paired with a native speaker might go second so they can benefit from hearing the story told first.
	• Topic A, Lesson 6 – During the Learn section, use the following scaffolds for generating story contexts, according to the degree of support needed:
	  ○ Provide all necessary details: characters, setting, action. *"Your story could be about fish swimming in the pond."*
	  ○ Provide some details: characters and setting. *"Your story could be about children at the playground."*
	  ○ Provide minimal details: setting. *"Your story could be about the farm."* **(This reappears in Topic B, Lesson 13.)**
	• Topic B, Lesson 9 – Consider using some of the following strategies to increase comprehension when telling story problems:
	  ○ Promote relevance by using proper names of familiar places and people in the community.
	  ○ Generate enthusiasm and increase engagement by building suspense with strategic pauses.
	  ○ Connect with students through conversational remarks, such as "You'll never believe what happened next!"
	  ○ Use familiar storytelling phrases, such as "once upon a time" and "the end." Find out if comparable phrases exist in students' native languages.
	• Topic C, Lesson 15 – Discerning the action of the story just by listening may be a challenge. During the Learn portion, demonstrate joining or separating as you tell the story to support students in deciding whether to write an addition or subtraction sentence. For example, as you tell the first story, show 8 fingers to represent the flowers at first. Move 3 fingers to the side to show that they are given away.
	• Topic C, Lesson 17 – Help students distinguish between units by using a unit counting exercise. For example, during the Launch, have them count the bicycles and include the word bicycle as the unit: *"1 bicycle, 2 bicycles …"* Students can also count the wheels the same way: *"1 wheel, 2 wheels, 3 wheels …"* Stating the number and the unit emphasizes what is being counted. Incorporate movement when relevant. For example, students might make a circle with their hands as they count the wheels.
	• Topic C, Lesson 18 – Students are accustomed to counting aloud. To help them exercise restraint and move toward mental math, demonstrate "Think–Shout Counting" with a brief finger count. (See examples in teacher's manual.)
	• Topic C, Lesson 19 – Support students with the instructions and questions following the video by renaming the term *coop* with a more familiar word, such as *house*. For example: *"How many chickens went inside the coop, or house?"* Invite students who know the word for *coop* in their home language to share.
	• Topic C, Lesson 21 – This is the first use of the term *organize*. Support the term in future instances by describing it as a way to sort, group, line up, or arrange things so they are easier to see and find. Look for opportunities to point out things that are organized throughout the classroom: *"The toys are organized into bins so you can find the toy you want. Your names are organized in the pocket chart so you can see which center to visit."*
	• Topic D, Lesson 24 – During the Learn portion of the lesson, the recording can be described as a table or a chart. Support language learners by using the word *chart* with students. *Table* is a multiple meaning word that could be an obstacle to understanding. It does not need to be introduced at this time.

Special Needs Learners	● Topic A, Lesson 4 - Reading number sentences in various ways helps clarify the meaning of terms and symbols. Using everyday words like *is*, *and*, or *makes* helps students understand the meaning of the mathematical terminology. Including units, like bears, in the sentence helps students relate the math to the sorting situation, such as in the following examples: *"9 equals 5 plus 4. 9 bears are 5 bears and 4 bears."* ● Topic B, Lesson 9 – Support students by guiding them to process information by chunking. Tell the first part of the story. Then pause and give them drawing time before telling the next part and then the last part. When chunking the story, use transition words that are familiar from language arts, such as first, next, last, beginning, middle, and end. ● Topic B, Lesson 12 – Consider presenting the bowling game in another format. Instead of using the digital interactive, engage students in a kinesthetic activity. Set up bowling pins by using empty plastic bottles. Make a triangle with tape on the floor to facilitate organization. Students can take turns rolling a ball individually or in small groups, depending on the availability of materials and space. ● Topic B, Lesson 13 – To clarify the meaning of symbols and equations, couple reading the number sentence with a tactile representation. Have students use the following hand gestures to mimic the familiar number bond and action of decomposition as they read the equation: "5 (*Hands are clasped together, indicating the total.)* Minus 2 *(Fingers on one hand show the part that is taken away, and the hand goes behind the back.)* Equals 3 (*Fingers on the other hand show the part that is left.)*" ● Topic C, Lesson 15 – Support students as they make sense of information by helping them chunk word problems, like the following example shows. Pause for them to represent what they heard after reading each line. For example: *"I picked 8 flowers. (Pause for students to draw or model with manipulatives.) I gave 3 flowers to a friend. (Pause again.) How many flowers do I have now?"* ● Topic C, Lesson 17 – Allow students to have their choice of tools to solve each story problem. Make sure they understand that they can change course at any time by opting to use a different tool. Part of students' learning is recognizing which tools work best for them in each problem. ● Topic C, Lesson 18 – During the third Fluency activity, consider incorporating movement. Invite students to run in place, hop, or engage in another physical exercise while counting. Additionally, the Land activity supports visual and auditory processing. As students listen during the counting race, they hear that starting from 1 takes longer than starting from 5. The number path recording allows students to interpret the information visually. Both ways of getting the information help them compare the counts. ● Topic C, Lesson 20 - As needed during the Launch portion of the lesson, relate the concrete to the abstract by color-coding the number sentence to match the cube sticks and asking questions to confirm their relationship. (See examples in teacher's manual.) ● Topic C, Lesson 21 – For the first Fluency activity, students with fine motor delays may find it easier to use their fingers when they lay their hands on the desk or floor. The flat surface helps them hold out the fingers they want to raise and to keep the others tucked. ● Topic D, Lesson 23 – During the Learn portion of the lesson, students may use cubes to assist them in recording the ramp used on each run. If they place the cubes next to the number path, they can match each cube to the trial number it represents. ● Topic D, Lesson 24 – During the Learn portion of the lesson, provide a visual cue of the number of shoes by keeping track on the rekenrek. Use two rows on the rekenrek to show each group of 2. Slide over 2 beads at a time, each on a different row, counting the children as you go.
Learners with a 504	Refer to page four in the Parent and Educator Resource Guide to Section 504 to assist in the development of appropriate plans.

Interdisciplinary Connections

Standards:

- SL.II,K.2 – Confirm understanding of a text read aloud or information presented orally or through other media by asking and answering questions about key details and requesting clarification if something is not understood.
    - Lesson 8 – "Pete the Cat and His Four Groovy Buttons" by James Dean and Eric Litwin uses subtraction sentences to represent a silly situation where Pete loses his buttons one at a time. Consider using the book as a read aloud before or after this lesson.

- SL.II,K.2 – Confirm understanding of a text read aloud or information presented orally or through other media by asking and answering questions about key details and requesting clarification if something is not understood.
    - Lesson 3 – Students will view a wordless video during the Launch portion of this lesson. Throughout the video, and again at the end, the teacher will guide a class discussion to monitor/confirm student understanding.

- SL.PL.K.4 – Describe familiar people, places, things, and events and, with prompting and support, provide additional detail.
    - Lesson 2 – In this lesson's "Problem Set", students are encouraged to analyze an illustration, describe what they see, turn it into a story problem, and then write a matching number model.

- SL.UM.K.5 – Add drawings or other visual displays to descriptions as desired to provide additional detail.
    - Lesson 5 – During the Launch part of this lesson, students will be asked to draw an illustration that matches a story problem. Once all students have created their initial drawings, and the class has discussed essential components of a good drawing, they will then be encouraged to revisit theirs and make sure all key elements are included.

- L.KL.1.A – Use frequently occurring nouns and verbs. ***AND***
  L.KL.1.C – Understand and use question words (interrogatives) (e.g., who, what, where, when, why, how).
    - Lessons 15, 16, & 19 – In these lessons, students are tasked with the job of analyzing a variety of verbiage in story problems to determine which operation to use prior to successfully solving it.

- 6.1.2.CivicsPD.1 – Engage in discussions effectively by asking questions, considering facts, listening to the ideas of others, and sharing opinions.
    - Lesson 17 – In this lesson, students are presented with a challenging story problem that they must solve independently. After solving, they will be paired up to share and discuss how they solved. Those conversations will allow students to have the opportunity to see the problem's solution through the lens of their peer(s).

- 6.1.2.HistoryCC.3 – Make inferences about how past events, individuals, and innovations affect our current lives.
    - Lesson 21 – This lesson includes the Math Past connection. The Math Past resource includes information about ancient writing materials such as bone, clay, and papyrus to assist teachers in making this connection. It explains how students in ancient times used these materials to record their mathematical thinking. Consider sharing the Ishango Bone and discussing the markings. Engage students in mathematical discourse by asking the following questions: *"What do you notice about how the markings are organized? For which groups can you tell how many without counting? How are the markings similar to and different from dot cards?"*

- 1.5.2.Re8a – Categorize and describe works of art, by identifying subject matter, details, mood, and formal characteristics.
    - Lesson 25 – During the Launch portion of this lesson, students will engage in the "Math Chat" routing (Turn & Talk) to discuss the image of a quilt. They will be prompted to look for shapes,

patterns, colors, etc. This “Math Chat” routine will be use as the gateway for the remainder of the lesson, which will consist of exploring extending and growing patterns.

Integration of 21st Century Skills

Standards:

- 8.1.2.DA.3 – Identify and describe patterns in data visualizations.
    - Lesson 18 – There are a myriad of opportunities throughout this lesson for students to apply their subitizing skills to find patterns for counting efficiently and effectively.

- 8.1.2.DA.4 – Make predictions based on data using charts or graphs.
    - Lessons 22 & 23 – These two lessons review patterns. First, students will be provided the opportunity to see and create concrete, visual patterns, and then will be challenged to describe and extend them. Then, they will use what they already know and see to make predictions about what would come next, or at certain place, in the pattern.

- 8.1.2.AP.2 – Model the way programs store and manipulate data by using numbers or other symbols to represent information.
    - Lesson 4 – In this lesson, students will practice decomposing larger sets of objects into smaller parts. Once they have done that, they will be encouraged to represent this information in the form of a number bond, written sentence using the words “is” and “and”, and then lastly, they will record it the form of a number model.

- 8.1.2.AP.4 – Break down a task into a sequence of steps.
    - Lesson 6 & 13 – In both of these lessons, students will be tasked (with the help of their peers and teacher) to generate, tell, and solve a variety of story problems part by part, using a number model as their “springboard”.

- 9.4.2.CI.1 – Demonstrate openness to new ideas and perspectives.
    - Lesson 17 – In this lesson, students are presented with a challenging story problem that they must solve independently. After solving, they will be paired up to share and discuss how they solved. Those conversations will allow students to have the opportunity to see the problem’s solution through the lens of their peer(s).

- 9.4.2.CI.2 – Demonstrate originality and inventiveness in work. ***AND***
  9.4.2.IML.2 – Represent data in a visual format to tell a story about the data. ***AND***
  9.4.2.CT.3 – Use a variety of types of thinking to solve problems.
    - Lesson 12 – During the “Represent and Solve” activity of this lesson, students will be posed with a story problem that they must solve independently. They will be allowed to used strategies that work for them, and can include: drawings, symbols, number models, etc.

Unit Title: Module 6 (Place Value Foundations)

Unit Description: Students compose and decompose numbers 11 to 20 as 10 ones and some more ones in various contexts. As they count to 100 by tens and ones, students explore patterns in the number sequence. This prepares them for continued work with the base ten number system.

Unit Duration: 24 instructional days (+ a few days to administer the 1:1 end-of-module assessment)
(Please note that Lessons 12, 20, 21, 22, 23 are included in the total number of instructional days but are optional.)

Desired Results

Standard(s):

- **K.CC.A.1 – Count to 100 by ones and by tens.**
- **K.CC.A.2 – Count forward beginning from a given number within the known sequence (instead of having to begin at 1).**
- **K.CC.A.3 – Write numbers from 0 to 20. Represent a number of objects with a written numeral 0–20 (with 0 representing a count of no objects).**
- **K.CC.B.4.c – Understand that each successive number name refers to a quantity that is one larger.**
- **K.CC.B.5 – Count to answer "how many?" questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1–20, count out that many objects.**
- **K.CC.C.6 – Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group, e.g., by using matching and counting strategies. (Clarification: Include groups with up to ten objects.)**
- **K.CC.C.7 – Compare two numbers between 1 and 10 presented as written numerals.**
- **K.OA.A.1 – Represent addition and subtraction with objects, fingers, mental images, drawings, sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations.**
- **K.NBT.A.1 – Compose and decompose numbers from 11 to 19 into ten ones and some further ones, e.g., by using objects or drawings, and record each composition or decomposition by a drawing or equation (e.g., 18 = 10 + 8); understand that these numbers are composed of ten ones and one, two, three, four, five, six, seven, eight, or nine ones.**
- **K.DL.A.1 – Classify objects into given categories; count the numbers of objects in each category and sort the categories by count. (Clarification: Limit category counts to be less than or equal to 10)**
- K.CC.B.4 – Understand the relationship between numbers and quantities; connect counting to cardinality.
- K.CC.B.4.a – When counting objects, say the number names in the standard order, pairing each object with one and only one number name and each number name with one and only one object.
- K.CC.B.4.b – Understand that the last number name said tells the number of objects counted. The number of objects is the same regardless of their arrangement or the order in which they were counted.
- K.OA.A.2 – Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem.
- K.OA.A.4 – For any number from 1 to 9, find the number that makes 10 when added to the given number, e.g., by using objects or drawings, and record the answer with a drawing or equation.
- K.M.A.1 – Describe measurable attributes of objects, such as length or weight. Describe several measurable attributes of a single object.
- K.M.A.2 – Directly compare two objects with a measurable attribute in common, to see which object has "more of"/"less of" the attribute and describe the difference. For example, directly compare the heights of two children and describe one child as taller/shorter.

Understandings:

Topic A

- I can describe teen numbers as 10 ones and some more ones.
- I can find 10 ones in a teen number.
- I can write numerals 11–20.
- I can order numerals 0–20.
- I can reason about a number's position in the number sequence.
- I can count out a group of objects to match a numeral.

Topic B

- I can decompose numbers 10–20 with 10 as one of a part.
- I can represent teen number compositions and decompositions as addition sentences.
- I can represent teen number decompositions as subtraction sentences.
- I can make sense of word problems involving teen numbers.
- I can represent teen number decompositions as 10 ones and some ones and find a hidden part.
- I can investigate different ways to decompose teen numbers.

Topic C

- I can organize, count, and represent a collection of objects.
- I can count by tens.
- I can use the structure of ten to count to 100.
- I can use patterns in the number sequence to count by ones within 100.
- I can count within and across decades when counting by ones.

Topic D

- I can compare totals in story situations.
- I can count and compare sets with more than 10 objects.
- I can compare area by comparing number.
- I can compare lengths of objects by using 10-sticks and individual cubes.
- I can organize, count, and represent a collection of objects.

Essential Questions:

- How does making a group of 10 help you count?
- When do numbers have 10 inside?
- What does the 1 in a teen number represent?
- How do you know which number comes next in the count sequence? Before?
- How do you know where to put a number on the number path?
- How can tools help you see how many without having to count by ones?
- How can organizing help you count out the right number of objects?
- How can number bonds help us better understand numbers?
- How do you know when a number bond or number sentence matches a story or picture?
- How do you know when a subtraction sentence matches a story or picture?
- How do you decide whether to write an addition or subtraction sentence for a story?
- How can tools help you find a hidden part?
- Does 10 always have to be a part when we decompose teen numbers? How do you know?
- How can you group objects to make counting easier?
- When is counting by tens helpful?
- How do you decide whether to count by tens or ones?
- How can you use what you know about counting by tens to help you count by ones to 100?
- How can the repeating pattern of numbers 0–9 help us count to 100?
- How can math tools and patterns help you know what number comes next?
- What are some ways to compare groups that have more than one part?
- What are some ways to compare groups with more than 10 objects?
- How can we compare shapes to see which takes up more space?
- How can you compare the lengths of objects?
- How can you count by tens and ones?
- Why does counting by tens sometimes make it easier to count?

Assessment Evidence

Assessments:

- Observational Assessment Recording Sheet
- Module Assessment

Benchmarks:
- Kindergarten Snapshots are administered three times per year.
- The iReady Assessment is administered in the fall and winter.

Learning Plans

Lesson #: Module 6, Topic A, Lesson 1

Standard: K.CC.A.2, K.CC.B.5, K.NBT.A.1

Mathematical Practice: 5

Target: SWBAT describe teen numbers as 10 ones and ___ (more) ones

Learning Activities:

Fluency:
- Counting on the Rekenrek the Say Ten Way – Count the Say Ten way to prepare for describing teen numbers as 10 ones and some more ones.
- Coin Drop: Add 1 – Track the count mentally and add 1 more to build addition fluency within 5.
- Show Me the Math Way: Add or Subtract – Use finger perception exercises to build addition and subtraction fluency within 5.

Launch:
- Use different strategies to determine how many.

Learn:
- Organized Count – Contrast counting with and without organizing objects into a group of 10.
- Tenn Counting Bags – Choose a tool to count a group of 10 – 19 things as 10 ones and some more ones.
- Problem Set – Complete the activity pages to circle a group of 10 and then fill in the blanks to tell how many more ones.

Land:
- Debrief by facilitating a discussion that summarizes how to describe teen numbers as 10 ones and ___ (more) ones.

Daily Exit Ticket: None for this lesson. However, teachers may opt to use the activity pages and the Problem Set pages in conjunction with the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:
- Teacher – 20-bead rekenrek, empty can, pennies (5), counting collection, 10-frame, Hide Zero cards (demonstration set)
- Student – Counting collection, work mat, Hide Zero cards, organizing tools, Learn book

Lesson #: Module 6, Topic A, Lesson 2

Standard: K.CC.A.1, K.CC.A.2, K.CC.B.5, K.NBT.A.1

Mathematical Practice: 7

Target: SWBAT find 10 ones in a teen number

Learning Activities:

Fluency:

- Counting on the Rekenrek the Say Ten Way – Count the Say Ten way to prepare for identifying 10 ones in a teen number.
- Coin Drop: Subtract 1 – Track count mentally and subtract 1 to build subtraction fluency within 5.
- Show Me the Math Way: Subtract – Use finger perception exercises to build subtraction fluency within 5.

Launch:

- Compare the efficiency of counting objects in different configurations.

Learn:

- Number Path – Identify the numbers between 1 and 19 that have 10 ones inside.
- Color Number Path – Color the number path to determine which numbers have 10 ones inside.

Land:

- Debrief by facilitating a discussion that summarizes how to find 10 ones in a teen number.

Daily Exit Ticket: None for this lesson. However, in its place, use the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – 20-bead rekenrek, empty can, pennies (5)
- Student – Counting collection, 10-frame carton, Number Path to 20, red crayon, green crayon, Student book

Lesson #: Module 6, Topic A, Lesson 3

Standard: K.CC.A.1, K.CC.A.3, K.CC.B.5, K.NBT.A.1

Mathematical Practice: 8

Target: SWBAT write numerals 11 – 20

Learning Activities:

Fluency:

- Sprint: Add 1 or 0 – Add 1 or 0 to build addition fluency within 5.

Launch:

- Chorally count by ones from 1 to 30 and notice patterns.

Learn:

- Inventory Demonstration – Help count a set as 10 ones and some more ones and then combine Hide Zero cards to show how many.
- Taking Inventory – Count a set as 10 ones and some more ones and then combine Hide Zero cards to show how many.
- Writing 20 – Write the numeral 20.
- Problem Set – Complete the activity pages to circle a group of 10, then count how many more ones, and then the teen number that tells how many.

Land:

- Debrief by facilitating a discussion that summarizes how to write numerals 11 – 20.

Daily Exit Ticket: None for this lesson. However, teachers may opt to use the activity pages and the Problem Set pages in conjunction with the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – Chart paper, different colored markers, books (13), Hide Zero cards (demonstration set)
- Student – Add 1 or 0 Sprint, Classroom Inventory page, Hide Zero cards, various classroom objects, organizing tools, group of objects (20), personal whiteboard, dry-erase marker, Student book

Lesson #: Module 6, Topic A, Lesson 4

Standard: K.CC.A.1, K.CC.A.3, K.CC.B.5, K.NBT.A.1, K.CC.A.4c

Mathematical Practice: 7

Target: SWBAT order numerals 0 – 20

Learning Activities:

Fluency:

- Beep Counting – Determine the missing number in a sequence to build fluency counting within 10.
- Counting on the Rekenrek – Count the regular way or the Say Ten way to develop fluency with describing teen numbers as 10 ones and some more ones.

Launch:

- Chorally count by ones from 1 to 30 and notice patterns.

Learn:

- Number Stairs – Extend their understanding of the 1 more pattern to teen numbers.
- Number Path Game – Relate movement on a number path to increasing or decreasing quantity.
- Problem Set – Complete the activity pages to write the numerals 0 – 20.

Land:

- Debrief by facilitating a discussion that summarizes how to order numerals 0 – 20.

Daily Exit Ticket: None for this lesson. However, teachers may opt to use the activity pages and the Problem Set pages in conjunction with the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – 100-bead rekenrek, choral counting chart created in Lesson 3, chart paper different colored markers
- Student – Number Path to 20 (1 per student pair), unfix cubes (2 per student pair), 6-sided die (1 per student pair), personal whiteboard, dry-erase marker, Student book

Lesson #: Module 6, Topic A, Lesson 5

Standard: K.CC.A.1, K.CC.B.3

Mathematical Practice: 3

Target: SWBAT reason about a number's position in the number sentence

Learning Activities:

Fluency:

- Sprint: Subtract 1, 0, or All – Subtract 1, subtract 0, or subtract all to build subtraction fluency within 10.

Launch:

- Reason about numbers based on their placement in a sequence.

Learn:

- Number Detective – Reason about numbers based on their placement in a sequence.
- Number Detective Partners – Reason about numbers based on their placement in a sequence.
- Problem Set – Complete the activity pages by cutting and pasting the numbers in the proper/correct sequence.

Land:

- Debrief by facilitating a discussion that summarizes how to reason about a number's position in the number sentence.

Daily Exit Ticket: None for this lesson. However, teachers may opt to use the activity pages and the Problem Set pages in conjunction with the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – Numeral Cards removable
- Student – Subtract 1, 0, or All Sprint, Numeral Cards (1 set per student pair), scissors, glue, Student book

Lesson #: Module 6, Topic A, Lesson 6

Standard: K.CC.A.3, K.CC.B.5, K.NBT.A.1

Mathematical Practice: 5

Target: SWBAT count out a group of objects to match a numeral

Learning Activities:

Fluency:

- Beep Counting – Determine the missing number in a sequence to build fluency counting within 20.
- Counting on the Rekenrek – Count the regular way or the Say Ten way to develop fluency with describing teen numbers as 10 ones and some more ones.

Launch:

- Use context to model a teen number as 10 ones and some more ones.

Learn:

- Show Me Teen Numbers – Utilize the structure of ten to model teen numbers accurately and efficiently.
- Build Teen Numbers – Use tools to model teen numbers and record with a drawing.
- Problem Set – Complete the activity pages to draw dots on the double 10-frames and write the corresponding teen number.

Land:

- Debrief by facilitating a discussion that summarizes how to count out a group of objects to match a numeral.

Daily Exit Ticket: None for this lesson. However, teachers may opt to use the activity pages and the Problem Set pages in conjunction with the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – 100-bead rekenrek, Hide Zero cards (demonstration set), Numeral Cards
- Student – Hide Zero cards, Double 10-frame, unifix cubes, student-made rekenrek, beans, 10-frame cartons, personal whiteboard, dry-erase marker, Student book

Lesson #: Module 6, Topic B, Lesson 7

Standard: K.CC.A.3, K.CC.B.5, K.OA.A.1, K.NBT.A.1

Mathematical Practice: 8

Target: SWBAT decompose numbers 10 – 20 with 10 as a part

Learning Activities:

Fluency:

- Shake Those Disks – Record a total and parts in a number bond to prepare for decomposing numbers.
- 10-Frame Hands – Model teen numbers with their hands to prepare for decomposing teen numbers.

Launch:

- Build teen numbers to match a pictorial representation.

Learn:

- Teen Number Bonds – Show decomposing a teen number by using a number bond.
- Whiteboard Exchange – Write a number bond to represent a set of objects as a 10 ones and some more ones.
- Teen Number Bond Game – Use cubes to compose a teen number and record that number with a number bond.
- Problem Set – Complete the activity pages to draw dots on the double 10-frames and write the corresponding number bond.

Land:

- Debrief by facilitating a discussion that summarizes how to decompose numbers 10 – 20 with 10 as a part.

Daily Exit Ticket: None for this lesson. However, teachers may opt to use the activity pages and the Problem Set pages in conjunction with the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – Hide Zero (demonstration set), unifix cubes (13), 10-frame carton
- Student – Two-color counters (10 per student pair), cup (1 per student pair), Shake Those Disks removable, Hide Zero cards, work mat, Number Bond removable, unifix cubes (20 per student pair), 10-frame carton, 10-sided die (1 per student pair), personal whiteboard, dry-erase marker, Student book

Lesson #: Module 6, Topic B, Lesson 8

Standard: K.OA.A.1, K.OA.A.2, K.NBT.A.1

Mathematical Practice: 2

Target: SWBAT represent teen number compositions and decompositions as addition sentences

Learning Activities:

Fluency:

- Coin Drop: Add or Subtract 1 – Track the count mentally and add or subtract 1 to build addition and subtraction fluency within 5.
- 10-Frame Hands – Model teen numbers with their hands to build fluency with decomposing teen numbers.
- Happy Counting by Tens Within 30 – Visualize a number line while counting aloud to build fluency counting within 100.

Launch:

- Watch a video to prepare to represent an *add to with result unknown* story problem.

Learn:

- Represent a Story Problem – Represent and solve an *add to with result unknown* story problem.
- Share, Compare, and Connect – Discuss different ways to represent and solve a story problem.
- Write Addition Sentences – Write an addition sentence to math pictures.
- Problem Set – Complete the activity pages to represent and show compositions and decompositions of teen numbers.

Land:

- Debrief by facilitating a discussion that summarizes how to represent teen number compositions and decompositions as addition sentences.

Daily Exit Ticket: None for this lesson. However, teachers may opt to use the activity pages and the Problem Set pages in conjunction with the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – Empty can, pennies (5), Number Bond and Number Sentences removable
- Student – Assorted math tools, personal whiteboard, dry-erase marker, Student book

Lesson #: Module 6, Topic B, Lesson 9

Standard: K.OA.A.1, K.OA.A.2, K.NBT.A.1

Mathematical Practice: 4

Target: SWBAT represent teen number decompositions as subtraction sentences

Learning Activities:

Fluency:

- Circle Groups of 10 – Circle groups of 10 to build fluency with decomposing teen numbers pictorially.
- Happy Counting by Tens Within 60 – Visualize a number line while counting aloud to build fluency counting within 100.
- Green Light, Red Light – Count from different numbers to build fluency with counting from a number other than 1.

Launch:

- Tell how many on the rekenrek.

Learn:

- Craft Fair Problem – Watch a video and solve a story problem.
- Share, Compare, and Connect – Discuss representations and confirm that a subtraction sentence can be used to represent the story**.**
- Notice and Wonder – Write subtraction sentence to match a picture.
- Problem Set – Complete the activity pages to represent the teen number decompositions as subtraction sentences.

Land:

- Debrief by facilitating a discussion that summarizes how to represent teen number decompositions as subtraction sentences.

Daily Exit Ticket: None for this lesson. However, teachers may opt to use the activity pages and the Problem Set pages in conjunction with the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – Rekenrek, puppet
- Student – Circle Groups of 10 removable, assorted math tools, dry-erase marker, personal whiteboard

Lesson #: Module 6, Topic B, Lesson 10

Standard: K.OA.A.1, K.OA.A.2, K.OA.A.4, K.NBT.A.1

Mathematical Practice: 1

Target: SWBAT make sense of word problems involving teen numbers

Learning Activities:

Fluency:

- Coin Drop: Add or Subtract 2 – Track the count mentally and add or subtract 2 to prepare for *add to* and *take from* word problems.
- Happy Counting by Tens Within 100 – Visualize a number line while counting aloud to build fluency counting within 100.

Launch:

- Visualize and represent a word problem.

Learn:

- Take Away Ten – Subtract 10 all at once.
- Add With 10 – Add with 10 as a total and with 10 as a part.
- Create Your Own Story – Create their own story problem and solve.
- Match: Number Sentences – Match pictures to number sentences.

Land:

- Debrief by facilitating a discussion that summarizes how to make sense of word problems involving teen numbers.

Daily Exit Ticket: None for this lesson. However, in its place, use the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – Empty can, pennies (5)
- Student – Unifix cubes, Match: Number Sentences cards, scissors, Double 10-Frame removable, personal whiteboard, dry-erase marker, Student book

Lesson #: Module 6, Topic B, Lesson 11

Standard: K.OA.A.1, K.OA.A.2, K.NBT.A.1

Mathematical Practice: 4, 5

Target: SWBAT represent teen number decompositions as 10 ones and some ones and find a hidden part

Learning Activities:

Fluency:

- Sprint: Add 2 or Add Doubles – Add 2 or add a doubles fact to build addition fluency within 10.

Launch:

- Reason about an unknown change.

Learn:

- Hidden Crayons – Solve a story problem involving a hidden part.
- How Many Are Hiding? – Hide part of the total, tell a story, and represent the situation.

Land:

- Debrief by facilitating a discussion that summarizes how to represent teen number decompositions as 10 ones and some ones and find a hidden part.

Daily Exit Ticket: None for this lesson. However, in its place, use the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – None
- Student – Add 2 or Add Doubles Sprint, assorted math tools, 10-frame carton (2 per student pair), unifix cubes (2 per student pair), Number Bond removable (per student pair), personal whiteboard, Student book

Lesson #: Module 6, Topic B, Lesson 12 ***(OPTIONAL)***

Standard: K.CC.B.5, K.OA.A.1, K.NBT.A.1, K.M.A.1

Mathematical Practice: 7

Target: SWBAT investigate different ways to decompose teen numbers

Learning Activities:

Fluency:

- Shake Those Disks – Record a total and parts in a number bond to prepare for work with *both addends unknown* situations.
- Green Light, Red Light – Count from different numbers to build fluency with counting from a number other than 1.

Launch:

- Share strategies for counting a set.

Learn:

- Decompose a Given Set – Decompose a group and arrange the objects in various ways based on the area of containers.
- Doughnut Shop – Decompose a teen number in various ways based on the area of containers.

Land:

- Debrief by facilitating a discussion that summarizes how to investigate different ways to decompose teen numbers.

Daily Exit Ticket: None for this lesson. However, in its place, use the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – Chart paper, marker
- Student – Two-color counters (16 per student pair), cup (1 per student pair), Shake Those Disks removable, Doughnut Box removable, Number Cards (1 set per student pair from Lesson 5), Doughnut Box Cutouts (1 set per student pair), personal whiteboard, dry-erase marker, Student book

Lesson #: Module 6, Topic C, Lesson 13

Standard: K.CC.A.1, K.CC.B.5, K.CC.A.4a-b

Mathematical Practice: 7

Target: SWBAT organize, count, and represent a collection of objects

Learning Activities:

Fluency:

- *None for this lesson.*

Launch:

- View artwork and count to find a total.

Learn:

- Organize, Count, and Record – Use their own strategies to count objects and record their process.
- Share, Compare, and Connect – Discuss strategies for counting and recording a collection.

Land:

- Debrief by facilitating a discussion that summarizes how to organize, count, and represent a collection of objects.

Daily Exit Ticket: None for this lesson. However, in its place, use the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – Puppet
- Student – Counting Collection (1 per student pair), work mat, organizing tools, recording sheet

Lesson #: Module 6, Topic C, Lesson 14

Standard: K.CC.A.1, K.CC.B.5

Mathematical Practice: 6

Target: SWBAT count by tens

Learning Activities:

Fluency:

- Sprint: 5 + *n* – Add 5 and another number to build addition fluency within 10.

Launch:

- Chorally count by ones to 10 and by tens to 100.

Learn:

- Make Rekenrek Bracelets – Reason about not enough or extras to make rekenrek bracelets with exactly 10 beads.
- Count by Ones and Tens – Count bracelets by ones and beads by tens.
- Problem Set – Complete the activity to count the sets of ten and write the matching numeral/total.

Land:

- Debrief by facilitating a discussion that summarizes how to count by tens.

Daily Exit Ticket: None for this lesson. However, teachers may opt to use the activity pages and the Problem Set pages in conjunction with the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – Chart paper, rekenrek
- Student – 5 + *n* Sprint, pony beads (5 red, 5 white), pipe cleaners, container (Ex: resealable plastic bag/bin), Student book

Lesson #: Module 6, Topic C, Lesson 15

Standard: K.CC.A.1, K.CC.B.5

Mathematical Practice: 5

Target: SWBAT count by tens by using math tools

Learning Activities:

Fluency:

- Sunrise, Sunset Counting – Engage in a physical counting exercise to prepare for counting by tens or ones.
- Ten and Tuck – Use their hands to represent a partner to 10 and say a related addition sentence to build fluency with partners to 10.

Launch:

- Chorally count and use patterns to determine missing numbers in a sequence.

Learn:

- Scavenger Hunt – look for the structure of 10 on math tools.
- Show Me – Count out a group of objects by 10s or ones to match a number.
- Problem Set – Complete the activity pages to count out the sets and write the matching number and/or draw more to show a given total.

Land:

- Debrief by facilitating a discussion that summarizes how to count by tens by using math tools.

Daily Exit Ticket: None for this lesson. However, teachers may opt to use the activity pages and the Problem Set pages in conjunction with the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – Chart paper, Mini 10-Frame cards, rekenrek, Math Past module resource
- Student – Assorted math tools, two-color beans (9), Mini 10-Frame cards, Two-Hands Mat, Student Book

Lesson #: Module 6, Topic C, Lesson 16

Standard: K.CC.A.1, K.CC.A.2, K.CC.B.5

Mathematical Practice: 7

Target: SWBAT use the structure of ten to count to 100

Learning Activities:

Fluency:

- Counting on the Rekenrek – Utilize the structure of five and ten to build fluency with counting to 100.

Launch:

- Chorally count by ones from 31 to 60 and notice patterns.

Learn:

- Introduce Stations – Learn procedures for station rotations.
- Rekenrek Counting – Take turns counting decades on the rekenrek.
- Number Path Game – Relate movement on the number path to increasing or decreasing quantity.
- 10-Frames and Beans – Count to 100 and represent given numbers by using 10-frames and beans.

Land:

- Debrief by facilitating a discussion that summarizes how to use the structure of ten to count to 100.

Daily Exit Ticket: None for this lesson. However, in its place, use the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – Chart paper, choral counting chart (from Lesson 3)
- Student – Rekenrek paper, 100-bead rekenrek (1 per student pair), Number Path to 20 (from Lesson 4; 1 per student pair), 6-sided die (1 per student pair), unifix cube, work mat, 10-Frames removable, Mini 10-frames (in Lesson 15; 1 per student pair), two-color beans (10), Student book

Lesson #: Module 6, Topic C, Lesson 17

Standard: K.CC.A.1, K.CC.A.2, K.CC.A.3, K.CC.B.5

Mathematical Practice: 7

Target: SWBAT use patterns in the number sequence to count by ones within 100

Learning Activities:

Fluency:

- Fitness Counting – Collaboratively count by ones to 100, taking turns at irregular intervals, to build fluency with counting to 100.
- Ten and Tuck – Use their hands to represent a partner to 10 and say related addition sentence to build fluency with partners to 10.

Launch:

- Chorally count by ones from 61 to 100 and notice patterns to determine missing numbers in the sequence.

Learn:

- Introduce Stations – Learn procedures for station rotations.
- Nearby Stations – Identify and order numbers.
- 10-Frames and Beans – Count to 100 and represent numbers by using 10-frames and beans.
- Rekenrek Counting – Make use of structure to predict numbers in a sequence.

Land:

- Debrief by facilitating a discussion that summarizes how to use patterns in the number sequence to count by ones within 100.

Daily Exit Ticket: None for this lesson. However, in its place, use the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – Chart paper, Choral counting charts (from Lessons 3 & 16), puppet
- Student – Scissors, glue, work mat (1 per student pair), 10-Frames removable (from Lesson 16; 1 per student pair), Mini 10-Frame cards (from Lesson 15; 1 per student pair), two-color beans (10 per student pair), Student book

Lesson #: Module 6, Topic C, Lesson 18

Standard: K.CC.A.1, K.CC.A.2

Mathematical Practice: 3

Target: SWBAT count within and across decades when counting by ones (Part 1)

Learning Activities:

Fluency:

- Sprint: Subtraction with 5 as a Part – Subtract 5 or subtract to find a difference of 5 to build subtraction fluency within 10.

Launch:

- Chorally count by ones crossing decades.

Learn:

- Introduce Stations – Learn procedures for station rotations.
- 10-Frames and Beans – Count to 100 and represent numbers by using 10-frames and beans.
- Nearby Numbers – Identify and order numbers.
- Clothesline Math – Reason about numbers to determine their placement in a sequence.

Land:

- Debrief by facilitating a discussion that summarizes how to count within and across decades when counting by ones.

Daily Exit Ticket: None for this lesson. However, in its place, use the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – Chart paper, index cards (33), puppet
- Student – Subtraction with 5 as a Part Sprint, scissors, glue, work mat (per student pair), 10-Frames removable (from Lesson 16; 1 per student pair), Mini 10-Frames cards (from Lesson 15; 1 per student pair), two-color beans (10 per student pair), Student book

Lesson #: Module 6, Topic C, Lesson 19

Standard: K.CC.A.1, K.CC.A.2

Mathematical Practice: 5

Target: SWBAT count within and across decades when counting by ones (Part 2)

Learning Activities:

Fluency:

- Fitness Counting – Collaboratively count by ones to 100, taking turns at irregular intervals, to build fluency with counting to 100.

Launch:

- Chorally count by ones crossing decades.

Learn:

- Introduce Stations – Learn procedures for station rotations.
- 10-Frames and Beans – Count to 100 and represent numbers by using 10-frames and beans.
- Nearby Numbers – Identify and order numbers.
- Clothesline Math – Reason about numbers to determine their placement in a sequence.

Land:

- Debrief by facilitating a discussion that summarizes how to count within and across decades when counting by ones.

Daily Exit Ticket: None for this lesson. However, in its place, use the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – Chart paper, index cards (22), puppet
- Student – Work mat (per student pair), 10-Frames removable (from Lesson 16; 1 per student pair), Mini 10-Frame cards (from Lesson 15; 1 per student pair), two-color beans (10 per student pair), Student book, scissors, glue

Lesson #: Module 6, Topic D, Lesson 20 ***(OPTIONAL)***

Standard: K.CC.C.6, K.OA.A.2

Mathematical Practice: 3

Target: SWBAT compare totals in story situations

Learning Activities:

Fluency:

- Ready, Set, Compare with Cards – Compare sets or numerals to prepare for comparing totals in story situations and to build fluency with comparing numbers.
- Ten and Tuck – Use their hands to represent a partner to 10 and say a related addition sentence to build fluency with partners to 10.

Launch:

- Notice and wonder about a comparative situation.

Learn:

- Who Has More? – Compare totals and parts.
- Compare Totals Game – Add to find totals and compare.

Land:

- Debrief by facilitating a discussion that summarizes how to compare totals in story situations.

Daily Exit Ticket: None for this lesson. However, in its place, use the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – Boxes (2), marbles or pom-poms (16), clear cups (2)
- Student – Match cards (1 set per student pair), personal whiteboard, dry-erase marker

Lesson #: Module 6, Topic D, Lesson 21 ***(OPTIONAL)***

Standard: K.CC.C.6, K.OA.A.2, K.NBT.A.1

Mathematical Practice: 5

Target: SWBAT count and compare sets with more than 10 objects

Learning Activities:

Fluency:

- Build and Compare: Length – Build and compare cube sticks to prepare for comparing teen numbers.
- Whiteboard Exchange: Decompose Teen Numbers – Represent teen numbers as 10 ones and some ones to build fluency with decomposition.

Launch:

- Count objects in a picture.

Learn:

- Compare Groups – Select tools and strategies to compare groups.
- Share, Compare, and Connect – Share and discuss strategies for comparing groups.
- Compare Totals – Strategize to compare team numbers.

Land:

- Debrief by facilitating a discussion that summarizes how to count and compare sets with more than 10 objects.

Daily Exit Ticket: None for this lesson. However, in its place, use the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – Comparison Strategies chart (from Module 3), Match cards, unifix cubes (30), puppet
- Student – Unifix cubes (30), Double 10-Frame, assorted math tools, Match cards (1 per student pair), personal whiteboard, dry-erase marker, Sunflower Quilting Bee, Student book

Lesson #: Module 6, Topic D, Lesson 22 ***(OPTIONAL)***

Standard: K.CC.C.6, K.M.A.2

Mathematical Practice: 6

Target: SWBAT compare area by comparing number

Learning Activities:

Fluency:

- Whiteboard Exchange: Decompose Teen Numbers and Compare – Represent teen numbers as 10 ones and some ones and compare to build fluency with decomposition and comparing numbers.
- Ten and Tuck – Use their hands to represent a partner to 10 and say a related addition sentence to build fluency with partners to 10.

Launch:

- Consider a real-life situation involving area.

Learn:

- Relate Area and Number – Recognize that different shapes can have the same area.
- Compare Area - Compare the area of two shapes.
- Share, Compare, and Connect – share and discuss strategies for comparing area.
- Problem Set – Complete the activity pages to count the square units, write how many, then circle the shape that takes up more space (has a greater area).

Land:

- Debrief by facilitating a discussion that summarizes how to compare area by comparing number.

Daily Exit Ticket: None for this lesson. However, teachers may opt to use the activity pages and the Problem Set pages in conjunction with the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – Red and Blue Shapes removable, unifix cubes (10)
- Student – Double 10-Frame, Red and Blue Shapes removable, Yellow and Blue Shapes removable, Purple and Green Shapes removable, unifix cubes (20), scissors, assorted math tools, personal whiteboard, dry-erase marker

Lesson #: Module 6, Topic D, Lesson 23 ***(OPTIONAL)***

Standard: K.CC.C.6, K.M.A.2

Mathematical Practice: 7

Target: SWBAT compare lengths of objects by using 10-sticks and individual cubes

Learning Activities:

Fluency:

- Number Bond Dash: Partners to 10 – Find the missing total or part to build fluency with partners to 10.

Launch:

- Discuss effective measurement practices.

Learn:

- Count by Tens and Ones – Count by tens and ones to measure objects with cubes.
- Measure Lengths – Use cubes to measure classroom objects.
- Order by Length – Place objects in order by length.

Land:

- Debrief by facilitating a discussion that summarizes how to compare lengths of objects by using 10-sticks and individual cubes.

Daily Exit Ticket: None for this lesson. However, in its place, use the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – Book, big book, unifix cubes (35), Classroom Objects removable, bag
- Student – Unifix cubes, Number Bond Dash: Partners to 10, Student book

Lesson #: Module 6, Topic D, Lesson 24

Standard: K.CC.A.1, K.CC.B.5, K.CC.B.4a-b

Mathematical Practice: 7

Target: SWBAT organize, count, and represent a collection of objects

Learning Activities:

Fluency:

- *None for this lesson.*

Launch:

- Discuss ways to find the total of a collection.

Learn:

- Organize, Count, and Record – Use their own strategies to count objects and record their process.
- Share, Compare, and Connect – Discuss strategies for counting and recording a collection.
- Gallery Walk – Do a gallery walk to examine others' work

Land:

- Debrief by facilitating a discussion that summarizes how to organize, count, and represent a collection of objects.

Daily Exit Ticket: None for this lesson. However, in its place, use the Observational Assessment Recording Sheet to informally assess student understanding of the lesson objective.

Resources:

- Teacher – Counting Collection removable, small bag or envelope (1 per student pair)
- Student – Counting collection (1 per student pair), work mat, organizing tools, Student book

Unit Modifications for Special Population Students	
Advanced Learners	• Topic A, Lesson 3 – All students can benefit from using Hide Zero cards to write teen numbers. The cards help overcome common reversal errors when writing numbers such as 14, 16, 17, 18, and 19 where students hear the ones first. When students think about covering the 0, they are more likely to put the correct digit in the ones place. If students need the challenge of counting larger sets, give them a set with 21-29 objects along with the 20 Hide Zero card. Point out that the 2 tells about the 2 groups of 10 inside the number. • Topic A, Lesson 4 – During the Learn section, challenge students by asking which number would get them to the target number. Ask them to describe how they know. • Topic A, Lesson 5 – Use the following suggestions to modify the *Number Detective* game to challenge learners: use cards 1–20, place the number cards in a decreasing sequence beginning with 20, arrange the cards in a 5-group rather than linear formation. • Topic B, Lesson 9 – During the first Learn activity, consider extending the problem for students who quickly solve and write a subtraction sentence by asking the following questions: *"If the children sold their bracelets for 2 cents each, how much money did they make? If the children sold their bracelets for 10 cents each, how much money did they make? If the children sold their bracelets for 5 cents each, how much money did they make?"*

	• Topic B, Lesson 12 – If students can count by fives during the Launch, or repeatedly add fives efficiently, have them imagine that there are 5 doughnuts in each row. How might they use the friendlier number 5 to arrive at the total? If necessary, draw the additional doughnut in each row to support students in the use of subtractive reasoning. Additionally, during the Learn section of the lesson, ask students to identify how many doughnuts fit in each of the doughnut boxes (4, 9, 16). Use some or all of the following questions: "*Could you fill a square box with exactly 5 doughnuts? Why? What do you notice about the columns or rows of doughnuts in the square boxes you filled? (Gesture.) Make a square box that fits an exact number of doughnuts without any big spaces or any doughnuts on top of each other. How many can you fit in your square?"* • Topic C, Lesson 15 – Pose the following problem to early finishers: The students in pre-kindergarten are making handprints. 7 students put their handprints on a poster. How many fingers are on the poster? If students use fingers to track the count, ask them to verbalize what they count: the hands or the fingers, the tens or the ones. • Topic C, Lesson 16 – For those who are ready, consider providing number paths with 2 decades that are more challenging than 1–20 when playing the *Number Path* game. Look in the teacher edition for removables that provide other options. • Topic C, Lesson 17 – Make the *10-Frames and Beans* activity more challenging by having students work with larger numbers. Consider the following adjustments. Replace the numbers 1 and 10 with the following numbers: 41 and 50 (rekenrek shows 41–80) and/or 61 and 70 (rekenrek shows 61–100). If students notice that the numerals do not match the quantity of beads they can see, then help them recall that the image shows only part of a rekenrek. Consider telling a story about a rekenrek that is broken or that has invisible rows. • Topic D, Lesson 22 – If students display proficiency with comparing numbers by using the 10-frames during the first Fluency activity, consider using a choral response routine and ask students to compare the numbers mentally. • Topic D, Lesson 24 – Instead of the suggested Launch, lead the class through a counting routine by tens, recording as shown in the manual. This routine prepares students to count groups greater than 100.
Struggling Learners	• Topic A, Lesson 5 – Use the following suggestions to modify the *Number Detective* game to support struggling learners: use fewer cards (10–15), create numeral cards with dots in 5-group formations on the back, and/or chorally say the number sequence before asking students to identify a hidden number. • Topic B, Lesson 7 – Consider differentiating the Fluency activity by assigning different numbers of counters. Students can be given anywhere from 3 to 10 counters to support them as needed (This reappears in Topic B, Lesson 12.) Then, during the first Learn activity, the initial demonstration requires students to reason that if the carton has 10 slots and they are all full, there must be 10 cubes. Build up to this idea by showing all of the fingers on two hands as you ask the following questions: *"How many fingers? How many fingernails? How many rings can I wear if I put one on each finger? How many if I take off 1 ring? (The last question disrupts the pattern to maintain alertness. Return to the tray and cubes.) How many cubes will there be if I put 1 in each slot?"* • Topic B, Lesson 9 – If students need support with counting down during the *Green Light, Red Light* game, model a think aloud. For example, "If we start at 8, and stop at 6, would we be counting up or counting down? Take a moment to practice in your mind before I say green light." • Topic B, Lesson 10 – During the second Learn activity, the double 10-frame is offered to support students with organizing their drawings. Offer students a choice of organizing their drawings on a double 10-frame or drawing on a whiteboard. • Topic C, Lesson 17 – Support students with visual discrimination by cutting the *Nearby Numbers* chart into individual rows. Working with only one sequence of numbers at a time may reduce distraction and increase focus. • Topic D, Lesson 20 – At the end of the second Learn activity, students may place cards picture side up in both piles and use the pictures to count all. They may also make one pile of numerals and another pile of pictures to help them count on.

	● Topic D, Lesson 22 – If students need more practice with representing teen numbers as 10 ones and some ones during the first Fluency activity, omit the partner comparison work. ● Topic D, Lesson 23 – To support students in solving for the missing part during the Fluency activity, encourage them to use *Ten and Tuck*. ● Topic D, Lesson 24 - The collections in this lesson are pictorial. Support students to count pictures by having them model the count by using concrete objects. For example, provide real packages of 10 pencils for students to count and then have them count the pictures.
English Language Learners	● Throughout Module 6 – For discussions, consider using strategic, flexible grouping. Pairing suggestions include: pair students who have different levels of mathematical proficiency and/or who have different levels of English language proficiency. As applicable, complement any of these groupings by pairing students who speak the same native language. ● Topic A, Lesson 2 – For the Debrief portion of this lesson, provide sentence frames with symbols to support students in discerning the meaning of *notice* and *wonder*. Choose symbols that are familiar from other content areas or students' life experience like the following examples: consider drawing a magnifying glass or eyes to convey observation for *"I notice …"* and a question mark or thinking face emoji might communicate curiosity as it relates to *"I wonder …"* ● Topic A, Lesson 3 – As students share during the Learn section, revoice their responses by using precise terminology (e.g., *digit, number, tens)*. For example, if a student says, *"4 has only 1 number, but 14 and 24 have 2 numbers"*, revoice the idea and point to the relevant part of the chart: *"Yes, the number 4 only has 1 digit. 14 and 24 are numbers that have 2 digits."* ● Topic A, Lesson 4 – Choral counting helps build students' fluency, self-confidence, and motivation. Because students are counting together, they feel supported by the unified voice of the class. Expect that some students may only listen at times, especially if they are unsure of pronunciation or feel self-conscious about errors. ● Topic B, Lesson 7 – If needed during the Debrief section of this lesson, help students recall that we use *alike* when things are the same but not exactly the same. Practice using the term with a few classroom materials as in these examples: *"These pencils are alike. They are the same kind, but one is broken and one is sharpened. These markers are alike. They are the same kind but different colors."* ● Topic B, Lesson 10 – This is the first instance in which the term *fair* is used without the support of a video. *Fair* is a word that students may encounter in conversation or children's books. It has multiple meanings: *show* or *festival*, *just* or *equitable*, *reasonable*, and *light in color*. Take a moment to establish the context and link to familiar terms such as *show* or *festival*. ● Topic B, Lesson 12 – The language of equal groups,_____*boxes of*_____ , may require clarification. If needed, gesture to examples of each option as you describe it. Invite students to point to indicate their selection, and as they do, revoice their choice with the corresponding equal groups statement. ● Topic C, Lesson 14 – As students share, revoice their responses by using precise terminology, such as *digit*, *number*, or *tens*. For example, if a student says, *"The numbers in the top row go in order but the second-row skips numbers,"* point to the relevant part of the chart and revoice as*, "Yes, the numbers in the top row don't skip any numbers. In the bottom row we are skip-counting by tens."* ● Topic C, Lesson 15 – Use gestures to communicate the distinctions between exactly ten and lots of tens. Show 10 fingers to communicate *exactly ten*. Repeatedly flash 10 fingers to show *lots of tens*. ● Topic C, Lesson 17 – As students describe how to edit numbers to form new ones, listen for colloquial use of the language of operations. For example, "take away the 7," or "add an 8." Revoice these ideas by using precise terminology. For example, "You'd like me to write the digit 8 so the number will be 81. Is that what you mean?" Avoid beginning a discussion about place value.

	• Topic C, Lesson 19 – As students count 101, 102, 103, and 104, voice the count with them to model saying each number correctly. Avoid inserting the word *and*. For example, rather than *one hundred and one*, the number 101 is pronounced as *one hundred one*. • Topic D, Lesson 20 – In the first Learn activity, students are asked to use the terminology *greater than* and *less than* in a turn and talk. As needed, refresh them on the language of comparison in advance by modeling it and have them echo the phrasing as shown in these examples: *"The number of marbles in Zac's present is greater than the number of marbles in Tom's present. The number of marbles in Tom's present is less than the number of marbles in Zac's present."* • Topic D, Lesson 21 – Display the sentence frames (in the teacher's manual) to support students with using comparison language. • Topic D, Lesson 24 – For the Land section of this lesson, provide sentence frames to distinguish between past and present levels of functioning such as these: *"I used to____. Now I know how to____."*
Special Needs Learners	• Topic A, Lesson 2 – The counting strategies learned in Module 1 will continue to be helpful as students count groups with more objects. Consider posting the counting strategies chart from module 1 as a reminder. • Topic A, Lesson 6 – For the first Learn activity, consider offering an alternative method of response. For students who would benefit from a concrete experience, use counters that fit neatly inside the 10-frame, such as beans. Observe to see if students must recount each time, or if they can adjust by adding or removing objects. • Topic B, Lesson 7 – For the second Learn activity, use a kinesthetic activity to relate the arrangement of the cartons to the number bond model. Have students make the numbers by using the process from the 10-Frame Hands activity in the Fluency component. Have them relate the model they make with their hands to what the cartons show. • Topic B, Lesson 12 - Provide a choice of materials to use during the Learn section of the lesson. Students can make their own doughnut boxes by cutting, folding, or drawing on construction paper. Creating their own boxes based on the customer's order invites students to hone spatial reasoning skills and experiment with estimation, which has not yet been formally taught.
Learners with a 504	Refer to page four in the Parent and Educator Resource Guide to Section 504 to assist in the development of appropriate plans.

Interdisciplinary Connections

Standards:

- SL.II,K.2 – Confirm understanding of a text read aloud or information presented orally or through other media by asking and answering questions about key details and requesting clarification if something is not understood.
    - Lesson 13 – In "One Hundred Angry Ants" by Elinor J. Pinczes, 100 ants group themselves in different ways in their effort to get to the picnic as quickly as possible. Consider reading this book aloud before or after this lesson.

- SL.PE.K.1.A – Follow agreed-upon norms for discussions (e.g., listening to others with care and taking turns speaking about the topics and texts under discussion). ***AND***
  6.1.2.CivicsPD.1 – Engage in discussions effectively by asking questions, considering facts, listening to the ideas of others, and sharing opinions.
    - Lesson 5 – During the "Number Detective Partners" activity, pairs or small groups of students will work together to brainstorm, reason, and rationalize about numbers (specifically their place value) based on their placement in a sequence. ***(A similar activity, with a slightly different name, reappears in Lesson 19.)***

- SL.II.K.2 – Confirm understanding of a text read aloud or information presented orally or through other media by asking and answering questions about key details and requesting clarification if something is not understood.
    - Lessons 1, 2, 8, & 12 – In these lessons, students will engage in a few variations of the Fluency activity called "Coin Drop". This activity requires students to listen for coins as they drop in a can and either name how many, add one or two, or subtract one or two.

- 1.5.2.Re8a – Categorize and describe works of art, by identifying subject matter, details, mood, and formal characteristics.
    - Lesson 13 – In the Launch portion of this lesson, students will analyze a piece of artwork titled "The Sunflower Quilting Bee at Arles" (1996) by Faith Ringgold, count the objects they observe, and discuss how organizing larger groups makes it easier to count. This piece of art was chosen for this lesson because Ringgold is an American painter, children's book writer and illustrator, and is well known for her quilts that tell a story. In this lithograph, Ringgold honors eight important African American women who have contributed to our country's shared history. She also included one fictional woman to represent all the others who contributed to the nation's story, but who are not shown individually.

- 6.1.2.HistoryCC.3 – Make inferences about how past events, individuals, and innovations affect our current lives.
    - Lesson 15 – In the Land portion of this lesson, students will be introduced to the concept of "infinity". In addition to using materials/information from the Math Past resource, students will also observe images of/from India and England to learn more about the concept of infinity and how people came to understand numbers and counting.

Integration of 21st Century Skills

Standards:

- 8.1.2.DA.3 – Identify and describe patterns in data visualizations. ***AND***
  8.1.2.DA.4 – Make predictions based on data using charts or graphs.
  - Lessons 1, 2, 4, & 6 – When students engage in the "Count on the Rekenrek" Fluency activity in each of these lessons, they will have the opportunity to use the visual (the rekenrek) to describe the patterns they see when counting "10 and some more".
  - Lessons 3, 4, 15, 16, & 17 – During the Launch of these lessons, students will "assist" the teacher in creating a number chart (see teacher's manual for example). Once it is complete, students will have the opportunity to share their observations and make predictions. These activities are either informal introductions to identifying place value and/or skip counting.

- 8.1.2.AP.2 – Model the way programs store and manipulate data by using numbers or other symbols to represent information. ***AND***
  8.1.2.AP.4 – Break down a task into a sequence of steps.
  - Lesson 10 – Throughout this lesson, visual representations are drawn to assist students in making sense of (by either drawing more or crossing some out) and solving number stories.

- 8.2.2.ED.3 – Select and use appropriate tools and materials to build a product using the design process.
  - Lesson 14 – In this lesson, students are tasked with the challenge of creating/making their own rekenrek bracelet. They will be provided with all the necessary tools but must use what they know about the rekenrek to construct their bracelets correctly/appropriately (using pipe cleaners and the right combinations of red and white pony beads).

- 9.4.2.CI.1 – Demonstrate openness to new ideas and perspectives.
  - Lesson 11 – When students are posed with a story problem during the Launch, they are invited to Think-Pair-Share with a partner(s) to brainstorm and determine ways that they can represent/show this story problem, including the tools they should use, prior to executing their plan.