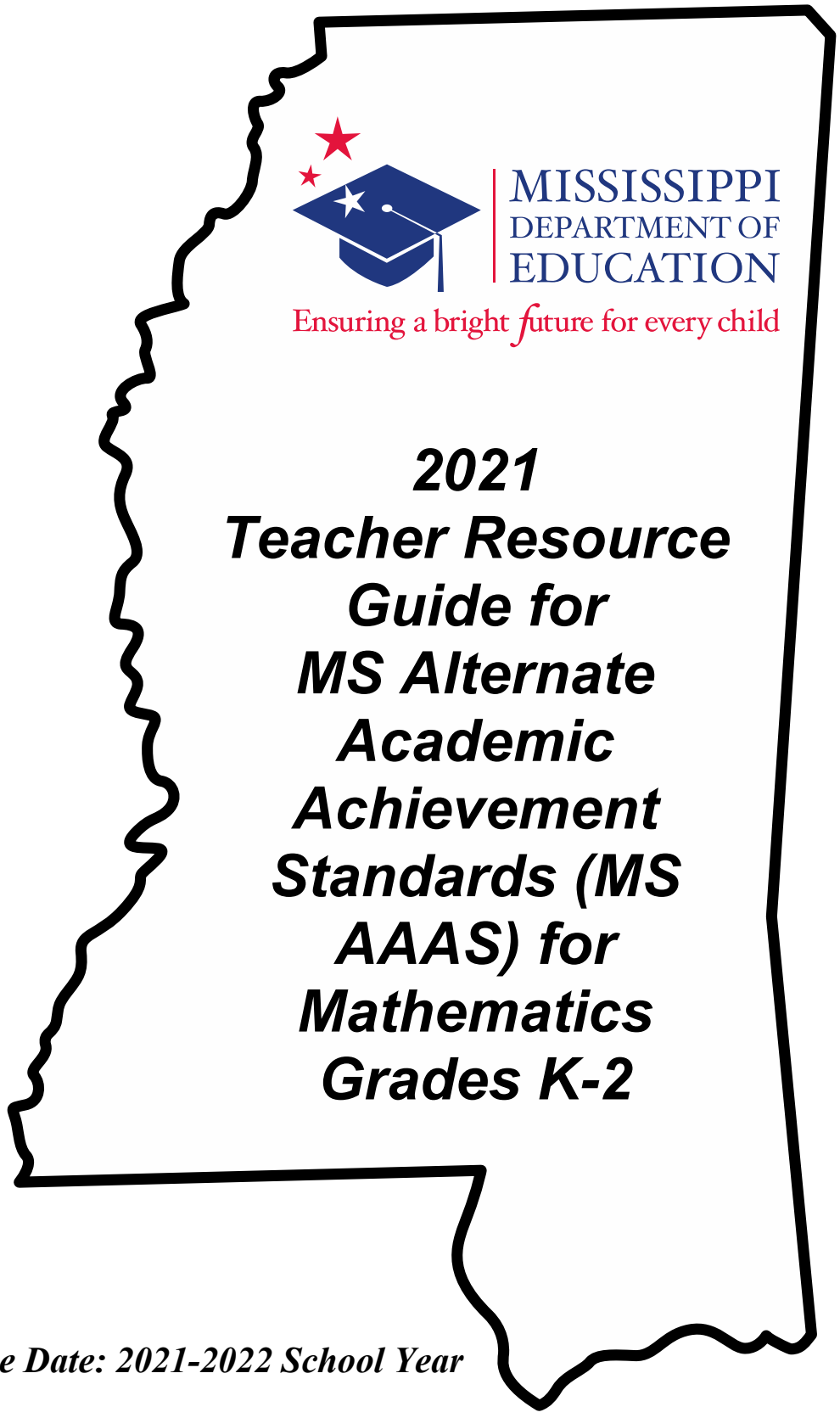

MISSISSIPPI DEPARTMENT OF EDUCATION

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2021 Teacher Resource Guide for MS Alternate Academic Achievement Standards (MS AAAS) for Mathematics Grades K-2

Effective Date: 2021-2022 School Year

2021
Teacher Resource Guide for MS AAAS for Grades K-2 Mathematics

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Director, Office of Human Resources
Mississippi Department of Education

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Acknowledgements

The Mississippi Department of Education gratefully acknowledges the hard work of the following individuals for their involvement in developing the *Teacher Resource Guide for MS AAAS for K-8*: *Mathematics*.

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The Standards

The *2020 Mississippi Alternate Academic Achievement Standards for Mathematics Grade K-2* is comprised of six conceptual categories: number and quantity, algebra, functions, modeling, geometry, and statistics and probability. The different categories combine to provide a broad scope of the study of mathematics.

Remaining Material in the Teacher Resource Guide

The remaining materials in the teacher resource guide (performance objectives, real world connections, vocabulary, and resources) were developed through a collaboration of Mississippi teachers, administrators, the Mississippi Department of Education (MDE) Office of Special Education staff, and the Mississippi State University Research and Curriculum Unit staff.

Introduction

The MDE is dedicated to student success, improving student achievement in mathematics and establishing communication skills within a technological environment. The *Mississippi Alternate Academic Achievement Standards* (MS AAAS) provide a consistent, clear understanding of what students are expected to know and be able to do by the end of each grade level or course. The purpose of the Alternate Standards is to build a bridge from the content in the general education mathematics framework to academic expectations for students with the most significant cognitive disabilities. The standards are designed to be rigorous and relevant to the real world, reflecting the knowledge and skills that students need for success in postsecondary settings.

Purpose

In an effort to closely align instruction for students with significant cognitive disabilities who are progressing toward postsecondary settings, the *MS AAAS for Mathematics Grade K-2* includes course-specific standards for mathematics. This document is designed to provide a resource for kindergarten through eighth grade special education teachers with a basis for curriculum development and instructional delivery.

The *Teacher Resource Guide for Mathematics Grade K-2* contains prioritized content, which is presented as a matrix to show the continuum of the concept across complexity levels. The matrix shows varying access points to the prioritized content. A student's progression through content contained in the matrix is intended to be fluid. It is not the intent, nor should it be practice, for a student to be exposed to content in a straight vertical line through one of the columns. Every student, regardless of disability, comes to the learning environment with a different set of prior knowledge and experience. For this reason, a student may be able to access some content from the middle complexity level and access other concepts at the more complex level. Teachers should evaluate a student's ability in relation to the content and select the entry point based on that evaluation. Students should not be locked into receiving exposure to all content at the same entry point.

Support Documents and Resources

The MDE Office of Special Education aims to provide local districts, schools, and teachers supporting documents to construct standards-based instruction and lessons, allowing them to customize content and delivery methods to fit each student's needs. The teacher resource guide includes suggested resources, instructional strategies, sample lessons, and activities. Additional sample activities and resources for selected standards may be added; this shall be a living document with ongoing updates based on educator feedback. The intent of these resources is to assist teachers in linking their instruction to the prioritized content. The teacher resource guide includes activity adaptations for students with a varying range of abilities within the classroom. The activities and adaptations provided are intended to serve as a model of how students participating in the Mississippi Academic Assessment Program-Alternate (MAAP-A) may receive academic instruction in mathematics. There are many ways in which skills and concepts can be incorporated based on students individual learning styles and needs. Professional development efforts are aligned to the *MS AAAS for Mathematics Grade K-2* and delivered in accord with teacher resources to help expand expertise in delivering student-centered lessons.

Structure of the Teacher Resource Guide for MS AAAS for Mathematics Grade K-2

MS AAAS for Mathematics Grade K-2: A general statement of what students with significant cognitive disabilities should know and be able to do because of instruction. This guide includes statements that describe in precise, measurable terms what learners will be able to do at the end of an instructional sequence; ways educators can link theory to real world activities; focused vocabulary banks; and additional teaching resources.

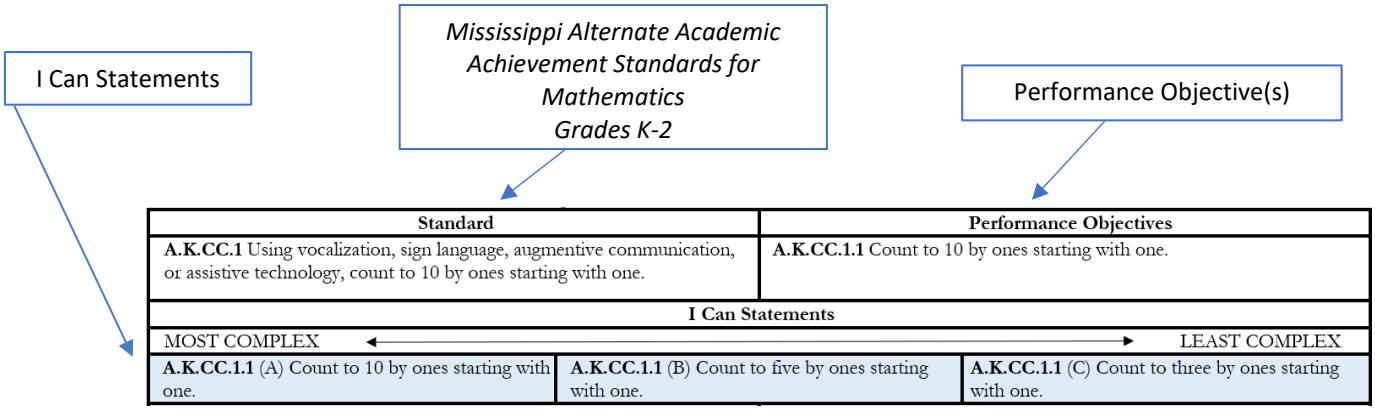
- I Can Statement(s): These statements include the Performance Objective(s) as the *Most Complex* and scaffolds the performance objectives two additional levels (B) and (C) to *Least Complex*. This matrix demonstrates the continuum of the concept across complexity levels. The purpose is to assist teachers in modifying to meet the unique diverse needs of learners with significant cognitive disabilities.

- Real World Connections: These items help facilitate learning that is meaningful to students and prepares them for their professional lives outside of school. When teachers move beyond textbook or curricular examples and connect content learned in the classroom to real people, places, and events, students can see a greater relevance to their learning. Real world connections are used to help students see that learning is not confined to the school, allow them to apply knowledge and skills in real world situations, and personalize learning to increase and sustain student engagement.

- Vocabulary: These lists include difficult or unfamiliar words students need to know and understand.

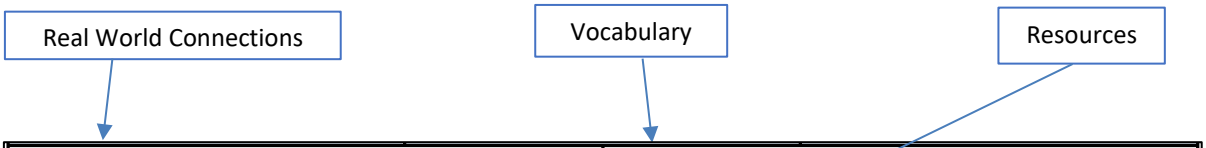
- Resources: These resources include instructional strategies, lessons, and activities. Additional sample activities and resources for selected standards may be added; this shall be a living document with ongoing updates based on educator feedback. The intent of these activities is to assist teachers in linking their instruction to the prioritized content.

Teacher Resource Guide for Mathematics Grades K-2 (Graphic)



Standard	Performance Objectives
A.K.CC.1 Using vocalization, sign language, augmentive communication, or assistive technology, count to 10 by ones starting with one.	**A.K.CC.1.1** Count to 10 by ones starting with one.

I Can Statements		
MOST COMPLEX ←	→	LEAST COMPLEX
A.K.CC.1.1 (A) Count to 10 by ones starting with one.	**A.K.CC.1.1** (B) Count to five by ones starting with one.	**A.K.CC.1.1** (C) Count to three by ones starting with one.



Real World Connections:
- Count how many pieces of candy in a bag.
- Sing the counting song.

Vocabulary
- Count
- Number
- Numeral

Resources:
- **Websites, articles, and other collections**
  - PreKinders (prekinders.com)
    - Ways to Teach Counting
  - Plinkit by DEI Creative (myplinkit.com)
    - How to Teach Math Basics: Part 2—Counting
- **Activities**
  - Use *Model/Lead/Test to model orally counting forward and have the student mimic or repeat the counting sequence (no visuals present).
  - Teach in small increments, adding two to three numbers at a time (no more than five), starting with the number one.
  - Teach using a song, chant, or tune (e.g., snapping, clapping, etc.).
  - Practice counting with a number line.
- **Videos**
  - Busy Beavers—Kids Learn ABCs 123s & More (YouTube)
    - "Counting to 10"—10 Little Numbers Song, Learn to Count 1 to 10

Levels of Support (LOS)

Students with significant cognitive disabilities require varying LOS to engage in academic content. The goal is to move the student along the continuum of assistance toward independence by decreasing the LOS provided and increasing student accuracy within the context of content to demonstrate progress.

The following chart describes the continuum of LOS. Appropriate LOS are important to increase student engagement and student independence and to track student achievement and progress.

Level of Assistance	Definition	Example	Non-Example
Non-Engagement (N)	The student requires assistance from the teacher to initiate, engage, or perform; however, the student actively refuses or is unable to accept teacher assistance.	The student resists the teacher's physical assistance toward the correct answer.	The student does not look at the activity.
Physical Assistance (P)	The student requires physical contact from the teacher to initiate, engage, or perform.	The teacher physically moves the student's hand to the correct answer.	The teacher taps the correct answer and expects the student to touch where he/she tapped.
Gestural Assistance (G)	The student requires the teacher to point to the specific answer.	When presenting a choice of three pictures and asking the student which picture is a triangle, the teacher will point to or tap on the correct picture to prompt the student to indicate that picture.	The teacher moves the student's hand to gesture toward the right answer.
Verbal Assistance (V)	The student requires the teacher to verbally provide the correct answer to a specific item.	The teacher says, "Remember, the main character was George. Point to the picture of the main character."	The teacher says, "Who is the main character?" without providing the information verbally.
Model Assistance (M)	The student requires the teacher to model a similar problem/opportunity and answer prior to performance.	The teacher models one-to-one correspondence using manipulatives and then asks the student to perform a similar item.	The teacher completes the exact same activity as the student is expected to perform.
Independent (I)	The student requires no assistance to initiate, engage, or perform. The student may still require other supports and accommodations to meaningfully engage in the content but does not require assistance to participate and respond.	The teacher asks the student, "Who is the main character of the book?" and the student meaningfully responds without any prompting or assistance.	The teacher asks the student, "Who is the main character?" and points to the picture of the main character.

COURSE: Alternate Mathematics Grade K
DOMAIN: Counting and Cardinality (CC)
CLUSTER: Know number names and the count sequence

Standard	Performance Objectives
A.K.CC.1 Using vocalization, sign language, augmentive communication, or assistive technology, count to 10 by ones starting with one.	**A.K.CC.1.1** Count to 10 by ones starting with one.

I Can Statements

MOST COMPLEX ⟷ LEAST COMPLEX

A.K.CC.1.1 (A) Count to 10 by ones starting with one.	**A.K.CC.1.1** (B) Count to five by ones starting with one.	**A.K.CC.1.1** (C) Count to three by ones starting with one.

Real World Connections:

- Count how many pieces of candy in a bag.
- Sing the counting song.

Vocabulary

- Count
- Number
- Numeral

Resources:

- **Websites, articles, and other collections**
  - PreKinders (prekinders.com)
    - Ways to Teach Counting
  - Plinkit by DEI Creative (myplinkit.com)
    - How to Teach Math Basics: Part 2—Counting
- **Activities**
  - Use *Model/Lead/Test to model orally counting forward and have the student mimic or repeat the counting sequence (no visuals present).
  - Teach in small increments, adding two to three numbers at a time (no more than five), starting with the number one.
  - Teach using a song, chant, or tune (e.g., snapping, clapping, etc.).
  - Practice counting with a number line.
- **Videos**
  - YouTube by Busy Beavers—Kids Learn ABCs 123s & More
    - "Counting to 10"—10 Little Numbers Song, Learn to Count 1 to 10

No alternate standard for K.CC.2-3

COURSE: Alternate Mathematics Grade K
DOMAIN: Counting and Cardinality (CC)
CLUSTER: Count to tell the number of objects

Standard	Performance Objectives
A.K.CC.4 Demonstrate one-to-one correspondence, pairing each object with one, and only one, number and each number with one, and only one, object.	**A.K.CC.4.1** 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.

I Can Statements

MOST COMPLEX ⟷ LEAST COMPLEX

A.K.CC.4.1 (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.	**A.K.CC.4.1** (B) When counting objects, pair each object with one, and only one, number name and each number name with one, and only one, object.	**A.K.CC.4.1** (C) When counting objects, say the number names in the standard order.

Real World Connections:

- Place plastic eggs in an egg carton.
- Count your fingers as you place them in a glove.
- Hand out glue sticks to every student at the table.

Vocabulary

- Correspond
- Count
- Number
- Numeral

Resources:

- **Websites, articles, and other collections**
  - Pre-K Pages by Vanessa Levin (pre-kpages.com)
    - How to Teach One-to-One Correspondence
- **Activities**
  - Count and tell the number of objects, touching each object as it is being counted.
- **Videos**
  - Erikson Institute Early Math Collaborative (earlymath.erikson.edu)
    - Why One-to-One Correspondence Matters

COURSE: Alternate Mathematics Grade K
DOMAIN: Counting and Cardinality (CC)
CLUSTER: Count to tell the number of objects

Standard	Performance Objectives
A.K.CC.5 Using vocalization, sign language, augmentive communication, or assistive technology, count out up to three objects from a larger set, pairing each object with one, and only one, number name to tell how many.	**A.K.CC.5.1** Count out up to three objects from a larger set, pairing each object with one, and only one, number name to tell how many.

I Can Statements

MOST COMPLEX ⟷ LEAST COMPLEX

A.K.CC.5.1 (A) Count out up to three objects from a larger set, pairing each object with one, and only one, number name to tell how many.	**A.K.CC.5.1** (B) Using picture representations and objects, match up to three objects to the pictures from a larger set and tell how many.	**A.K.CC.5.1** (C) Using picture representations and objects, match up to two objects to the pictures from a larger set.

Real World Connections:

- Count items needed for different activities.
- Practice counting to build a foundation for understanding math.

Vocabulary

- Count
- Set
- Tell how many

Resources:

- **Websites, articles, and other collections**
  - Happy Numbers Inc. (happynumbers.com)
    - Count out a given number of objects from a larger set.
  - Tap into Teen Minds by Kyle Pearce (tapintoteenminds.com)
    - Counting Principles—Counting and Cardinality
- **Activities**
  - Take three eggs out of an egg carton.
  - Count out candies up to three from a candy jar.
  - Select three colors to use to color a picture.
- **Videos**
  - YouTube by Lalay Kids Tv — Coloring Pictures Learn Colors ABCs
    - How to Count to 3—Let's Count to 3—Counting 123- Count 123
  - YouTube by For Kids TV
    - Learning to Count to Three—Educational Cartoons for Children—Happy Counting (Ep. 2)
  - YouTube by Just a Pancake
    - How to Count to 3
  - YouTube by Cheeseburger School
    - Counting to 3 | Toddler Home School Preschool Learning Video ESL

COURSE: Alternate Mathematics Grade K
DOMAIN: Counting and Cardinality (CC)
CLUSTER: Compare numbers

Standard	Performance Objectives
A.K.CC.6 Identify whether the number of objects in one group is more or less than (e.g., when the quantities are clearly different) or equal to the number of objects in another group.	**A.K.CC.6.1** Identify whether the number of objects in one group is more or less than (e.g., when the quantities are clearly different) or equal to the number of objects in another group.

I Can Statements

MOST COMPLEX ⟷ LEAST COMPLEX

A.K.CC.6.1 (A) Identify whether the number of objects in one group is more or less than (e.g., when the quantities are clearly different) or equal to the number of objects in another group.	**A.K.CC.6.1** (B) Given two groups of dramatically different quantities of objects, identify which group has more.	**A.K.CC.6.1** (C) Identify groups that have more and less.

Real World Connections:

- Compare two or more sets of objects to determine which is more or less.
- Compare the number of objects in two groups.

Vocabulary

- Different
- Equal
- Less
- More
- Same

Resources:

- **Websites, articles, and other collections**
  - Mrs. Balius: Teaching Resources to Share (mrsbalius.com)
    - Teaching the Skill of Comparing Numbers
  - Mathfox by Eduterials Limited (Mathfox.com)
    - Comparison of Numbers and Objects Math Activities
- **Activities**
  - Use two different newspaper ads to compare prices of the same or similar items.
  - Compare the number of votes in a class election.
  - Count and compare manipulatives.
  - Pay the card game "War," removing face cards.
  - Circle the group that has more or less.
- **Videos**
  - SplashLearn by Studypad, Inc. (splashlearn.com)
    - Compare Number of Objects in Two Groups—Kindergarten Math
  - Nagwa Limited (Nagwa.com)
    - Lesson Video: Comparing Groups of Objects: Less Than
  - YouTube by TeacherTubeMath
    - Number Eating Alligator Song

No alternate standard for K.CC.7

COURSE: Alternate Mathematics Grade K
DOMAIN: Operations and Algebraic Thinking (OA)
CLUSTER: Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from

Standard	Performance Objectives
A.K.OA.1 Demonstrate an understanding of addition as "putting together" or subtraction as "taking from" in everyday activities.	**A.K.OA.1.1** Represent addition as "putting together" or subtraction as "taking from" in everyday activities (e.g., counting on their fingers to 5).

I Can Statements

MOST COMPLEX ⟵ ⟶ LEAST COMPLEX

A.K.OA.1.1 (A) Represent addition as "putting together" or subtraction as "taking from" in everyday activities (e.g., counting on their fingers to 5).	**A.K.OA.1.1** (B) Demonstrate "put together" by adding one or "take from" by subtraction.	**A.K.OA.1.1** (C) Using objects, demonstrate "put together" or "take from" with guidance and support.

Real World Connections:

- Put things together and take things away to build a foundation for understanding math.
- Participate in everyday activities that involve adding and subtracting (e.g., pizza slices left to eat later, how many cookies you have and if you eat one, how many are left to eat later, etc.).

Vocabulary

- Addition
- Count
- Put together
- Subtract
- Take from

Resources:

- **Websites, articles, and other collections**
  - 3P Learning (3plearning.com)
    - How to Teach Addition | 7 Simple Steps
  - Wikihow article co-authored by Catherine Palomino, MS (Wikihow.com)
    - How to Teach Your Kid Adding and Subtracting
- **Activities**
  - Take away number of objects from a group using manipulatives.
  - Add objects to a group using manipulatives.
  - Use toilet paper rolls to set up a bowling game, then count the number of rolls that fall each time you bowl.
  - Put together the same color of assorted candy.
- **Videos**
  - Khan Academy (Khanacademy.org)
    - Relating Addition and Subtraction
  - YouTube by Planning Playtime
    - Subtraction Activities for Kindergarten
  - SplashLearn by Studypad, Inc. (splashlearn.com)
    - Count in Different Arrangements

COURSE: Alternate Mathematics Grade K
DOMAIN: Operations and Algebraic Thinking (OA)
CLUSTER: Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from

- YouTube by Scratch Garden
  - Adding & Subtracting! | Mini Math Movies

No Alternate Standard for K.OA.2-5 and K.NBT.1

COURSE: Alternate Mathematics Grade K
DOMAIN: Measurement and Data (MD)
CLUSTER: Describe and compare measurable attributes & classify objects and count the number of objects in each category (Addresses 2 clusters)

Standard	Performance Objectives
A.K.MD.1-3 Classify objects according to attributes (e.g., big/small, heavy/light, tall/short).	**A.K.MD.1-3.1** Match objects according to attributes (e.g., big/small, heavy/light, tall/short).

I Can Statements

MOST COMPLEX ⟷ LEAST COMPLEX

A.K.MD.1-3.1 (A) Match objects according to attributes (e.g., big/small, heavy/light, tall/short).	**A.K.MD.1-3.1** (B) Using a model or a template, sort objects by one attribute (e.g., big/small or heavy/ light).	**A.K.MD.1-3.1** (C) Match objects by attribute big or small.

Real World Connections:

- Classify objects into given categories (e.g., fruits and vegetables based upon color, size, shape, etc.).
- Sort laundry for washing (i.e., white clothes in one pile to bleach and colored clothes in another).
- Sort toys to put similar ones on shelves.
- Sort objects into categories.

Vocabulary

- Attributes
- Big
- Classify
- Heavy
- Light
- Short
- Small
- Tall

Resources:

- **Websites, articles, and other collections**
  - Goshen Schools Kindergarten Math (Goshenschools.instructure.com)
    - Lesson Plan: K.DA.1: Identify, Sort, and Classify Objects
  - SplashLearn by Studypad, Inc. (splashlearn.com)
    - K.MD.3 Online Math Standards Practice
- **Activities**
  - Sort stuffed animals.
  - Sort items into groups (e.g., fruit or vegetable, etc.).
  - Sort different colored objects into groups of the same color.
  - Select a specific colored crayon to match an object of the same color.
  - Sort objects into categories.
- **Videos**
  - YouTube by Kids Academy
    - Sorting Objects for Kids | Sort Objects into Three Groups
    - Sort the Same Group Two Different Ways | Preschool and Kindergarten
  - PBS LearningMedia Videos (mpb.pbslearningmedia.org)
    - Counting and Classifying Objects with Categories

- Nagwa Limited (Nagwa.com)
  - Question Video: Classifying Objects into Given Categories

No alternate standard for K.G.1

COURSE: Alternate Mathematics Grade K
DOMAIN: Geometry (G)
CLUSTER: Identify and describe shapes (e.g., squares, circles, triangles, rectangles, hexagons, cubes, cones, cylinders, spheres)

Standard	Performance Objectives
A.K.G.2-3 Match shapes of the same size and orientation (e.g., circle, square, rectangle, triangle).	**A.K.G.2-3.1** Match shapes of the same size and orientation (e.g., circle, square, rectangle, triangle).

I Can Statements

MOST COMPLEX ⟷ LEAST COMPLEX

A.K.G.2-3.1.(A) Match shapes of the same size and orientation (e.g., circle, square, rectangle, triangle).	**A.K.G.2-3.1.**(B) Match a shape to its duplicate.	**A.K.G.2-3.1.** (C) Repeat a model to match shapes.

Real World Connections:

- Match real world objects to their geometric shape.
- Match shapes found in the real world (e.g., car tires are circles, windows are squares or rectangles, etc.).
- Draw geometric shapes.
- Observe street signs and recognize their geometric shapes.
- Sort objects based upon their geometric shape.

Vocabulary

- Add
- All together
- Circle
- Duplicate
- Model
- Orientation
- Rectangle
- Repeat
- Result
- Shape
- Size
- Square
- Two-dimensional
- Triangle

Resources:

- **Websites, articles, and other collections**
  - Education.com (education.com)
    - Worksheet—Shape Coloring
  - Pre-K Pages (pre-kpages.com)
    - Shapes Activities for Preschoolers
  - Pocket of Preschool (pocketofpreschool.com)
    - 2D Shape Activities for Preschool, Pre-K, and Kindergarten
  - Kindergarten Works (kindergartenworks.com)
    - 21 Creative Ways to Teach 2D Shapes in Kindergarten
  - Free Flashcards for Preschool (flashcardsforkindergarten.com/shape-flashcards)
    - Shape Flashcards
  - Sparkle Box (sparklebox.co.uk)
    - 2D Shape Attributes Chart Worksheets
  - Superstar Worksheets (superstarworksheets.com)
    - Shape Attributes Worksheets
  - SplashLearn (splashlearn.com)

        - Attribute—Definition with Examples
- **Activities**
    - Teacher models by holding up one shape and asking student to produce a matching shape.
    - Conduct a shapes scavenger hunt.
    - Use straws and pipe cleaners or straws and twist ties to create shapes.
    - Allow students to use twist ties or pipe cleaners to make the shapes.
    - Create shape robots (e.g., square body, circle head, triangle eyes and nose, etc.)
- **Videos**
    - YouTube by Oh, My Genius—Nursery Rhymes and Kids Songs
        - Shape Song | Shapes Song | Preschool
    - YouTube by Mizyaka Dizyaka ENG
        - Learn 2D Shapes with Choo-Choo Train Part 1. Shapes for Kids (Kindergarten and Students of Grade 1)
    - YouTube by Jack Hartmann Kids Music Channel
        - Shapes for Kids | 2D Shapes | Shapes Song | Shape Up
    - Khan Academy (khanacademy.org)
        - Recognize Shapes

No alternate standard for K.G.4-6

COURSE: Alternate Mathematics 1ST Grade
DOMAIN: Operations and Algebraic Thinking (OA)
CLUSTER: Represent and solve problems involving addition and subtraction

Standard	Performance Objectives
A.1.OA.1.a Represent addition and subtraction within five using objects, fingers, mental images, drawings, sounds (e.g., claps), or acting out situations.	**A.1.OA.1.a.1** Add and subtract up to five using objects, fingers, mental images, drawings, sounds (e.g., claps), or acting out situations.

I Can Statements

MOST COMPLEX ⟷ LEAST COMPLEX

A.1.OA.1.a.1 (A) Add and subtract up to five using objects, fingers, mental images, drawings, sounds (e.g., claps), or acting out situations.	**A.1.OA.1.a.1** (B) Subtract up to five using objects, fingers, mental images, drawings, sounds (e.g., claps), or acting out situations.	**A.1.OA.1.a.1** (C) Add up to five using objects, fingers, mental images, drawings, sounds (e.g., claps), or acting out situations.

Real World Connections:

- Count money (e.g., adding up dollar bills, adding up pennies, etc.).
- Find out how many pieces of candy are left after giving some away to friends.
- See how many pieces of pizza remain after you and friends eat four pieces.

Vocabulary

- Acting out situations
- Addition
- Attribute
- Color
- Curved
- Represent
- Sides
- Size
- Shapes
- Subtraction

Resources:

- **Websites, articles, and other collections**
  - 3P Learning (3plearning.com)
    - How to Teach Addition | 7 Simple Steps
  - Wikihow article co-authored by Catherine Palomino, MS (Wikihow.com)
    - How to Teach Your Kid Adding and Subtracting
  - Better Lesson (betterlesson.com)
    - Subtracting From 5
  - ThoughtCo (thoughtco.com)
    - A Kindergarten Lesson Plan for Teaching Addition and Subtraction
- **Activities**
  - Count money (e.g., Add up the number of pennies or dollar bills.).
  - Use fingers to visually show subtraction by "taking away".
  - Represent addition and subtraction within five using breakfast cereal (i.e., Put students' breakfast cereal in small bags, have students count out the number you call out, and have them take away and/or add to up to five.).
- **Videos**
  - YouTube by Anelyse Jacobs
    - Add and Subtract Within 5
  - YouTube by Ignite Study

- Math for Kids—Lesson 2. Subtraction Within 5 for Kids | 1st Grade

COURSE: Alternate Mathematics 1ST Grade
DOMAIN: Operations and Algebraic Thinking (OA)
CLUSTER: Represent and solve problems involving addition and subtraction

Standard	Performance Objectives
A.1.OA.1.b Recognize two groups that have the same or equal quantity.	**A.1.OA.1.b.1** Identify two groups that have the same or equal quantity.

I Can Statements

MOST COMPLEX ⟷ LEAST COMPLEX

A.1.OA.1.b.1 (A) Identify two groups that have the same or equal quantity.	**A.1.OA.1.b.1** (B) Match two groups that have the same or equal quantity.	**A.1.OA.1.b.1** (C) Replicate a group of objects.

Real World Connections:

- Using manipulatives, make equal groups and describe them.
- Identify equal groups of fruits or vegetables and describe the groups.
- Describe the attributes of items found in a group and how the items match those in an equal group.

Vocabulary

- Equal
- Group
- Match
- Same
- Quantity

Resources:

- **Websites, articles, and other collections**
  - Better Lesson (betterlesson.com)
    - Finding Equal Groups
  - Khan Academy (Khanacademy.org)
    - Practice using equal groups.
  - Emmaus School (emmausschool.co.uk)
    - Lesson 2—Make Equal Groups (Grouping)
- **Activities**
  - Describe how many fingers are on each hand.
  - Identify two groups of the same number of grapes in a bowl.
  - Select two groups of fruit that have the same or equal quantity.
  - Using manipulatives, place items in equal groups.
  - Model or "act out" equal groups.
  - Identify the number of equal groups.
  - Match pictures and descriptions of equal groups.
- **Videos**
  - Khan Academy (Khanacademy.org)
    - Equal Groups Video

COURSE: Alternate Mathematics 1ST Grade
DOMAIN: Operations and Algebraic Thinking (OA)
CLUSTER: Represent and solve problems involving addition and subtraction

Standard	Performance Objectives
A.1.OA.2 Demonstrate "putting together" two sets of objects to solve the problem.	**A.1.OA.2.1** "Put together" two sets of objects to solve a problem.

I Can Statements

MOST COMPLEX ⟵ ⟶ LEAST COMPLEX

A.1.OA.2.1 (A) "Put together" two sets of objects to solve a problem.	**A.1.OA.2.1** (B) Using a given set, "put together" by adding a set to solve a problem.	**A.1.OA.2.1** (C) Using two given sets, combine or "put together" to solve a problem.

Real World Connections:

- Add to, take from, put together, and compare objects or things in real life.
- Compare items when buying things.
- Have a firm grasp of the concept of what is needed in solving simple, put-together word problems.

Vocabulary

- Add
- Combine
- Solve a problem
- Object
- Put together

Resources:

- **Websites, articles, and other collections**
  - Mrs. Ward's Kindergarten Class (wardqae2014.weebly.com)
    - Counting On & Combining Sets Lesson
  - Better Lesson (betterlesson.com)
    - Problem Solving: Using Objects
  - Online Math Learning Resources (OnlineMathLearning.com)
    - Lesson 17: Objective: Solve put together with total unknown word problems to eight using objects and drawings.
- **Activities**
  - Place the green building blocks l with the red building blocks
  - Show how Sam has three green pens and Jane has two green pens. How many pens do they have together?
  - Use connecting cubes to make a model that will help students solve math problems.
- **Videos**
  - YouTube by Todo Math Stories
    - Addition for Kindergarten
  - YouTube by MatholiaChannel
    - Addition by Putting Together
  - YouTube by TenMarks Amazon
    - Solving Put-Together/Take-Apart Problems (K.OA.2)

No alternate standard for 1.OA.3-4

COURSE: Alternate Mathematics 1ST Grade
DOMAIN: Operations and Algebraic Thinking (OA)
CLUSTER: Add and subtract within 20

Standard	Performance Objectives
A.1.OA.5.a Use manipulatives or visual representations to indicate the number that results when adding one more.	**A.1.OA.5.a.1** Use manipulatives or visual representations to indicate the number that results when adding one more.

I Can Statements

MOST COMPLEX ⟷ LEAST COMPLEX

A.1.OA.5.a.1 (A) Use manipulatives or visual representations to indicate the number that results when adding one more.	**A.1.OA.5.a.1** (B) Indicate the numbers that result when adding one more to the numbers from one to five.	**A.1.OA.5.a.1** (C) Add or give one more.

Real World Connections:

- Add one more thing to a group of things to build a foundation for understanding math.
- Add treats for one more.
- Count pennies by adding one more.
- Add one more color to a color box.
- Participate in everyday activities that involve adding (e.g., add eggs to a cake batter, add candies to the jar, add pennies to a bank, etc.).
- Compare items when buying things.
- Have a firm grasp of the concept of what is needed in solving simple, put-together word problems.

Vocabulary

- Add
- Addition
- All together
- More
- Result

Resources:

- **Websites, articles, and other collections**
  - K-5 Math Teaching Resources LLC. (k-5mathteachingresources.com)
    - Represent and solve problems involving addition and subtraction
  - Mrs. Ward's Kindergarten Class(wardqae2014.weebly.com)
    - Counting On & Combining Sets Lesson
  - Better Lesson (betterlesson.com)
    - Problem Solving: Using Objects
  - Online Math Learning Resources (OnlineMathLearning.com)
    - Lesson 17: Objective: Solve put together with total unknown word problems to eight using objects and drawings.
  - 3P Learning (3plearning.com)
    - How to Teach Addition | 7 Simple Steps
  - Wikihow article co-authored by Catherine Palomino, MS (Wikihow.com)
    - How to Teach Your Kid Adding and Subtracting
  - Mashup Math (Mashupmath.com)

- The Best Free First Grade Math Resources, Strategies, and Ideas!

- **Activities**
  - Place the green blocks with the red blocks.
  - Show how Sam has three green pens and Jane has two green pens. How many pens do they have together?
  - Use connecting cubes to make a model that will help them solve math problems.
  - Add objects to a group using manipulatives.
  - Put together the same color of assorted candy.
  - Use Skittles or M&Ms to let the student add one and count.
  - Use pennies or counting blocks to let the student pair and continue to add one more until they've reached a certain number.
  - Using a number line, have the student continue to add one until a designated number. Magnets on a white board could also be used.
- **Videos**
  - YouTube by Todo Math Stories
    - Addition for Kindergarten
  - YouTube by MatholiaChannel
    - Addition by Putting Together
  - YouTube by TenMarks Amazon
    - Solving Put-Together/Take-Apart Problems (K.OA.2)
  - SplashLearn by Studypad, Inc. (splashlearn.com)
    - Count in Different Arrangements
  - YouTube by Scratch Garden
    - Adding & Subtracting! | Mini Math Movies
  - YouTube by STEMHAX
    - Jack the Builder—Counting on Math (Read Aloud)
  - Have Fun Teaching, LLC (havefunteaching.com)
    - The Adding 1 Song! Video

COURSE: Alternate Mathematics 1ST Grade
DOMAIN: Operations and Algebraic Thinking (OA)
CLUSTER: Add and subtract within 20

Standard	Performance Objectives
A.1.OA.5.b Apply knowledge of "one less" to subtract one from a number.	**A.1.OA.5.b.1** Demonstrate "one less" to subtract one from a number.

I Can Statements

MOST COMPLEX ⟵ ⟶ LEAST COMPLEX

A.1.OA.5.b.1 (A) Demonstrate "one less" to subtract one from a number.	**A.1.OA.5.b.1** (B) Remove or take one away to show how many are left.	**A.1.OA.5.b.1** (C) Remove or take one away.

Real World Connections:

- Take things away from groups to build a foundation for understanding math.
- Participate in everyday activities that involve subtracting (e.g., pizza slices left to eat later, cookies left to eat later, etc.)
- While outside playing, determine how many birds are left if there are five sitting in a tree and one flies away.
- Share your toy with a friend, meaning there is one less toy to play with at the time.
- Take away a sock from a pair, meaning there is one less.

Vocabulary

- Less
- One less
- Subtract
- Take away

- **Websites, articles, and other collections**
  - 3P Learning (3plearning.com)
    - How to Teach Addition | 7 Simple Steps
  - Wikihow article co-authored by Catherine Palomino, MS (Wikihow.com)
    - How to Teach Your Kid Adding and Subtracting
  - Erikson Institute Early Math Collaborative (earlymath.erikson.edu)
    - Sets can be changed by adding items (joining) or by taking some away (separating).
  - ThoughtCo (thoughtco.com)
    - Great Books for Teaching Counting and Number Recognition
  - National Center on Intensive Interventions (intensiveintervention.org)
    - Teaching Counting: Considerations for Instruction
  - Fantastic Fun and Learning (fantasticfunandlearning.com)
    - One More, One Less Activities
    - Hands-on, Quick Prep, One More, One Less Number Sense Activities
- **Activities**
  - Take away numbers of manipulatives and show the corresponding subtraction operation.

- Use toilet paper rolls to set up a bowling game, then count the number of rolls that fall each time you bowl.
- Sort candy in a group by color and tell how many candies are left when you remove one color of candy from the group.
- Number lines on the floor or a wall.
- Give students a group of small objects to count.
- Play games with small objects and decks of cards, where counting one more or less is needed.
- Play a group counting game called "Around the World."
- Use small objects to count from a number given (e.g., cubes, counters, dice, etc.).
- Put numbers in reverse order.

- **Videos**
  - Khan Academy (Khanacademy.org)
    - Relating Addition and Subtraction
  - YouTube by Planning Playtime
    - Subtraction Activities for Kindergarten
  - SplashLearn by Studypad, Inc. (splashlearn.com)
    - Count in Different Arrangements
  - YouTube by Scratch Garden
    - Adding & Subtracting! | Mini Math Movies

No alternate standard for 1.OA.6-8

COURSE: Alternate Mathematics 1ST Grade
DOMAIN: Number and Operations in Base Ten (NBT)
CLUSTER: Extend the counting sequence

Standard	Performance Objectives
A.1.NBT.1.a Count by ones to 30.	**A.1.NBT.1.a.1** Count by ones to 30.

I Can Statements

MOST COMPLEX ⟷ LEAST COMPLEX

A.1.NBT.1.a.1 (A) Count by ones to 30.	**A.1.NBT.1.a.1** (B) Count by ones to 15.	**A.1.NBT.1.a.1** (C) Count to five.

Real World Connections:

- Count the how many pieces of candy are in a bag.
- Sing the counting song.
- Learn to count your money.
- Count the number of birthdays you have had.

Vocabulary

- Count
- Number
- Numeral

Resources:

- **Websites, articles, and other collections**
  - Erikson Institute Early Math Collaborative (earlymath.erikson.edu)
    - Sets can be changed by adding items (joining) or by taking some away (separating).
  - PreKinders (Prekinders.com)
    - Ways to Teach Counting
  - Plinkit by DEI Creative (myplinkit.com)
    - How to Teach Math Basics: Part 2—Counting
  - Better Lesson (betterlesson.com)
    - Subtraction: Act It Out!
  - National Center on Intensive Interventions (intensiveintervention.org)
    - Teaching Counting: Considerations for Instruction
  - University of Alabama at Birmingham (UAB) Collat School of Business (businessdegrees.uab.edu)
    - Number Fun: Counting Activities for Kids
- **Activities**
  - Use *Model/Lead/Test to model orally counting forward and have the student mimic or repeat the counting sequence (no visuals present).
  - Teach in small increments, adding two to three numbers at a time (no more than five), starting with the number one.
  - Teach using a song, chant, or tune (e.g., snapping, clapping, etc.)
  - Practice counting with a number line.
- **Videos**
  - Busy Beavers—Kids Learn ABCs 123s & More
    - "Counting to 10"—10 Little Numbers Song, Learn to Count 1 to 10
  - YouTube by Inspiring Parents
    - DIY Activities for Teaching Number Counting & Number Recognition to 2-3 Year Old's at Home

- Early Impact Learning (earlyimpactlearning.com)
  - 14 Ways to Teach Counting on From a Given Number

COURSE: Alternate Mathematics 1ST Grade
DOMAIN: Number and Operations in Base Ten (NBT)
CLUSTER: Extend the counting sequence

Standard	Performance Objectives
A.1.NBT.1.b Count as many as 10 objects and represent the quantity with the corresponding numeral.	**A.1.NBT.1.b.1** Count as many as 10 objects and represent the quantity with the corresponding numeral.

I Can Statements

MOST COMPLEX ⟷ LEAST COMPLEX

A.1.NBT.1.b.1 (A) Count as many as 10 objects and represent the quantity with the corresponding numeral.	**A.1.NBT.1.b.1** (B) Count as many as five objects and represent the quantity with the appropriate numeral.	**A.1.NBT.1.b.1** (C) Count up to five objects.

Real World Connections:

- Read directions/find your way.
- Track what you spend your money on.

Vocabulary

- Count/counting
- Numbers
- Numerals
- Objects

Resources:

- **Websites, articles, and other collections**
  - Worksheetfun (Worksheetfun.com)
    - Count and Match—Numbers 1-10—Six Worksheets
  - Justifying Play-based Approaches to Learning by Kate Johnson (justifyingplaybased.weebly.com)
    - 1:1 Correspondence and its importance in numeracy
- **Activities**
  - Match objects to numerals on flash cards.
- **Videos**
  - Play Within Early Years Classrooms (playingwithlearning.weebly.com)
    - What is 1:1 Correspondence?
  - FirstPath Autism (firstpathautism.com)
    - 1:1 Correspondence: Counting Objects

COURSE: Alternate Mathematics 1ST Grade
DOMAIN: Number and Operations in Base Ten (NBT)
CLUSTER: Understand place value

Standard	Performance Objectives
A.1.NBT.2 Create sets of 10.	**A.1.NBT.2.1** Create sets of 10.

I Can Statements

MOST COMPLEX ⟷ LEAST COMPLEX

A.1.NBT.2.1 (A) Create sets of 10.	**A.1.NBT.2.1** (B) Create one set of 10 to match another set of 10 from a picture example.	**A.1.NBT.2.1** (C) Identify a set of five.

Real World Connections:

- Share with friends.
- Sort toys.

Vocabulary

- One-to-one
- Sets
- Sorting
- Ten

Resources:

- **Websites, articles, and other collections**
  - The Teach Company (teachwire.net)
    - Teaching Times Tables with Real-World Examples
  - New Zealand Ministry of Education (Nzmaths.co.nz)
    - Making Ten
  - LearnZillion (learnzillion.com)
    - Understanding Ten Ones Make a Ten
  - Little Minds at Work by Tara West (littlemindsatwork.org)
    - Ways to Make Ten!
- **Activities**
  - Building 10 with unfix cubes is a great guided-math lesson that offers students the chance to see the stair-step pattern of making 10 combinations. After students create this pattern, it's the perfect time to talk about the commutative property (i.e., flip-flop facts).
  - Make your own bead racks with sets of 10.
  - Play the "Making 10 Hand Game" in the hallway, a perfect way provide learning moments during hallway and bathroom waits. As students wait, they close their eyes, opening them and looking at the teacher's hand on the count of three. They then flash the number needed to make 10.
- **Videos**
  - The Brown Bag Teacher (brownbagteacher.com)
    - Making 10 Centers, Mini-Lessons, & Online Tools
  - YouTube by The WCPSSAcademics
    - ES 1 Math Place Value Making Groups of Ten

COURSE: Alternate Mathematics 1ST Grade
DOMAIN: Number and Operations in Base Ten (NBT)
CLUSTER: Understand place value

Standard	Performance Objectives
A.1.NBT.3 Using vocalization, sign language, augmentive communication, or assistive technology, compare two groups of 10 or fewer items using appropriate vocabulary (e.g., more, less, equal) when the number of items in each group is similar.	**A.1.NBT.3.1** Compare two groups of 10 or fewer items using appropriate vocabulary (e.g., more, less, equal) when the number of items in each group is similar.

I Can Statements

MOST COMPLEX ⟵ ⟶ LEAST COMPLEX

A.1.NBT.3.1 (A) Compare two groups of 10 or fewer items using appropriate vocabulary (e.g., more, less, equal) when the number of items in each group is similar.	**A.1.NBT.3.1** (B) Using appropriate vocabulary (e.g., more, less, equal), choose the matching set of items.	**A.1.NBT.3.1** (C) Using manipulatives, demonstrate groups that have more and groups that have less.

Real World Connections:

- Compare amounts of money.
- Compare the number of flowers of each color in an arrangement.
- Match dots on dominos.
- Compare the number of candy pieces in two bags.
- Compare the relationships between numbers in real-life situations that involve comparing amounts or values.

Vocabulary

- Compare
- Equal
- Few/fewer
- Less
- More
- Similar

Resources:

- **Websites, articles, and other collections**
  - A Kinder Teacher Life (akteacherlife.com)
    - One More, One Less Math Center Activities
  - Education.com (education.com)
    - More, Less, or Equal: Comparing Quantities
  - Duvall County Public Schools, Jacksonville, Florida (dcps.duvalschools.org)
    - Lesson 22: Compare Numbers
- **Activities**
  - Play a game with your child that involves comparing two-digit numbers. Use playing cards or make cards using index cards. Take turns picking two cards and comparing them. Say what the statement shows (e.g., Six is greater than two.). When all the cards are used, you can mix them up and play again.
  - Find which of two numbers is greater (i.e., has more) or less than (i.e., has fewer) by counting out the objects on picture cards.
  - Build a tower with building blocks then add one more or one less.
  - Have students act out one more/one less word problems.

- **Videos**
  - Khan Academy (khanacademy.org)
    - Comparing Numbers of Objects
  - YouTube by MatholiaChannel
    - Comparing Numbers Within 10
  - Mississippi Public Broadcasting Learning Media (mpb.pbslearningmedia.org)
    - More, Fewer, Same
  - YouTube by Year 1 Teaching Strategies
    - Week 2 Math: Comparing Sets

COURSE: Alternate Mathematics 1ST Grade
DOMAIN: Number and Operations in Base Ten (NBT)
CLUSTER: Use place value understanding and properties of operations to add and subtract

Standard	Performance Objectives
A.1.NBT.4 Compose numbers less than or equal to five in more than one way.	**A.1.NBT.4.1** Add numbers less than or equal to five in more than one way.

I Can Statements

MOST COMPLEX ⟷ LEAST COMPLEX

A.1.NBT.4.1 (A) Add numbers less than or equal to five in more than one way.	**A.1.NBT.4.1** (B) Add numbers less than or equal to five.	**A.1.NBT.4.1** (C) Using manipulatives, add numbers equal to five.

Real World Connections:

- Understand money can be the same amount in various ways using pennies and a nickel.
- Compose numbers to teach they are flexible and you can represent a number in more than one way.

Vocabulary

- Compare
- Less than
- More than

Resources:

- **Websites, articles, and other collections**
  - Better Lesson (betterlesson.com)
    - Ways to Make 7- A Lesson on Decomposing
  - A Kinder Teacher Life (akteacherlife.com)
    - Decomposing Math Problems for Google Classroom
  - K-5 Math Teaching Resources LLC (k-5mathteachingresources.com)
    - Kindergarten Number—Kindergarten Math Centers
- **Activities**
  - Set up problems with some manipulatives to help the students organize their thinking. Give two boxes split into two sections each to help the students see that they need to create groups and can use them to create two different groupings. Toy cars, car pictures, students' drawings, etc. can be used. It is critical to understand the idea that numbers can be put together or broken apart to make other numbers. To do this with the whole group, have two students come up and work on the problem. Have one student create the first grouping and another student create a different grouping. Remind the students to check their work when they are finished and have the class tell if they agree or disagree by showing a thumbs up or thumbs down.
- **Videos**
  - Khan Academy (khanacademy.org)
    - Making 5
  - YouTube by Motion-Tutor.com
    - Kindergarten Math—Making 5 Using Counters
  - YouTube by Freckle by Renaissance
    - [K.OA.3-1.0] Decompose Less Than 10—Common Core Standard

- YouTube by Teaching Without Frills
  - Ways to Make 5 Using Objects | Kindergarten Math

No alternate standard for A.1.NBT 5. a -b

COURSE: Alternate Mathematics 1ST Grade
DOMAIN: Number and Operations in Base Ten (NBT)
CLUSTER: Use place value understanding and properties of operations to add and subtract

Standard	Performance Objectives
A.1.NBT.6 Decompose numbers less than or equal to five in more than one way.	**A.1.NBT.6.1** Subtract numbers less than or equal to five in more than one way.

I Can Statements

MOST COMPLEX ⟵ ⟶ LEAST COMPLEX

A.1.NBT.6.1 (A) Subtract numbers less than or equal to five in more than one way.	**A.1.NBT.6.1** (B) Subtract numbers less than or equal to five in one way.	**A.1.NBT.6.1** (C) Identify two sets of the same object (less than five).

Real World Connections:

- Practice counting skills.
- Show relationships between a number of objects.
- Count money.
- Allow students to see the whole group as the subsets that created the whole by composing and decomposing small sets of objects.

Vocabulary

- Decompose
- Equal to
- Identify
- Less than
- Subtract

Resources:

- **Websites, articles, and other collections**
  - Illustrative Mathematics (tasks.illustrativemathematics.org)
    - Standard Decompose Numbers Less Than or Equal to 10
  - Janice's Mash-up (janicenovkam.typepad.com)
    - Decomposing Numbers
  - Achieve the Core (achievethecore.org)
    - Topic: Composing and Decomposing 10
- **Activities**
  - Show students a large copy of a six of hearts playing card. As a class, count the hearts. Ask students: "What does the six on the top and the bottom of the card tell us?" Ask students: "When you look at these six hearts, do you see any little groups inside there?" If no one volunteers a correct response, volunteer a group that you see: for example, "I see three hearts here. What else do you see?" Call on a volunteer to come up and circle other groups. Ask one student to describe what he or she circled. Then ask other students to repeat the first student's description. Note that all of the hearts have been circled. Move this card to the side. Project another blank copy of the six of hearts card. Wait at least 10 seconds before calling on a student to draw and describe the groups that he or she sees. Then ask the other students to repeat the description of what their classmate circled. Invite students to go back to their tables with copies of the seven of hearts card. Invite them to find as many different ways as possible to decompose that number by circling groups and recording their decomposition using a number sentence.

- **Videos**
  - YouTube by SparkLearningVideos
    - eSpark Learning: Decomposing Numbers Framing Video (K.OA, Quest 3)
  - YouTube by Freckle by Renaissance
    - [K.OA.3-1.0] Decompose Less Than 10—Common Core Standard

COURSE: Alternate Mathematics 1ST Grade
DOMAIN: Measurement and Data (MD)
CLUSTER: Measure lengths indirectly and by iterating length units

Standard	Performance Objectives
A.1.MD.1-2 Compare lengths to identify which is longer/shorter, taller/shorter.	**A.1.MD.1-2.1** Compare lengths to identify which is longer/shorter, taller/shorter.

I Can Statements

MOST COMPLEX ⟷ LEAST COMPLEX

A.1.MD.1-2.1 (A) Compare lengths to identify which is longer/shorter, taller/shorter.	**A.1.MD.1-2.1** (B) Select from two everyday objects based on the stated attribute (i.e., longer/shorter, taller/shorter).	**A.1.MD.1-2.1** (C) Identify longer/shorter objects.

Real World Connections:

- Classify objects based upon their length (i.e., tall/short, long/short, etc.).
- Stack blocks to sort them from longest to shortest or tallest to shortest.
- Compare heights of plants, people, and buildings.

Vocabulary

- Compare
- Length
- Longer
- Shorter
- Taller

Resources:

- **Websites, articles, and other collections**
  - Goshen Schools Kindergarten Math (Goshenschools.instructure.com)
    - Lesson Plan: K.DA.1: Identify, Sort and Classify Objects
  - SplashLearn by Studypad, Inc. (splashlearn.com)
    - Order Objects by Length—Grade 1 Math
  - K5 Learning (k5learning.com)
    - Length: Which object is longer or shorter?
  - Biglearners.com
    - Size, Length, Weight, and Height: Measurement: First Grade Math Worksheets
- **Activities**
  - Sort items into groups (i.e., tall items, short items).
  - Sort different length objects into groups of the same length.
  - Select a specific length object and match an object of the same length.
  - Sort objects into categories (i.e., tall/short, long/short).
- **Videos**
  - YouTube by Kids Academy
    - Comparing Lengths of Objects | Math for 1st Grade
  - YouTube by Boddle Learning
    - Comparing & Measuring Lengths—1st Grade Math (1.MD.A.1 and 1.MD.A.2)

- YouTube by NUMBEROCK
  - Longer or Shorter Song | Comparing Measurements | Kindergarten to 2nd Grade

COURSE: Alternate Mathematics 1ST Grade
DOMAIN: Measurement and Data (MD)
CLUSTER: Tell and write time with respect to a clock and a calendar

Standard	Performance Objectives
A.1.MD.3.a Demonstrate an understanding of the terms tomorrow, yesterday, and today.	**A.1.MD.3.a.1** Identify the appropriate day for today, yesterday, and tomorrow on a calendar.

I Can Statements

MOST COMPLEX ⟵ ⟶ LEAST COMPLEX

A.1.MD.3.a.1 (A) Identify the appropriate day for today, yesterday, and tomorrow on a calendar.	**A.1.MD.3.a.1** (B) Identify today and tomorrow on a calendar.	**A.1.MD.3.a.1** (C) Identify today on a calendar.

Real World Connections:

- Recall events that students did yesterday, today or will do tomorrow.

Vocabulary

- Calendar
- Day
- Time
- Today
- Tomorrow
- Yesterday

Resources:

- **Websites, articles, and other collections**
  - Education.com (education.com)
    - Worksheets Days of the Week
  - Worksheetfun (Worksheetfun.com)
    - Days of the Week—Yesterday and Tomorrow—6 Worksheets
  - McKillop Library, Salve Regina University (library.salve.edu)
    - Lesson 1 Yesterday, Today, and Tomorrow: Creating a Timeline
- **Activities**
  - Lead students in recalling events that they did yesterday and ask them to tell about events they will do today and events they will do tomorrow.
  - Make a picture calendar showing what happened yesterday and what is happening today and tomorrow.
- **Videos**
  - YouTube by Learning Time Fun
    - Today Is, Yesterday Was, Tomorrow Is | Days of the Week | Learning Games | 7 Days | Days of Week
  - YouTube by Baby Toot Toot
    - Yesterday, Today and Tomorrow | Coco Beats Cartoons | Learning Videos for Children by USP Cartoons
  - YouTube by Teach for Life
    - Yesterday, Today, Tomorrow

COURSE: Alternate Mathematics 1ST Grade
DOMAIN: Measurement and Data (MD)
CLUSTER: Tell and write time with respect to a clock and a calendar

Standard	Performance Objectives
A.1.MD.3.b Demonstrate an understanding of the terms morning, afternoon, day, and night.	**A.1.MD.3.b.1** Identify the activities that relate to the terms morning, afternoon, day, and night.

I Can Statements

MOST COMPLEX ⟷ LEAST COMPLEX

A.1.MD.3.b.1 (A) Identify the activities that relate to the terms morning, afternoon, day, and night.	**A.1.MD.3.b.1** (B) Identify the activities that relate the terms morning, afternoon, and night.	**A.1.MD.3.b.1** (C) Identify the activities that relate the terms day and night.

Real World Connections:

- Recall daily routines and the times of the day that they occur.
- Understand how the sunlight and darkness outside help determine various times of day.
- Sort activities by those that happen in the morning, in the afternoon and at night.

Vocabulary

- Afternoon
- Day
- Morning
- Night

Resources:

- **Websites, articles, and other collections**
  - Early Math Counts (earlymathcounts.org)
    - At What Time?
  - Education.com (education.com)
    - Lesson Plan A.M. or P.M.
- **Activities**
  - Use manipulatives to discuss and demonstrate how the sun moves around the earth at different times of the day.
  - Discuss activities that one does during the day (e.g., eat breakfast in the morning, sleep at night, etc.).
  - Discuss daily routines and the times of the day they happen.
- **Videos**
  - YouTube by learning junction
    - Day and Night | Video for Kids
  - YouTube by Quixot Kids—Edu
    - Different Time of the Day—Daytime & Nighttime for Kids | Basic English Lessons & Vocabulary
  - YouTube by Studycat Limited
    - Lesson 9: "Morning, Afternoon, Evening" Time of Day & 1st Person Daily Actions Kids Online English

COURSE: Alternate Mathematics 1ST Grade
DOMAIN: Measurement and Data (MD)
CLUSTER: Tell and write time with respect to a clock and a calendar

Standard	Performance Objectives
A.1.MD.3.c Identify activities that come before, next, and after.	**A.1.MD.3.c.1** Identify activities that come before, next, and after.

I Can Statements

MOST COMPLEX ⟵ ⟶ LEAST COMPLEX

A.1.MD.3.c.1 (A) Identify activities that come before, next, and after.	**A.1.MD.3.c.1** (B) Demonstrate that next and after are synonymous.	**A.1.MD.3.c.1** (C) Indicate activities that come before.

Real World Connections:

- Line up shopping items at the checkout counter and point out "before, next, and after."
- Brush your teeth before bedtime.
- Put shoes on after you put socks and clothes on.
- Follow directions.

Vocabulary

- After
- Before
- Next

Resources:

- **Websites, articles, and other collections**
  - We Have Kids (wehavekids.com)
    - How to Teach the "Before and After" Prenumber Concept
  - Speech 2U (speech2u.com)
    - How I do It: Teach Before and After
  - Mrs. Winter's Bliss Ideas and Resources to Help you Teach with Bliss! (mrswintersbliss.com)
    - Teaching Story Retell and Sequence Writing
- **Activities**
  - Create sequence of events anchor charts.
  - Use sequence prompts for first, next, and last in a story.
- **Videos**
  - YouTube by KidsClassroom—Nursery Rhymes & Kids Songs
    - Learn Grade 1—Maths—What Comes Before and After
  - YouTube by Teacher Pher
    - Sequencing (What Comes Next?) for Kindergarten

COURSE: Alternate Mathematics 1ST Grade
DOMAIN: Measurement and Data (MD)
CLUSTER: Tell and write time with respect to a clock and a calendar

Standard	Performance Objectives
A.1.MD.3.d Demonstrate an understanding that telling time is the same every day.	**A.1.MD.3.d.1** Recognize that daily activities occur at the same time every day (e.g., lunch at noon, recess, bedtime at night, etc.).

I Can Statements

MOST COMPLEX ⟷ LEAST COMPLEX

A.1.MD.3.d.1 (A) Recognize that daily activities occur at the same time every day (e.g., lunch at noon, recess, bedtime at night, etc.).	**A.1.MD.3.d.1** (B) Recognize two or more daily activities that occur at the same time every day (e.g., lunch at noon, recess, bedtime at night, etc.).	**A.1.MD.3.d.1** (C) Match one activity to one specific time of day (e.g., lunch at noon.).

Real World Connections:

- Eat meals at the same time every day.
- Go to bed at the same time every day.
- Ride the school bus to school at the same time every day.

Vocabulary

- Afternoon
- Evening
- Morning
- Night
- Noon
- Same
- Same time
- Telling time
- Time

Resources:

- **Websites, articles, and other collections**
  - Education.com (education.com)
    - Lesson Plan: Tick, Tick, Tock!
  - Math Genie (mathgenie.com)
    - How to Teach Your Child to Tell Time
  - Khan Academy (khanacademy.org)
    - Practice Telling Time on a Clock
- **Activities**
  - Introduce a clock and explain how we eat lunch at noon, etc.
  - Use time of the day picture sorts, clock clip cards, designing a watch, and other hands-on activities to teach telling time.
  - Create a clock puzzle or a time picture sort.
- **Videos**
  - YouTube by Math & Learning Videos 4 Kids
    - Telling Time—Basics of the Clock 1st Grade
  - Khan Academy (khanacademy.org)
    - Telling Time (labeled clock)
  - Class Ace (Classace.io)
    - Learn How to Tell Time

COURSE: Alternate Mathematics 1ST Grade
DOMAIN: Measurement and Data (MD)
CLUSTER: Represent and interpret data

Standard	Performance Objectives
A.1.MD.4 Organize data into categories by sorting.	**A.1.MD.4.1** Organize data into categories by sorting manipulatives (e.g., colored balls, different colored candy, etc.).

I Can Statements

MOST COMPLEX ⟵ ⟶ LEAST COMPLEX

A.1.MD.4.1 (A) Organize data into categories by sorting manipulatives (e.g., colored balls, different colored candy, etc.).	**A.1.MD.4.1** (B) Model organizing data into categories by sorting manipulatives (e.g., colored balls, different colored candy, etc.).	**A.1.MD.4.1** (C) Select manipulatives for a given category.

Real World Connections:

- Separate toys by attributes.
- Place oranges and apples in separate bowls.
- Sort candy by color.
- Sort clothes for washing.

Vocabulary

- Categories
- Data
- Organize
- Sort

Resources:

- **Websites, articles, and other collections**
  - Education.com (education.com)
    - Categorize It!
    - Sorting Data Lesson Plans
  - Online Math Learning.com (onlinemathlearning.com)
    - Sorting (Grade 1)
- **Activities**
  - Begin graphing skills.
  - Sort buttons by size, shape, color, etc.
- **Videos**
  - YouTube by Math & Learning Videos 4 Kids
    - Organizing and Interpreting Data—1st Grade Math Videos for Kids
  - YouTube by KidsClassroom—Nursery Rhymes & Kids Songs
    - Learn Grade 1—Maths—Sorting and Classifying

COURSE: Alternate Mathematics 1ST Grade
DOMAIN: Measurement and Data (MD)
CLUSTER: Work with money

Standard	Performance Objectives
A.1.MD.5.a-d Using vocalization, sign language, augmentive communication, or assistive technology, identify U.S. coins by name (e.g., penny, nickel, dime, quarter).	**A.1.MD.5.a-d.1** Identify U.S. coins by name (e.g., penny, nickel, dime, quarter).

I Can Statements

MOST COMPLEX ⟵ ⟶ LEAST COMPLEX

A.1.MD.5.a-d.1 (A) Identify U.S. coins by name (e.g., penny, nickel, dime, quarter).	**A.1.MD.5.a-d.1** (B) Match U.S. coins by name (e.g., penny, nickel, dime, quarter).	**A.1.MD.5.a-d.1** (C) Match U.S. coins that have the same value (e.g., penny, nickel, dime, quarter).

Real World Connections:

- Choose coins to use to pay for goods and services.
- Choose coins to use to pay for school lunch.

Vocabulary

- Coins
- Dime
- Dollar
- Half-dollar
- Nickel
- Penny
- Quarter

Resources:

- **Websites, articles, and other collections**
  - Education.com (education.com)
    - Lesson Plan—Show Me the Money: Understanding Value
    - EL Support Lesson—Identifying Coin Values
  - Macche Corporation (gogoshopper.com)
    - Learning the Value of Money: Lesson Plans and Activities
- **Activities**
  - Print out a U.S. coins coloring page and color the coins.
  - Sort coins by size and value.
- **Videos**
  - Lucky Little Learners (luckylittlelearners.com)
    - Math Videos That Teach Money
  - YouTube by Uplift Education
    - April 13—1st Grade—Math Lesson 1—Identifying Coins
  - YouTube by Math & Learning Videos 4 Kids
    - Money First Grade—Penny and Nickel—First Grade Math Video

COURSE: Alternate Mathematics 1ST Grade
DOMAIN: Geometry (G)
CLUSTER: Reason with shapes and their attributes

Standard	Performance Objectives
A.1.G.1 Identify the basic attributes of objects (e.g., color, overall size).	**A.1.G.1.1** Identify the basic attributes of objects (e.g., color, overall size, etc.).

I Can Statements

MOST COMPLEX ⟷ LEAST COMPLEX

A.1.G.1.1 (A) Identify the basic attributes of objects (e.g., color, overall size, etc.).	**A.1.G.1.1** (B) Match a shape to a shape or a color to a color.	**A.1.G.1.1** (C) Recognize a shape or a color.

Real World Connections:

- Draw objects.
- Sort objects.
- Match objects.
- Describe details about objects.

Vocabulary

- Attributes
- Color
- Curved
- Shapes
- Sides
- Size
- Straight

Resources:

- **Websites, articles, and other collections**
  - Etsy (etsy.com)
    - Shape Matching Game
    - Sort by Shapes Worksheet, Busy Book Pages, Preschool Busy Book, Sorting Activity, File Folder Game, Busy Binder, Homeschool Worksheet
  - The Learning Ap (thelearningap.com)
    - Play Online Shape Matching Game for Kids
  - Totschooling by Education.com (totschooling.net)
    - Snowman Shape Matching
  - Powerful Mothering by Nicolette Roux (powerfulmothering.com)
    - Printable Shape Matching and Size Sorting Activity
  - Fun with Mama (funwithmama.com)
    - Sticker Preschool Shapes Matching Activity
- **Activities**
  - Make a picture gram of different shapes and use manipulatives to match the shapes to the pictures.
- **Videos**
  - Mississippi Public
    - Shapes and Their Attributes—Peg + Cat | PBS KIDS Lab
  - YouTube by TenMarks Amazon
    - Basic Shapes and Their Attributes (1.G.1)
  - YouTube by Anna Navarre

- Shape Attributes

COURSE: Alternate Mathematics 1ST Grade
DOMAIN: Geometry (G)
CLUSTER: Reason with shapes and their attributes

Standard	Performance Objectives
A.1.G.2 Sort shapes of the same size and orientation (e.g., circle, square, rectangle, triangle).	**A.1.G.2.1** Sort shapes of the same size and orientation (e.g., circle, square, rectangle, triangle).

I Can Statements

MOST COMPLEX ⟷ LEAST COMPLEX

A.1.G.2.1 (A) Sort shapes of the same size and orientation (e.g., circle, square, rectangle, triangle).	**A.1.G.2.1** (B) Match shapes to similar shapes (e.g., circle, square, rectangle, triangle).	**A.1.G.2.1** (C) Recognize a shape (e.g., circle, square, rectangle, triangle).

Real World Connections:

- Recognize different shapes of equipment in the park to play on.
- Compare different shapes you observe in real life.
- Draw pictures of shapes.
- Sort different shapes.

Vocabulary

- Attribute
- Circle
- Color
- Rectangle
- Shape
- Size
- Sort
- Square
- Triangle

Resources:

- **Websites, articles, and other collections**
  - SparkleBox (sparklebox.co.uk)
    - 2D Shape Attributes Chart Worksheets
  - Superstar Worksheets (superstarworksheets.com)
    - Shape Attributes Worksheets
  - Education.com (education.com)
    - Worksheet Shape Coloring
  - Pre-K Pages by Venessa Levin (Pre-kpages.com)
    - Shapes Activities for Preschoolers
  - Pocket of Preschool (pocketofpreschool.com)
    - 2D Shape Activities for Preschool, Pre-K, and Kindergarten
  - Kindergarten Works (kindergartenworks.com)
    - 21 Creative Ways to Teach 2D Shapes in Kindergarten
  - Flashcards for Kindergarten (flashcardsforkindergarten.com)
    - Shape Flashcards
  - Printable.com(printablee.com)
    - Shape Worksheets Printable Houses
  - SplashLearn by Studypad, Inc. (splashlearn.com)
    - Attribute—Definition with Examples
- **Activities**

- Have one student read the attributes and draw the shape, and the other students have to guess the specific name. When they guess the name, have them say they knew that it was a _(name)_ because they heard/saw it had _(attribute).
- Use different kinds of card games and have students match the cards by attribute.

- **Videos**
  - YouTube by Boodle Learning
    - 2D Shapes and Their Attributes—1st Grade Math (1.GA.1)
  - YouTube by read'n'bloom
    - 1st Grade: Grouping Shapes—Attributes
  - YouTube by Alma Munguia
    - Distinguishing and Non-Distinguishing Features

COURSE: Alternate Mathematics 1ST Grade
DOMAIN: Geometry (G)
CLUSTER: Reason with shapes and their attributes

Standard	Performance Objectives
A.1.G.3 Put two pieces together to make a shape that relates to the whole (e.g., two semicircles to make a circle, two squares to make a rectangle).	**A.1.G.3.1** Put together two pieces to make a shape that relates to the whole (e.g., two semicircles to make a circle, two squares to make a rectangle, etc.).

I Can Statements

MOST COMPLEX ⟷ LEAST COMPLEX

A.1.G.3.1 (A) Put together two pieces to make a shape that relates to the whole (e.g., two semicircles to make a circle, two squares to make a rectangle, etc.).	**A.1.G.3.1** (B) Match two pieces of a shape.	**A.1.G.3.1** (C) Given an inset puzzle or technology equivalent, insert a shape.

Real World Connections:

- Draw shapes with different attributes to show how parts relate to a whole.
- Observe how various street signs have different attributes.
- Observe designs in different types of construction.

Vocabulary

- Attributes
- Circle
- Color
- Rectangle
- Size
- Square
- Triangle

Resources:

- **Websites, articles, and other collections**
  - Math 4 Texas Education Service Center Region 11 (Math4texas.org)
    - Two-Dimensional Shapes
  - Math Worksheets Land (mathworksheetsland.com)
    - 2 Dimensional Shapes Step-by-Step Lesson
  - Math Worksheets 4 Kids
    - Composing and Decomposing 2D Shapes Worksheets
  - Parentingscience.com
    - Tangrams for Kids: Educational Tips and a Printable Tangram Template
  - Teachers Pay Teachers (teacherspayteachers.com)—subscription required
    - Two-Dimensional Shapes: Combining to Make New Shapes
- **Activities**
  - Use laminated large shapes and match laminated half shapes to create new shapes.
  - Use small shapes for the "I have, who has" game. Allow students to pair up to make a new shape.
- **Videos**
  - YouTube by Lampofilm
    - Make New Figures—Two Dimensional / 2D Shapes from Learning Adventures
  - Khan Academy (khanacademy.org)
    - Composing Shapes

- Schilling Farms Elementary School (schillingfarmses.colliervilleschools.org)
  - Video Gallery—Module 5 Lesson 5- Composing and Decomposing 2D Shapes

COURSE: Alternate Mathematics 2nd Grade
DOMAIN: Operations and Algebraic Thinking (OA)
CLUSTER: Represent and solve problems involving addition and subtraction and Add and subtract within 20

No alternate standard for 2.OA.1-2

COURSE: Alternate Mathematics 2nd Grade
DOMAIN: Operations and Algebraic Thinking (OA)
CLUSTER: Work with equal groups of objects to gain foundations for multiplication

Standard	Performance Objectives
A.2.OA.3 Equally distribute even numbers of objects between two groups.	**A.2.OA.3.1** Equally distribute even numbers of objects between two groups.

I Can Statements

MOST COMPLEX ⟵ ⟶ LEAST COMPLEX

A.2.OA.3.1 (A) Equally distribute even numbers of objects between two groups.	**A.2.OA.3.1** (B) Using manipulatives, sort objects into groups to match a picture representation.	**A.2.OA.3.1** (C) Create two groups.

Real World Connections:

- Give each student two slices of pizza.
- Share at a tea party: Divide crackers into equal portions.

Vocabulary

- Distribute
- Even number
- Equal
- Equally
- Groups

Resources:

- **Websites, articles, and other collections**
  - SplashLearn by Studypad, Inc.
    - Equal Shares—Definition with Examples
  - Parenting for the Science-Minded by Gwen Dewar, Ph.D. (parentingscience.com)
    - Preschool Number Activities: How do you introduce numbers to preschoolers?
  - Parent Homework Help by Laurie Laurendeau (parent-homework-help.com)
    - Beginning Division: Concept of Equal Sharing
  - PBS Kids (pbskids.org)
    - Fair Sharing
- **Activities**
  - Match items one-to-one to learn how we prove that two quantities are equal. Two sets contain the same number of items if the items in each set can be matched, one-to-one, with no items left over.
  - Present students with a small set of tokens arranged on a table or floor. Ask them to create an identical copy of this set using additional tokens. When finished, make a count of the items in each set—the original and the copy.
  - Present students with two sets at once. Make sure each set contains the same number of tokens but arranged in different spatial patterns. Have the student reproduce both of these sets, then do an end count to confirm that all sets are equal.
- **Videos**
  - YouTube by Learningvids4kids
    - How to Share Equally—Introduction to Division

- Khan Academy (khanacademy.org)
  - Equal Groups
- YouTube by Ramy Melhem
  - Dividing by Sharing

COURSE: Alternate Mathematics 2nd Grade
DOMAIN: Operations and Algebraic Thinking (OA)
CLUSTER: Work with equal groups of objects to gain foundations for multiplication

Standard	Performance Objectives
A.2.OA.4 Use repeated addition to find the sum of objects arranged in equal groups up to 10.	**A.2.OA.4.1** Use repeated addition to find the sum of objects arranged in equal groups up to 10.

I Can Statements

MOST COMPLEX ⟷ LEAST COMPLEX

A.2.OA.4.1 (A) Use repeated addition to find the sum of objects arranged in equal groups up to 10.	**A.2.OA.4.1** (B) Using manipulatives, match objects to represent repeated addition up to 10 (e.g., 2+2+2+2+2=10).	**A.2.OA.4.1** (C) Using manipulatives, match objects to picture representations of repeated addition up to six (e.g., 2+2+2=6).

Real World Connections:

- Find the number of muffins in a tin, eggs in a carton, etc.
- Find how many legs a cat has.
- Show the total number of chocolate chips if there are two cookies, each having three chocolate chips

Vocabulary

- Add
- Equal
- Same
- Sum

Resources:

- **Websites, articles, and other collections**
  - A+ Teaching Resources (aplusteachingresources.com.au)
    - Top Tips for Teaching Repeated Addition
  - LearnZillion (learnzillion.com)
    - Use repeated addition to find the total number of objects in an array.
- **Activities**
  - Use addition to find the total number of objects arranged in rectangular arrays with up to 5 rows and up to 2 columns.
  - Use math drawings to represent equal groups and relate to repeated addition.
- **Videos**
  - YouTube by JoAnn's School
    - 2nd Grade Math 3.11, Repeated Addition of Equal Groups
  - YouTube by Math Songs by NUMBEROCK
    - Equal Groups Multiplication Song | Repeated Addition Using Arrays

COURSE: Alternate Mathematics 2nd Grade
DOMAIN: Number and Operations in Base Ten (NBT)
CLUSTER: Understand place value

Standard	Performance Objectives
A.2.NBT.1 Represent numbers up to 30 with sets of tens and ones, using objects in columns or arrays.	**A.2.NBT.1.1** Represent numbers up to 30 with sets of tens and ones, using objects in columns or arrays.

I Can Statements

MOST COMPLEX ⟷ LEAST COMPLEX

A.2.NBT.1.1 (A) Represent numbers up to 30 with sets of tens and ones, using objects in columns or arrays.	**A.2.NBT.1.1** (B) Represent numbers up to 20 with sets of tens and ones, using objects in columns or arrays.	**A.2.NBT.1.1** (C) Demonstrate one-to-one correspondence up to 10.

Real World Connections:

- Prepare for multiplication.
- Use arrays to show different ways to multiply and get the same solution.

Vocabulary

- Arrays
- Columns
- Representation
- Sets

Resources:

- **Websites, articles, and other collections**
  - NRICH in the Millennium Mathematics Project, University of Cambridge (nrich.maths.org)
    - Multiplication Series: Number Arrays
  - Engage NY, New York State Education Department (engageny.org)
    - New York State Common Core Mathematics Curriculum Grade 2—Module 4
  - Manitoba Education (edu.gov.mb.ca)
    - Grade 2 Mathematics—Number
  - Common Core Sheets (commoncoresheets.com)
    - Number and Operations in Base-10
  - Math Geek Mama (mathgeekmama.com)
    - How to Teach Multiplication & Division with LEGO Bricks
- **Activities**
  - Form arrays by arranging a set of objects into rows and columns. Each column must contain the same number of objects as the other columns, and each row must contain the same number as the other rows. Use the array to represent number sentences.
- **Videos**
  - Khan Academy (khanacademy.org)
    - Multiplication with Arrays
  - YouTube by JoAnn's School
    - 3rd Grade Math 3.5, Model Multiplication with Arrays
  - YouTube by Rachel Bishop
    - 2nd Grade Arrays & Repeated Addition

- YouTube by Kids Academy
  - Arrays for Kids | Math for 2nd Grade

COURSE: Alternate Mathematics 2nd Grade
DOMAIN: Number and Operations in Base Ten (NBT)
CLUSTER: Understand place value

Standard	Performance Objectives
A.2.NBT.2.a Using vocalization, sign language, augmentive communication, or assistive technology, count from 1 to 30 (count with meaning; cardinality).	**A.2.NBT.2.a.1** Count from 1 to 30 (count with meaning; cardinality).

I Can Statements

MOST COMPLEX ⟷ LEAST COMPLEX

A.2.NBT.2.a.1 (A) Count from 1 to 30 (count with meaning; cardinality).	**A.2.NBT.2.a.1** (B) Count from 1 to 20 (count with meaning; cardinality).	**A.2.NBT.2.a.1** (C) Count from 1 to 10 (count with meaning; cardinality).

Real World Connections:

- Count objects.
- Count money.
- Count in order.
- Increase mathematical reasoning.
- Understand place value connection. Think about the numbers 11-19 as "10 and some ones" and focus on how writing numbers correctly will help students better understand this connection.

Vocabulary

- Cardinality
- Count

Resources:

- **Websites, articles, and other collections**
  - Tap into Teen Minds by Kyle Pearce (tapintoteenminds.com)
    - Counting Principles—Counting and Cardinality
  - Matific Digital Math Platform (matific.com)
    - Counting and Cardinality Kindergarten Activities & Worksheets
  - Online Math Learning Resources (OnlineMathLearning.com)
    - Counting and Cardinality
- **Activities**
  - Help students build knowledge of the place value of numbers to 30 by giving students manipulatives to work with and allow them to prove how they got an answer to help them understand how they got the answer. Ask them questions to get them to use their knowledge to understand if the teacher added more or just moved the magnets around.
- **Videos**
  - Keeping My Kiddo Busy (keepingmykiddobusy.com)
    - Counting and Cardinality Freebies
  - Mississippi Public Broadcasting Learning Media (mpb.pbslearningmedia.org)
    - Counting and Cardinality
  - YouTube by Kids Games TV

- Todo Math—Counting and Cardinality—Math Learning Games to Suit All Children

COURSE: Alternate Mathematics 2nd Grade
DOMAIN: Number and Operations in Base Ten (NBT)
CLUSTER: Understand place value

Standard	Performance Objectives
A.2.NBT.2.b Using vocalization, sign language, augmentive communication, or assistive technology, name the next number in a sequence between 1 and 10.	**A.2.NBT.2.b.1** Name the next number in a sequence between 1 and 10.

I Can Statements

MOST COMPLEX ⟵ ⟶ LEAST COMPLEX

A.2.NBT.2.b.1 (A) Name the next number in a sequence between 1 and 10.	**A.2.NBT.2.b.1** (B) Name the next number in a sequence between 1 and 5.	**A.2.NBT.2.b.1** (C) Select the next number in a sequence between 1 and 5.

Real World Connections:

- Count objects found in nature.
- Find patterns to predict future events.

Vocabulary

- Name
- Next
- Number
- Sequence

Resources:

- **Websites, articles, and other collections**
  - Twinkl (twinkl.com)
    - Counting and Cardinality
  - Technology Curriculum by Brittany Washburn (K5technologycurriculum.com)
    - Counting and Cardinality
  - Tap into Teen Minds by Kyle Pearce (tapintoteenminds.com)
    - Counting Principles—Counting and Cardinality
  - Math is Fun by Rod Pierce (Mathsisfun.com)
    - Sequences
  - Matific Digital Math Platform (matific.com)
    - Counting and Cardinality Kindergarten Activities & Worksheets
  - Online Math Learning Resources (OnlineMathLearning.com)
    - Counting and Cardinality
  - Worksheet Fun (worksheetfun.com)
    - Count and Match—Numbers 1-10—Six Worksheets
  - Justifying Play-Based Approaches to Learning by Kate Johnson (justifyingplaybased.weebly.com)
    - 1:1 correspondence and its importance in numeracy
  - New Zealand Ministry of Education (Nzmaths.co.nz)
    - Number Sequence Activities
  - Khan Academy (khanacademy.org)
    - Intro to Arithmetic Sequences

- Mathigon (mathigon.org)
  - Sequences and Patterns
- HappyNumbers.com (happynumbers.com)
  - 4 Steps Toward Number Sequence Automaticity
- The Story of Mathematics by Luke Mastin (storyofmathematics.com)
  - Number Sequence—Explanation & Examples

- **Activities**
  - Provide students with two sets of standard dot cards 1-10. Use a set of dot cards 1-10 and an extra 1, 2, and 3. The extra cards will be used to practice "counting on." Begin with two cards (e.g., a 5 and a 2). Identify the cards with the students. Turn over the larger card and leave the "count on" card face up. Model how to "count on."
  - Match objects to numerals on flash cards.
  - Use a calendar to name the next number in a sequence (e.g., Mondays are 1, 8, and 15 and Tuesdays are 2, 9, 16).
  - Use a tape measure to practice counting backwards and forwards between any two numbers. For example, start counting at two and stop at 10. Follow the numbers on the tape measure as you count together.
  - Play find the hidden numbers 1 to 10 using worksheets.
- **Videos**
  - Maths 4 All (mathsfourall.com)
    - Cardinality—Giving Meaning to Numbers
  - Keeping My Kiddo Busy (keepingmykiddobusy.com)
    - Counting and Cardinality Freebies
  - Mississippi Public Broadcasting Learning Media (mpb.pbslearningmedia.org)
    - Counting and Cardinality
  - YouTube by Kids Games TV
    - Todo Math—Counting and Cardinality—Math Learning Games to Suit All Children
  - Play Within Early Years Classrooms (playingwithlearning.weebly.com)
    - What is 1:1 Correspondence?
  - FirstPath Autism (firstpathautism.com)
    - 1:1 Correspondence: Counting Objects
  - Khan Academy (khanacademy.org)
    - Finding Patterns in Numbers

COURSE: Alternate Mathematics 2nd Grade
DOMAIN: Number and Operations in Base Ten (NBT)
CLUSTER: Understand place value

Standard	Performance Objectives
A.2.NBT.3 Identify numerals 1 to 30.	**A.2.NBT.3.1** Identify numerals 1 to 30.

I Can Statements

MOST COMPLEX ⟷ LEAST COMPLEX

A.2.NBT.3.1 (A) Identify numerals 1 to 30.	**A.2.NBT.3.1** (B) Identify numerals 1 to 20.	**A.2.NBT.3.1** (C) Identify numerals 1 to 10.

Real World Connections:

- Recognize numbers of things in nature (e.g., the number of sticks in a row, the number of rocks in a pile, the number of petals on a flower, etc.).
- Tell time.
- Read directions and mileage.

Vocabulary

- Identify
- Number
- Numerals

Resources:

- **Websites, articles, and other collections**
  - Math Coach's Corner by Donna Boucher (mathcoachscomer.com)
    - Online Activities for Number Recognition to 20
  - A+ Teaching Resources (aplusteachingresources.com.au)
    - Teaching Number Recognition Activities to Preschoolers
  - SplashLearn by Studypad, Inc. (splashlearn.com)
    - Number Games
  - HeidiSongs.com (heidisongs.blogspot.com)
    - Find the Number! 1-30 Worksheets
  - Study.com (study.com)
    - Numbers 1-30: Lesson for Kids
  - Worksheet Fun (Worksheetfun.com)
    - Worksheets for Working with Numbers 1-30
  - New Zealand Ministry of Education (Nzmaths.co.nz)
    - Making Ten
  - LearnZillion (learnzillion.com)
    - Understanding ten ones make a ten
  - Little Minds at Work by Tara West (littlemindsatwork.org)
    - Ways to Make Ten!
- **Activities**
  - Use color by number printables.
  - Write the numbers 1-30 in the bottom of 30 paper cupcake holders. Have students count out the exact number of candy corns to represent

the number and put them in each cup.
    - Produce the correct number when asked. For example, correctly identify the date given on a calendar. Given a numbers chart and asked to identify a number, correctly identify the number.
    - Play the game "I Spy" with numbers around the room.
- **Videos**
    - YouTube by Farmees—Nursery Rhymes and Kids Songs
        - Numbers Song 1 to 30 | 3D Rhymes | Learning Number for Kids by Farmees
    - YouTube by Fin Kids English
        - Count to 30 | Learn Numbers 1 to 30 | Learn Counting Numbers | ESL for Kids
    - The Brown Bag Teacher (brownbagteacher.com)
        - Making 10 Centers, Mini-Lessons, & Online Tools

COURSE: Alternate Mathematics 2nd Grade
DOMAIN: Number and Operations in Base Ten (NBT)
CLUSTER: Understand place value

Standard	Performance Objectives
A.2.NBT.4 Using vocalization, sign language, augmentive communication, or assistive technology, compare sets of objects and numbers using appropriate vocabulary (e.g., more, less, equal).	**A.2.NBT.4.1** Compare sets of objects and numbers using appropriate vocabulary (e.g., more, less, or equal).

I Can Statements

MOST COMPLEX ⟷ LEAST COMPLEX

A.2.NBT.4.1 (A) Compare sets of objects and numbers using appropriate vocabulary (e.g., more, less, or equal).	**A.2.NBT.4.1** (B) Compare sets of objects and numbers using appropriate vocabulary (more or less).	**A.2.NBT.4.1** (C) Match equal groups of objects.

Real World Connections:

- Match and order objects.
- Sort money and compare sets of coins to number representations.
- Given sets of different objects, indicate the sets that are equal.

Vocabulary

- Compare
- Equal
- Less
- More
- Numbers
- Objects
- Sets

Resources:

- **Websites, articles, and other collections**
  - Education.com (education.com)
    - Lesson Plan: More, Less, or Equal: Comparing Quantities
  - Maths with Mum (mathswithmum.com)
    - Teaching More or Less Than for Comparing Quantities
  - Virginia Department of Education (doe.virginia.gov)
    - Comparing Numbers—a Co-Teaching Lesson Plan
  - BrainPOP by FWD Media Inc. (educators.brainpop.com)
    - Comparing Numbers Activities for Kids
  - CPALMS, Florida State University (cpalms..org)
    - Comparing Numbers: Between 1 and 10
  -
- **Activities**
  - Given two sets of objects, a box with 10 and a box of nine, identify that the box with 10 has one more and associate the numeral.
  - Given two reward strips determine which strip has more reward stickers on it.
  - Given two groups of three red counters, determine that they are equal.
  - Given a four and a six, determine that six is more than four.
  - Given sets of two bears and two apples, be able to indicate that the sets are equal.
  - Given two sets, be able to indicate the sets that are equal.

- **Videos**
  - YouTube by Periwinkle
    - More and Less Objects—Elementary Math Concept Video for Kids
  - Nagwa Limited (NAGWA.com)
    - Question Video: Comparing Sets—Greater Than, Less Than or Equal To

COURSE: Alternate Mathematics 2nd Grade
DOMAIN: Number and Operations in Base Ten (NBT)
CLUSTER: Use place value understanding and properties of operations to add and subtract

Standard	Performance Objectives
A.2.NBT.5.a Identify the meaning of the "+" sign (i.e., combine, plus, add), "–" sign (i.e., separate, subtract, take), and the "=" sign (equal).	**A.2.NBT.5.a.1** Identify the meaning of the "+" sign (i.e., combine, plus, add), "–" sign (i.e., separate, subtract, take), and the "=" sign (equal).

I Can Statements

MOST COMPLEX ⟷ LEAST COMPLEX

A.2.NBT.5.a.1 (A) Identify the meaning of the "+" sign (i.e., combine, plus, add), "–" sign (i.e., separate, subtract, take), and the "=" sign (equal).	**A.2.NBT.5.a.1** (B) Identify the meaning of the "+" sign (i.e., combine, plus, add) and the "–" sign (i.e., separate, subtract, take).	**A.2.NBT.5.a.1** (C) Identify the meaning of the "=" sign (equal).

Real World Connections:

- Given three groups of objects representing a subtraction equation, identify the correct sign to use.
- Given a subtraction equation, place the minus sign and the equal sign in the correct places.
- Solve addition and subtraction word problems.

Vocabulary

- Add
- Equal
- Subtract

Resources:

- **Websites, articles, and other collections**
  - Online Math Learning Resources (OnlineMathLearning.com)
    - The Equal Sign
  - mathsteacher.com Pty Ltd. (mathsteacher.com.au)
    - Basic Operations
- **Activities**
  - Put an equal number of chairs at two tables.
  - When presented with two groups of items, indicate if they have the same quantity. "Are they equal?"
  - While playing a game with dice, recognize when the same quantity is rolled on each die.
  - Make two groups of objects-one having two objects and one having one object-and have students make the groups equal. At the request of the teacher, add one more object to make the groups equal after the teacher makes two groups of objects, one group having two objects and one group only one object (e.g., Add one more chair at the request of the teacher when there are two students and one chair.).
  - Use 10 frames to add beans to a quantity to make one more in order to match the teacher model.
  - Add one more student to a group to play a game or complete a cooperative group with teacher prompts.
  - When asked to find the same item as shown somewhere else in the room, bring two of the same items together to make a bigger set.
  - Point to the plus or equal sign in an equation.
  - Given three groups of objects (e.g., two addends and the sum), identify the "+" sign.
  - When shown a group of symbols, point to/identify the plus/equal sign when prompted by the teacher.
  - When shown plus/equal signs taped on the floor, indicate the sign when prompted by the teacher.

- When shown plus/equal signs drawn on the board, indicate the sign when prompted by the teacher.
- When given a cue, match the plus sign (e.g., The teacher shows a "+" sign and an "=" then points to the "+" sign. The teacher says, "This is a plus sign. Pick the one that is the same.").
- When given a cue, match the equal sign (e.g., The teacher shows a "+" sign and an "=" then points to the "=" sign. The teacher says, "This is an equal sign. Pick the one that is the same.").
- When given two cards with plus/equal signs and one distracter, match the appropriate sign.

- **Videos**
  - YouTube by Scratch Garden
    - Adding & Subtracting | Mini Math Movies
  - YouTube by Boddle Learning
    - Understanding the Equal Sign + Addition and Subtraction Equations—1st Grade (1.OA.7)

COURSE: Alternate Mathematics 2nd Grade
DOMAIN: Number and Operations in Base Ten (NBT)
CLUSTER: Use place value understanding and properties of operations to add and subtract

Standard	Performance Objectives
A.2.NBT.5.b Using concrete examples, compose and decompose numbers up to 10 in more than one way.	**A.2.NBT.5.b.1** Using concrete examples, add and subtract numbers up to 10 in more than one way.

I Can Statements

MOST COMPLEX ⟷ LEAST COMPLEX

A.2.NBT.5.b.1 (A) Using concrete examples, add and subtract numbers up to 10 in more than one way.	**A.2.NBT.5.b.1** (B) Using concrete examples, add and subtract up to five in at least one way.	**A.2.NBT.5.b.1** (C) Using concrete examples, show that objects can be put together or taken apart.

Real World Connections:

- Understand that numbers one through 10 can be composed and decomposed in more than one way.
- Model simple joining and separating situations with sets of objects.
- Use objects or drawings to show the pairs of numbers that make 10.
- Use concrete objects, such as 10-frames, base-10 blocks, bundled sticks, the open number line, etc., and sketch pictures of the objects to represent composing—or putting together—and decomposing—or the breaking apart—of numbers up to 10.
- Use various combinations of ones and explain the sums using visual models.

Vocabulary

- Add
- Compare
- Decompose
- Subtract

Resources:

- **Websites, articles, and other collections**
  - Math 4 Texas Education Service Center Region 11 (Math4texas.org)
    - Composing and Decomposing Numbers
    - Concrete & Pictorial Models to Compose & Decompose Numbers to 1,200
  - Math Coach's Corner by Donna Boucher (mathcoachscomer.com)
    - Flexibility with Place Value
  - Matific Digital Math Platform (matific.com)
    - Use concrete and pictorial models to compose and decompose numbers—Grade 2 Activities & Worksheets
  - Alaska Staff Development Network (aasdn.org)
    - Developing Number Sense in K-2 Webinar #2: Composing & Decomposing Numbers
  - San Francisco Unified School District Mathematics (sfusdmath.org)
    - Kindergarten Unit K.3: Compose and Decompose Numbers Up to Ten
- **Activities**
  - Given a group of four counting bears on a circle mat, separate them into two groups.

- Given a triangle graphic organizer with the number 10 in the tip, place numbers in the base angles to show the decomposition of 10.
- Given pictures of seven grizzly bears, identify one group of three and one group of four as decomposing seven, and one group of two and one group of five as decomposing seven.
- When shown the number five, indicate that it is made up of one and four or two and three.
- Shown groups of dots, recognize the quantity automatically.
- Given eight bears in a row, place a straw and make a group of four and a group of four to show it makes eight.
- Given two groups of bears totaling 10, put them together to create one group.
- Divide (decompose) 10 counting bears into two groups (e.g., eight and two, five and five, four and six, etc.) in at least two ways, then show with blocks that the total of the two groups is 10 (composed).
- Shown groups of dots for an amount up to 10, recognize, without counting, the quantity it represents.
- Use sets of objects to model simple joining and separating situations.
- Use objects or drawings to show the pairs of numbers that make 10.

- **Videos**
  - YouTube by WACS Parent Education
    - Composing & Decomposing Numbers, Place Value—Kindergarten
  - YouTube by Oxford Owl—Learning at Home
    - What is composing and decomposing numbers?
  - YouTube by Build Math Minds
    - Composing and Decomposing Numbers

COURSE: Alternate Mathematics 2nd Grade
DOMAIN: Number and Operations in Base Ten (NBT)
CLUSTER: Use place value understanding and properties of operations to add and subtract

Standard	Performance Objectives
A.2.NBT.6-7 Use objects, representations, and numbers (0-20) to add and subtract.	**A.2.NBT.6-7.1** Use objects, representations, and numbers (0-20) to add and subtract.

I Can Statements

MOST COMPLEX ⟵ ⟶ LEAST COMPLEX

A.2.NBT.6-7.1 (A) Use objects, representations, and numbers (0-20) to add and subtract.	**A.2.NBT.6-7.1** (B) Use objects, representations, and numbers (0-20) to subtract.	**A.2.NBT.6-7.1** (C) Use objects, representations, and numbers (0-20) to add.

Real World Connections:

- Help students understand each number as a quantity by practicing the different ways to show a number
- Sound out the countdown to the launch of a space craft.
- Answer how many by counting up to 20 objects.
- Compare two numbers between one and 20.
- Use counting strategies to solve word problems involving comparing, addition, and subtraction.

Vocabulary

- Add
- Objects
- Representation
- Subtract

Resources:

- **Websites, articles, and other collections**
  - Lincoln Public Schools, Lincoln, Rhode Island (central.lincolnps.org)
    - Kindergarten Mathematics, Quarter 4, Unit 4.1 Developing Number Sense Through Counting and Comparison
  - Understood for All, Inc. (understood.org)
    - Teaching Strategies—Number Representations: An Evidence-Based Math Strategy
- **Activities**
  - Count out the correct number of objects when given a number from one to 20.
  - Students begin a rote forward counting sequence from a number other than one. Thus, given the number four, the student would count, "4, 5, 6, 7 ..." This activity focuses on the rote number sequence zero to 20.
  - Represent addition and subtraction with objects, fingers, drawings (need not show details but show the mathematics in the problem), acting out situations in conjunction with verbal explanations, expressions, or equations.
  - Use counting to solve the four problem types by acting out the situation and/or with objects, fingers, and drawings.
- **Videos**
  - YouTube by Enuma
    - Todo Math: Learning and Fun, Hand in Hand
  - YouTube by Math & Learning Videos 4 Kids
    - Addition Subtraction Under 20—1st Grade Math Videos for Kids
  - Khan Academy (khanacademy.org)

- Making 5
- Goshen Schools Math Curriculum (goshenschools.instructure.com)
  - 1.OA.B.3 (associative property) and 1.OA.B.4 Full Standard: Create a real-world problem to represent a given equation involving addition and subtraction within 20.
- YouTube by Todo Math Stories
  - Addition for Kindergarten

No alternate standard for 2.NBT.8 - 2.NBT.9

COURSE: Alternate Mathematics 2nd Grade
DOMAIN: Measurement and Data (MD)
CLUSTER: Relate addition and subtraction to length

Standard	Performance Objectives
A.2.MD.1 Measure the length of objects using non-standard units.	**A.2.MD.1.1** Measure the length of objects using non-standard units (e.g., paper clips, a piece of string, etc.).

I Can Statements

MOST COMPLEX ⟷ LEAST COMPLEX

A.2.MD.1.1 (A) Measure the length of objects using non-standard units (e.g., paper clips, a piece of string, etc.).	**A.2.MD.1.1** (B) Count the number of non-standard tool units of measure when given the beginning point (e.g., five paper clips, two pieces of string, etc.).	**A.2.MD.1.1** (C) Measure from a beginning point using a non-standard tool (e.g., paper clips, a piece of string, etc.).

Real World Connections:

- Use stack blocks or magna tiles to measure height.
- Use rope to measure a person's waist.
- Compare grocery items you plan to purchase using non-standard units of measure.
- Figure out how many steps it is from your front door to the school bus stop.

Vocabulary

- Length
- Measure
- Non-standard unit
- Non-standard tool

Resources:

- **Websites, articles, and other collections**
  - LearnZillion (learnzillion.com)
    - Measuring Lengths with Non-Standard Units
  - A+ Teaching Resources (aplusteachingresources.com.au)
    - Non-Standard Measurement Activities (Our Secret Weapon!)
  - Education.com (education.com)
    - Exploring Non-Standard Units of Length
- **Activities**
  - Explain to the students that a parent or guardian wants to buy some storage boxes that will hold a certain item. Ask students to figure out the length that the boxes need to be. An example sentence frame would be "You can use _____ to figure out the length that the boxes need to be." Allow students to share ideas. Explain to the students that they are measuring using non-standard units of length and that this means they will be using objects to measure things instead of rulers or a tape measure.
  - Encourage students to describe the height of a peer using non-standard units of length and frame sentences to support.
- **Videos**
  - YouTube by Periwinkle
    - Length Uniform Non-Standard Units | Maths Concepts for Kids | Maths Grade 2
  - YouTube by TenMarks Amazon

COURSE: Alternate Mathematics 2nd Grade
DOMAIN: Measurement and Data (MD)
CLUSTER: Relate addition and subtraction to length

- Measuring with Non-Standard Units (1.MD.2)

No alternate standard for 2.MD.2

COURSE: Alternate Mathematics 2nd Grade
DOMAIN: Measurement and Data (MD)
CLUSTER: Relate addition and subtraction to length

Standard	Performance Objectives
A.2.MD.3-4 Order by length using non-standard units.	**A.2.MD.3-4.1** Order by length using non-standard units (e.g., paper clips, a piece of string, etc.).

I Can Statements

MOST COMPLEX ⟷ LEAST COMPLEX

A.2.MD.3-4.1 (A) Order by length using non-standard units (e.g., paper clips, a piece of string, etc.).	**A.2.MD.3-4.1** (B) Compare two non-standard units of length and determine which is shorter and which is longer.	**A.2.MD.3-4.1** (C) Compare an item to a model that is shorter or longer.

Real World Connections:

- Compare the height of family members and friends.
- Build something with building blocks and compare it to someone else's using non-standard units.
- Compare who can stack cards the highest

Vocabulary

- Length
- Longer
- Measure
- Model
- Non-standard unit
- Order
- Shorter

Resources:

- **Websites, articles, and other collections**
  - LearnZillion (learnzillion.com)
    - Measuring Lengths with Non-Standard Units—Grade 1, Unit 16
  - Education.com (education.com)
    - Worksheet—Glossary: Exploring Non-Standard Units of Length
- **Activities**
  - Compare the height of children by building a Magna-Tiles tower.
  - Estimate length with a giant sneaker or tennis shoe.
- **Videos**
  - Lucky Little Learners (luckylittlelearners.com)
    - Videos That Teach Kids Measurement
  - YouTube by MatholiaChannel
    - Measuring Length (Non-Standard Units)
  - YouTube by Periwinkle
    - Length Uniform Non-Standard Units | Math Concepts for Kids | Math Grade 2

COURSE: Alternate Mathematics 2nd Grade
DOMAIN: Measurement and Data (MD)
CLUSTER: Relate addition and subtraction to length

Standard	Performance Objectives
A.2.MD.5 Increase or decrease length by adding or subtracting unit(s).	**A.2.MD.5.1** Increase or decrease length by adding or subtracting unit(s) using non-standard units.

I Can Statements

MOST COMPLEX ⟷ LEAST COMPLEX

A.2.MD.5.1 (A) Increase or decrease length by adding or subtracting unit(s) using non-standard units.	**A.2.MD.5.1** (B) Decrease length by subtracting unit(s) using non-standard units.	**A.2.MD.5.1** (C) Increase length by adding unit(s) using non-standard units.

Real World Connections:

- Measure clothing when sewing to shorten or lengthen clothing.
- Select boxes to hold objects of a certain lengths.

Vocabulary

- Add
- Decrease
- Increase
- Subtract

Resources:

- **Websites, articles, and other collections**
  - Google.com (google.com)
    - Non-standard units of measurements worksheets
  - Math-Only-Math.com (math-only-math.com)
    - Addition and Subtraction of Measuring Length
- **Activities**
  - Compare two pencils that have been sharpened to different lengths. Measure each pencil, subtract to find out how much longer one is than the other, and add the two lengths together to find the combined length of the pencils.
  - Use non-standard units of measure worksheets to practice measuring and adding or subtracting units.
- **Videos**
  - YouTube by Periwinkle
    - Length Uniform Non-Standard Units | Math Concepts for Kids | Math Grade 2
  - YouTube by Kids Academy
    - Comparing & Measuring Lengths | Math for 2nd Grade

COURSE: Alternate Mathematics 2nd Grade
DOMAIN: Measurement and Data (MD)
CLUSTER: Relate addition and subtraction to length

Standard	Performance Objectives
A.2.MD.6 Use a number line to add one more or one less unit of length.	**A.2.MD.6.1** Use a number line to add one more or one less unit of length.

I Can Statements

MOST COMPLEX ⟷ LEAST COMPLEX

A.2.MD.6.1 (A) Use a number line to add one more or one less unit of length.	**A.2.MD.6.1** (B) Indicate one more number on a number line and track left to right.	**A.2.MD.6.1** (C) Count forward on a number line showing units of length.

Real World Connections:

- Measure objects using a number line to compare lengths of different objects.
- Measure temperature.

Vocabulary

- Add
- Count forward
- Number line
- Subtract
- Track left
- Track right

Resources:

- **Websites, articles, and other collections**
  - Elementary Nest, Jessica Tobin (Elementarynest.com)
    - How to Teach Number Lines
  - Wiley & Sons, Inc. (dummies.com)
    - The Number Line and Addition, Subtraction, Multiplication, and Division
- **Activities**
  - Paint a number line.
  - Use chalk on pavement to draw a number line.
  - Use a clothesline to clip numbers on in correct order.
- **Videos**
  - Nagwa Limited (nagwa.com)
    - Question Video: Choosing a Suitable Unit for the Length of an Object
  - YouTube by Periwinkle
    - Learn Addition Using Number Line | Elementary Math Concept for Kids | Addition | Part 4
  - YouTube by Math & Learning Videos 4 Kids
    - Number Line Word Problem—1st and 2nd Grade

COURSE: Alternate Mathematics 2nd Grade
DOMAIN: Measurement and Data (MD)
CLUSTER: Work with time with respect to a clock and a calendar, and work with money

Standard	Performance Objectives
A.2.MD.7 Identify on a digital clock the hour that matches a routine activity.	**A.2.MD.7.1** Identify on a digital clock the hour that matches a routine activity (i.e., lunchtime is 12 noon).

I Can Statements

MOST COMPLEX ← → LEAST COMPLEX

A.2.MD.7.1 (A) Identify on a digital clock the hour that matches a routine activity (i.e., lunchtime is 12 noon).	**A.2.MD.7.1** (B) Match the time on a digital clock to daily activities.	**A.2.MD.7.1** (C) Select the tool that is used to tell time from an array of objects.

Real World Connections:

- Carry out daily routines on time.
- Know when to get up, when to go to bed, when to eat breakfast and lunch, etc.

Vocabulary

- Digital clock
- Hour
- Routine activity
- Time

Resources:

- **Websites, articles, and other collections**
  - ESL Kidstuff (eslkidstuff.com)
    - Daily Routines & Times of the Day Lesson Plan
  - NRICH in the Millennium Mathematics Project, University of Cambridge (nrich.maths.org)
    - Times of Day
- **Activities**
  - Play time Bingo
  - Teach time by the hour and half-hour with fun activities, such as a clock puzzle, an hour "scoot" game, or a time picture sort.
- **Videos**
  - Khan Academy (khanacademy.org)
    - Telling Time 1
  - YouTube by Boodle Learning
    - How to Tell and Write Time (Digital and Analog Clocks)—1st Grade Math (1.MD.3)

COURSE: Alternate Mathematics 2nd Grade
DOMAIN: Measurement and Data (MD)
CLUSTER: Work with time with respect to a clock and a calendar, and work with money

Standard	Performance Objectives
A.2.MD.8 Identify the value of money (e.g., a penny has a value of 1 cent, a nickel has a value of 5 cents).	**A.2.MD.8.1** Identify the value of money (e.g., a penny has a value of 1 cent, a nickel has a value of 5 cents).

I Can Statements

MOST COMPLEX ⟷ LEAST COMPLEX

A.2.MD.8.1 (A) Identify the value of money (e.g., a penny has a value of 1 cent, a nickel has a value of 5 cents).	**A.2.MD.8.1** (B) Match a coin to its corresponding value.	**A.2.MD.8.1** (C) Select money from other items.

Real World Connections:

- Count coins and match to items that coins can purchase.
- Count correct change from a purchase.
- Give correct coins and bills to a customer, merchant, or cashier. .

Vocabulary

- Cent
- Dime
- Money
- Nickel
- Penny
- Quarter
- Value

Resources:

- **Websites, articles, and other collections**
  - Online Math Learning Resources (OnlineMathLearning.com)
    - Money (Grade 2)
  - Macche Corporation (gogoshopper.com)
    - Learning the Value of Money: Lesson Plans and Activities
  - Education.com (education.com)
    - EL Support Lesson—Identifying Coin Values
    - Lesson Plan—Show Me the Money: Understanding Value
- **Activities**
  - Identify penny, nickel, dime, and quarter by name. Flip them to see the other side.
  - Count out pennies to match a nickel and a dime, nickels to match a quarter, etc.
  - Calculate the amount of money, given a collection of coins (pennies, nickels, dimes), using counting and skip-counting skills.
- **Videos**
  - Khan Academy (Khanacademy.org)
    - Counting American Coins
  - Lucky Little Learners (luckylittlelearners.com)
    - Math Videos That Teach Money

COURSE: Alternate Mathematics 2nd Grade
DOMAIN: Measurement and Data (MD)
CLUSTER: Represent and interpret data

Standard	Performance Objectives
A.2.MD.9-10 Create picture graphs from collected measurement data.	**A.2.MD.9-10.1** Create picture graphs from collected measurement data.

I Can Statements

MOST COMPLEX ⟷ LEAST COMPLEX

A.2.MD.9-10.1 (A) Create picture graphs from collected measurement data.	**A.2.MD.9-10.1** (B) Create picture graphs from collected measurement data using models.	**A.2.MD.9-10.1** (C) Use a completed picture graph to identify specified data.

Real World Connections:

- Collect weather data for a week.
- Determine the ice cream flavor preferences of the class by collecting data and plotting in a picture graph.

Vocabulary

- Data
- Measurement data
- Picture graph

Resources:

- **Websites, articles, and other collections**
  - Education.com (education.com)
    - Picture Graphs Resources
  - LearnZillion (learnzillion.com)
    - Draw picture graphs to represent data.
  - Better Lesson (betterlesson.com)
    - Make Picture Graphs
- **Activities**
  - Make a picture graph that shows which fruits students prefer.
  - Involve the whole class in making a graph to display the length of thumbs in the class.
  - Have students create a simple survey to see if they prefer sweet, salty, or sour treats; then have the students create a picture graph using the data from the survey.
- **Videos**
  - NUMBEROCK (numberock.com)
    - Bar Graphs and Picture Graphs Song | 2nd Grade Video
  - YouTube by Math & Learning Videos 4 Kids
    - Picture Graphs Second Grade—Kids Learn About Picture Graphs
  - Khan Academy (khanacademy.org)
    - Picture Graphs

COURSE: Alternate Mathematics 2nd Grade
DOMAIN: Geometry (G)
CLUSTER: Reason with shapes and their attributes

Standard	Performance Objectives
A.2.G.1 Identify the common two-dimensional shapes: square, circle, triangle, and rectangle.	**A.2.G.1.1** Identify the common two-dimensional shapes: square, circle, triangle, and rectangle.

I Can Statements

MOST COMPLEX ⟷ LEAST COMPLEX

A.2.G.1.1 (A) Identify the common two-dimensional shapes: square, circle, triangle, and rectangle.	**A.2.G.1.1** (B) Sort shapes by their attributes.	**A.2.G.1.1** (C) Match shapes that are identical.

Real World Connections:

- Read symbols on maps.
- Sort items based upon attributes.
- Draw pictures using different shapes.

Vocabulary

- Circle
- Rectangle
- Shape
- Square
- Triangle
- Two-dimensional

Resources:

- **Websites, articles, and other collections**
  - Education.com (education.com)
    - Kindergarten Shapes Worksheets and Printables
    - Two-Dimensional Shapes
  - SplashLearn by Studypad, Inc. (splashlearn.com)
    - Identify Two Dimensional Shapes—Kindergarten Math
  - Shelbyville Elementary by Amber Swearengen (smore.com)
    - Two-Dimensional Figures
  - Free Flashcards for Kindergarten (flashcardsforkindergarten.com)
    - Shape Flashcards
  - Printable.com(printablee.com)
    - Shape Worksheets Printable Houses
  - TheSchoolRun (theschoolrun.com)
    - What are the names of 2D and 3D shapes?
- **Activities**
  - Do a walking tour through the classroom/hall/school and identify the squares, triangles, rectangles, and circles.
  - Play "I have who has" using the flashcards.
- **Videos**
  - YouTube by Homeschool Pop
    - 2D Shapes for Kids

COURSE: Alternate Mathematics 2nd Grade
DOMAIN: Geometry (G)
CLUSTER: Reason with shapes and their attributes

- Khan Academy (khanacademy.org)
  - Recognizing Shapes

No alternate standard for 2.G.2 - 2.G.