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2021
Teacher Resource
Guide for
MS Alternate
Academic
Achievement
Standards (MS
AAAS) for
Mathematics
Grades 3-5

Effective Date: 2021-2022 School Year



2021

Teacher Resource Guide for
MS AAAS for
Grades 3-5 Mathematics

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Mississippi Department of Education

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The Standards

The *2020 Mississippi Alternate Academic Achievement Standards for Mathematics Grades 3-5* 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 Grades K-8* 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 Grades 3-5* 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

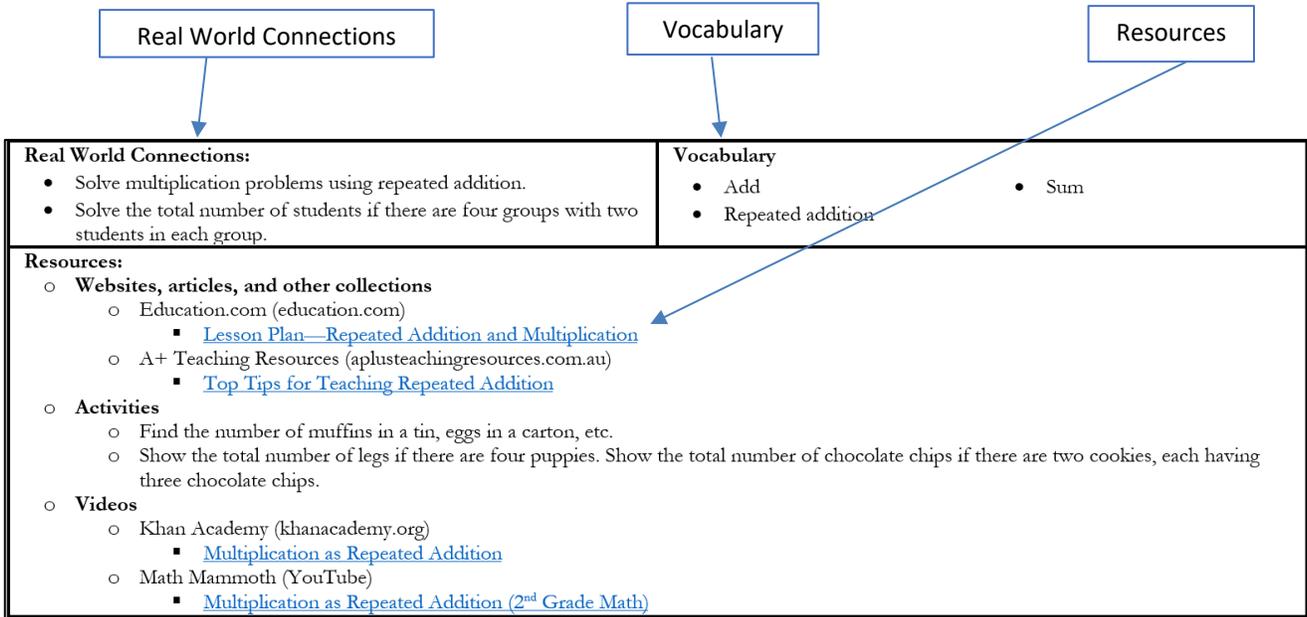
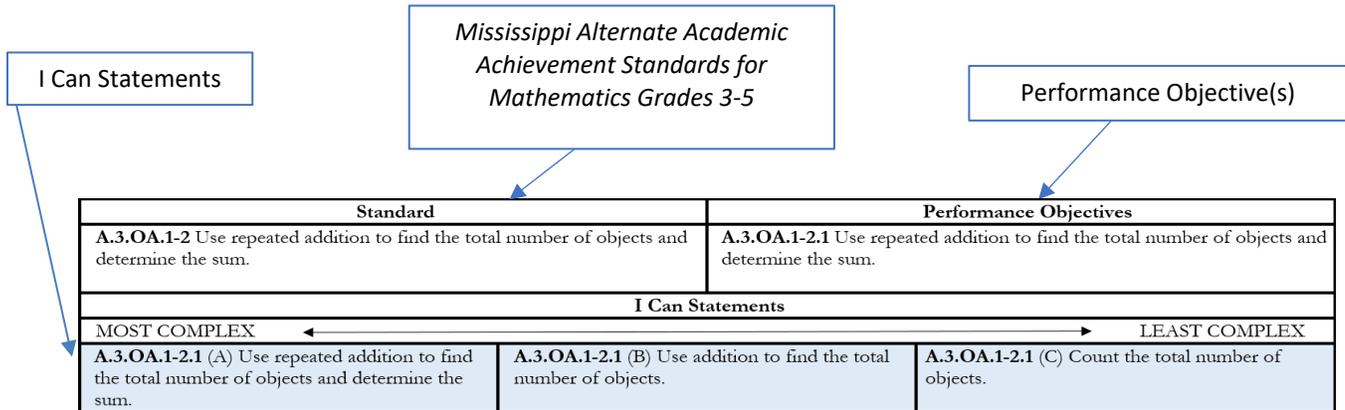
The MDE Office of Special Education aims to provide local districts, schools, and teachers supporting documents to construct standards-based instruction and lessons, allowing them to customize content and delivery methods to fit each student's needs. The teacher resource guide includes suggested resources, 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 Grades 3-5* 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 Grades 3-5

MS AAAS for Mathematics Grades 3-5: 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 3-5 (Graphic)



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.

Teacher Resource Guide for MS AAAS for Mathematics Grade 3

COURSE: Alternate Mathematics 3rd Grade

DOMAIN: Operations and Algebraic Thinking (OA)

CLUSTER: Reason with shapes and their attributes

Standard		Performance Objectives	
A.3.OA.1-2 Use repeated addition to find the total number of objects and determine the sum.		A.3.OA.1-2.1 Use repeated addition to find the total number of objects and determine the sum.	
I Can Statements			
MOST COMPLEX ←		→ LEAST COMPLEX	
A.3.OA.1-2.1 (A) Use repeated addition to find the total number of objects and determine the sum.	A.3.OA.1-2.1 (B) Use addition to find the total number of objects.	A.3.OA.1-2.1 (C) Count the total number of objects.	
Real World Connections: <ul style="list-style-type: none"> Solve multiplication problems using repeated addition. Solve the total number of students if there are four groups with two students in each group. 		Vocabulary <ul style="list-style-type: none"> Add Sum Repeated addition 	
Resources: <ul style="list-style-type: none"> Websites, articles, and other collections <ul style="list-style-type: none"> Education.com (education.com) <ul style="list-style-type: none"> Lesson Plan—Repeated Addition and Multiplication A+ Teaching Resources (aplusteachingresources.com.au) <ul style="list-style-type: none"> Top Tips for Teaching Repeated Addition Activities <ul style="list-style-type: none"> Find the number of muffins in a tin, eggs in a carton, etc. Show the total number of legs if there are four puppies. Show the total number of chocolate chips if there are two cookies, each having three chocolate chips. Videos <ul style="list-style-type: none"> Khan Academy (khanacademy.org) <ul style="list-style-type: none"> Multiplication as Repeated Addition YouTube by Math Mammoth <ul style="list-style-type: none"> Multiplication as Repeated Addition (2nd Grade Math) 			

No alternate standard for 3.OA.3-7

COURSE: Alternate Mathematics 3rd Grade

DOMAIN: Operations and Algebraic Thinking (OA)

CLUSTER: Solve problems involving the four operations, and identify and explain patterns in arithmetic

Standard	Performance Objectives	
A.3.OA.8 Solve one-step addition or subtraction word problems involving real-life situations within 20.	A.3.OA.8.1 Solve one-step addition or subtraction word problems involving real-life situations within 20.	
I Can Statements		
MOST COMPLEX ←	→ LEAST COMPLEX	
A.3.OA.8.1 (A) Solve one-step addition or subtraction word problems involving real-life situations within 20.	A.3.OA.8.1 (B) Solve one-step addition or subtraction word problems involving real-life situations within 10.	A.3.OA.8.1 (C) Solve one-step addition or subtraction problems.
Real World Connections: <ul style="list-style-type: none"> • Add items to a grocery cart. • Pay for items at a store and determine how much money is left. 	Vocabulary <ul style="list-style-type: none"> • Add • One-step addition • One-step subtraction • Real-life situations • Word problems 	
Resources: <ul style="list-style-type: none"> ○ Websites, articles, and other collections <ul style="list-style-type: none"> ○ Iknowit (Iknowit.com) <ul style="list-style-type: none"> ▪ Addition and Subtraction Word Problems (to 20) ○ K5 Learning (k5learning.com) <ul style="list-style-type: none"> ▪ Add/subtract word problems—mixed word problem worksheets ○ Khan Academy (khanacademy.org) <ul style="list-style-type: none"> ▪ Add & Subtract Within 20 ○ What I Have Learned (whatihavelearnedteaching.com) <ul style="list-style-type: none"> ▪ 5 Tips—How to Teach Students to Solve Word Problems ○ Activities <ul style="list-style-type: none"> ○ Subtract within 20 using value blocks. ○ Add within 20 using 10 frames. ○ Subtract within 20 using a number line. ○ Videos <ul style="list-style-type: none"> ○ YouTube by Kids Academy <ul style="list-style-type: none"> ▪ Teach Addition and Subtraction for Kids—Practice Word Problems ○ YouTube by K12 Mojo <ul style="list-style-type: none"> ▪ Use Addition and Subtraction Within 20 to Solve Word Problems—1OAA1 ○ Khan Academy (khanacademy.org) <ul style="list-style-type: none"> ▪ Addition and Subtraction Word Problems: Superheroes 		

No alternate standard for 3.OA.9

COURSE: Alternate Mathematics 3rd Grade

DOMAIN: Number and Operations in Base Ten (NBT)

CLUSTER: Use place value understanding and properties of operations to perform multi-digit arithmetic

Standard	Performance Objectives	
A.3.NBT.1-2 Demonstrate an understanding of place value to the tens place.	A.3.NBT.1-2.1 Identify place value to the tens place.	
I Can Statements		
MOST COMPLEX ←—————→ LEAST COMPLEX		
A.3.NBT.1-2.1 (A) Identify place value to the tens place.	A.3.NBT.1-2.1 (B) Use the place value chart to identify place value to the tens place.	A.3.NBT.1-2.1 (C) Use the place value chart to identify place value to the ones place.
Real World Connections: <ul style="list-style-type: none"> • Count money. • Recognize numbers and their value in the home, school, neighborhood, etc. 	Vocabulary <ul style="list-style-type: none"> • Ones • Place value • Tens 	
Resources: <ul style="list-style-type: none"> ○ Websites, articles, and other collections <ul style="list-style-type: none"> ○ BrainPOP by FWD Media Inc. (educators.brainpop.com) <ul style="list-style-type: none"> ▪ Place Value Activities for Kids Classroom Activities for Teaching Place Value ○ Greater Houston Moms (greaterhoustonmoms.com) <ul style="list-style-type: none"> ▪ 45+ Tips & Games for Teaching Place Value ○ Teach Starter, Inc. (teachstarter.com) <ul style="list-style-type: none"> ▪ 6 Place Value Games for the Classroom ○ Hojo’s Teaching Adventures, LLC (hojoteachingadventures.com) <ul style="list-style-type: none"> ▪ Teaching Place Value (Great Ideas, Freebies, and More!) ○ National Center on Intensive Intervention at American Institutes for Research (intensiveintervention.org) <ul style="list-style-type: none"> ▪ Teaching Place Value Concepts: Considerations for Instruction ○ We Are Teachers (weareteachers.com) <ul style="list-style-type: none"> ▪ 30 Smart Place Value Activities for Elementary Math Students ○ Mr. Elementary Math (mrelementarymath.com) <ul style="list-style-type: none"> ▪ 3 Super Tips for Teaching Place Value ○ Activities <ul style="list-style-type: none"> ○ Take a walk around the neighborhood. Look for one-, two-, three-digit numbers and have the student read them out loud. You may want the student to record the numbers he or she sees. Discuss each number and ask how many ones, tens, or hundreds are in the number. Ask the student to identify the largest and smallest number he or she can find. ○ Given the lunch cards for the class and two absent students, subtract two to get the lunch count for the day. ○ Using pictures of objects, tally marks, or number cards with numbers to 20, complete an addition or subtraction equation. ○ Given 12 counting cubes, count eight more beginning from 12 (e.g., 12, 13, 14, 15, . . . 20). ○ Use objects to add by counting (e.g., “I have three apples and get 10 more, how many do I have?” The student counts out three objects 		

COURSE: Alternate Mathematics 3rd Grade

DOMAIN: Number and Operations in Base Ten (NBT)

CLUSTER: Use place value understanding and properties of operations to perform multi-digit arithmetic

and then counts 10 more to find the total).

- Given three counting cubes, determine how many more are needed to make six.

- **Videos**

- YouTube by Kids Academy
 - [Place Value: Ones and Tens | Math for Grade 2 | Kids](#)
- Khan Academy (khanacademy.org)
 - [Intro to Place Value](#)
- NUMEROCK (Numberock.com)
 - [Place Value Song | 1st, 2nd, & 3rd Grade](#)

COURSE: Alternate Mathematics 3rd Grade

DOMAIN: Number and Operations in Base Ten (NBT)

CLUSTER: Use place value understanding and properties of operations to perform multi-digit arithmetic

Standard		Performance Objectives	
A.3.NBT.3 Using vocalization, sign language, augmentive communication, or assistive technology, count by tens to at least 30 using models such as objects, base-10 blocks, or money.		A.3.NBT.3.1 Count by tens to at least 30 using models such as objects, base-10 blocks, or money.	
I Can Statements			
MOST COMPLEX ←		→ LEAST COMPLEX	
A.3.NBT.3.1 (A) Count by tens to at least 30 using models such as objects, base-10 blocks, or money.	A.3.NBT.3.1 (B) Count by tens to at least 20 using models such as objects, base-10 blocks, or money.	A.3.NBT.3.1 (C) Count to 10 using models such as objects or money.	
Real World Connections: <ul style="list-style-type: none"> Count the coins in a piggy bank. Sort and count change. 		Vocabulary <ul style="list-style-type: none"> Coins Count Money Objects Tens Thirty Twenty 	
Resources: <ul style="list-style-type: none"> Websites, articles, and other collections <ul style="list-style-type: none"> Hand to Mind (hand2mind.com) <ul style="list-style-type: none"> Learning About Base-10 Blocks Alisal Union School District, Salinas, California (alisal.org) <ul style="list-style-type: none"> Grade 2 —Module 3 Place Value, Counting, and Comparison of Numbers to 1,000 National Council of Teachers of Mathematics (nctm.org) <ul style="list-style-type: none"> Base-10 and Place Value NCTM Interactive Institute, 2015 Keeping My Kiddo Busy Educational Activities for Toddlers —Primary Students (keepingmykiddobusy.com) <ul style="list-style-type: none"> Kindergarten Math—Teen Numbers and Place Value Activities <ul style="list-style-type: none"> Play base-10 riddles to practice place value. Have children build the number with base-10 blocks (draw or write as you give clues. Here are a few to get you started, then work together to make up some new riddles. I have 23 ones and four tens. Who am I? (63) • I have four hundreds, 12 tens, and six ones. Who am I? (526) • I have 30 ones and 30 hundreds. Who am I? (3,030) • I am 450. I have 250 ones. How many tens do I have? (20) • If you put 30 more tens with me, I would be 1,015. Who am I? (715) Videos <ul style="list-style-type: none"> LearnZillion (learnzillion.com) <ul style="list-style-type: none"> Model and Write Numbers Using Base-10 Blocks 			

COURSE: Alternate Mathematics 3rd Grade

DOMAIN: Number and Operations in Base Ten (NBT)

CLUSTER: Use place value understanding and properties of operations to perform multi-digit arithmetic

- Two Boys and a Dad (twoboysandadad.com)
 - [Ideas on How to Effectively Teach Place Value in a Virtual Setting](#)

COURSE: Alternate Mathematics 3rd Grade

DOMAIN: Number and Operations—Fractions¹² (NF)

CLUSTER: Develop an understanding of fractions as numbers

Standard		Performance Objectives	
A.3.NF.1-3 Differentiate a fractional part from a whole.		A.3.NF.1-3.1 Differentiate a fractional part from a whole.	
I Can Statements			
MOST COMPLEX		←-----→ LEAST COMPLEX	
A.3.NF.1-3.1 (A) Differentiate a fractional part from a whole.	A.3.NF.1-3.1 (B) Recognize that fractions are part of a whole.	A.3.NF.1-3.1 (C) Identify a whole.	
Real World Connections: <ul style="list-style-type: none"> Put together a puzzle to make a whole. Recognize objects in nature that are made up of different parts and, when combined, make the whole. Match halves to assemble them into wholes. Build a solid understanding of how parts make up a whole to better understand addition and subtraction. 		Vocabulary <ul style="list-style-type: none"> Differentiate Fraction Fractional part Part Whole 	
Resources: <ul style="list-style-type: none"> Websites, articles, and other collections <ul style="list-style-type: none"> Tales from outside the classroom (talesfromoutsidetheclassroom.com) <ul style="list-style-type: none"> Understanding Part-Part-Whole Education.com (education.com) <ul style="list-style-type: none"> Area: Whole, Parts, and Shapes Storyboard That by Clever Prototypes, LLC (storyboardthat.com) <ul style="list-style-type: none"> Parts of Wholes or Sets Erikson Institute Early Math Collaborative (earlymath.erikson.edu) <ul style="list-style-type: none"> A quantity (whole) can be decomposed into equal or unequal parts; the parts can be composed to form the whole. Online Math Learning Resources (OnlineMathLearning.com) <ul style="list-style-type: none"> Part-Part-Whole Word Problems Activities <ul style="list-style-type: none"> Use base-10 blocks to find ways to make a sum. Locking cubes can also be used to practice the same skill. Students explore the related numbers that are the “parts” that make the “whole.” Have a predetermined number of cubes already separated, or have students grab a handful and explore the numbers that can be connected to make that number. Using a self-sticking, non-adhesive shape, take apart and put together fractional parts of a whole. Separate wooden shapes into halves and put them back together to make a whole. Identify pictures or objects that are split into fourths. Fold a square piece of paper into four equal parts and identify it as four parts of a whole. Combine a picture of half an object with the other half to make the whole. 			

COURSE: Alternate Mathematics 3rd Grade

DOMAIN: Number and Operations—Fractions¹² (NF)

CLUSTER: Develop an understanding of fractions as numbers

- Given a set of pictures, color a half of each whole.
- Assemble four halves into two wholes and state the number of wholes.
- Sort pictures of whole objects and parts into the appropriate category.
- Use a variety of real-world objects (e.g., pizza, segmented chocolate bar, etc.) to demonstrate that each piece represents a part of the whole.
- Shown four halves, assemble them into two wholes.
- Given a puzzle with missing pieces and one that is complete, identify the whole.
- **Videos**
 - Study.com (study.com)
 - [Part to Whole Analogies: Definition & Types](#)
 - Nearpod.com (nearpod.com)
 - [Parts of a Whole](#)
 - YouTube by Hereford Elementary First Grade
 - [Introduction to Part-Part-Whole](#)
 - [Part-Part-Whole with Missing Part](#)
 - YouTube by MooMoo Math and Science
 - [Fraction Basics \(Parts of Whole\)](#)
 - Teachers Pay Teachers (teacherspayteachers.com)
 - [Part-Part-Whole Video Lesson Freebie](#)

COURSE: Alternate Mathematics 3rd Grade

DOMAIN: Measurement and Data (MD)

CLUSTER: Solve problems involving measurement and the estimation of intervals of time, liquid volumes, and masses of objects

Standard		Performance Objectives	
A.3.MD.1 Using vocalization, sign language, augmentive communication, or assistive technology, tell time to the hour on a digital clock.		A.3.MD.1.1 Tell time to the hour on a digital clock.	
I Can Statements			
MOST COMPLEX ←		→ LEAST COMPLEX	
A.3.MD.1.1 (A) Tell time to the hour on a digital clock.	A.3.MD.1.1 (B) Identify which is the hour on a digital clock.	A.3.MD.1.1 (C) Recognize a digital clock.	
Real World Connections: <ul style="list-style-type: none">• Leave for activities on time (e.g., doctor's appointment, sporting event, etc.).• Know when a TV show airs.• Relate the hour with the time on their daily schedule.		Vocabulary <ul style="list-style-type: none">• Digital clock• Half-hour• Hour• Time	
Resources: <ul style="list-style-type: none">○ Websites, articles, and other collections<ul style="list-style-type: none">○ Teachers Pay Teachers (teacherspayteachers.com) subscription required<ul style="list-style-type: none">▪ Telling Time to the Minute on a Clock Digital Task Cards○ Class Ace (Classace.io)<ul style="list-style-type: none">▪ Learn to Read Digital Clocks○ Education.com (education.com)<ul style="list-style-type: none">▪ Telling Time Games▪ Telling Time to the Hour▪ Lesson Plan —Time to Tell Time: Showing and Writing Time○ Activities<ul style="list-style-type: none">○ Create a picture gram using pictures of a digital clock to teach students to tell time to the hour.○ Given a time written to the hour, write the digital time.○ Identify the time of a digital clock that is set to the hour.○ Given a time on a digital clock, say the time to the hour.○ Given cards showing digital clocks—one clock having the hour circled and one clock having the minutes circled. Indicate the clock with the hour circled.○ Given a digital clock and a measuring cup, identify the clock for telling time.○ Videos<ul style="list-style-type: none">○ YouTube by Jack Hartmann Kids Music Channel<ul style="list-style-type: none">▪ This Is a Digital Clock Digital Clock Song for Kids Telling Time○ YouTube by Claredon Learning			

COURSE: Alternate Mathematics 3rd Grade

DOMAIN: Measurement and Data (MD)

CLUSTER: Solve problems involving measurement and the estimation of intervals of time, liquid volumes, and masses of objects

- [Telling Time for Kids | Learn to Tell Time on Both Analog and Digital Clocks](#)

COURSE: Alternate Mathematics 3rd Grade

DOMAIN: Measurement and Data (MD)

CLUSTER: Solve problems involving measurement and the estimation of intervals of time, liquid volumes, and masses of objects

Standard	Performance Objectives	
A.3.MD.2 Identify the appropriate measurement tool for measuring mass and volume.	A.3.MD.2.1 Identify the appropriate measurement tool for measuring mass and volume.	
I Can Statements		
MOST COMPLEX ←	→ LEAST COMPLEX	
A.3.MD.2.1 (A) Identify the appropriate measurement tool for measuring mass and volume.	A.3.MD.2.1 (B) Select the appropriate measurement tool for measuring a liquid.	A.3.MD.2.1 (C) Identify an object that is a solid and an object that is a liquid.
Real World Connections: <ul style="list-style-type: none"> Select the appropriate tool for measuring water for lemonade. Select the appropriate tool for measuring ingredients to cook. Measure out the ingredients in a recipe. Compare the mass of two items using a two-pan balance scale. 	Vocabulary <ul style="list-style-type: none"> Appropriate Liquid Mass Measurement tool Volume Solid 	
Resources: <ul style="list-style-type: none"> Websites, articles, and other collections <ul style="list-style-type: none"> Varsity Tutors (Varsitytutors.com) <ul style="list-style-type: none"> Choosing Appropriate Units of Measure Education.com (education.com) <ul style="list-style-type: none"> Measuring Volume Class Ace (Classace.io) <ul style="list-style-type: none"> Learn About Measuring Tools Activities <ul style="list-style-type: none"> Use a weighted scale and balance scales to find out how much objects weigh (mass). Given a rock and a glass of water, identify which would be measured using a measuring cup. Use a spring scale to measure the weight of objects. Place objects from the room into the appropriate measurement category (i.e., solid or liquid). Use a measuring cup and have students answer questions about volume measurement conversions. When provided a measuring cup and a scale, identify which tool measures liquid. Sort real-world items as being measured by grams or liters (e.g., apple measured in grams, juice in liters, etc.). Videos <ul style="list-style-type: none"> Khan Academy (khanacademy.org) <ul style="list-style-type: none"> Understanding Mass (Grams and Kilograms) Volume: Intro Measuring Volume with Unit Cubes 		

COURSE: Alternate Mathematics 3rd Grade

DOMAIN: Measurement and Data (MD)

CLUSTER: Solve problems involving measurement and the estimation of intervals of time, liquid volumes, and masses of objects

- YouTube by Turtlediary
 - [Science for Kids: Measuring Matter Video](#)
- YouTube by LearnFatafat
 - [Mass and Volume Measurement](#)

COURSE: Alternate Mathematics 3rd Grade

DOMAIN: Measurement and Data (MD)

CLUSTER: Represent and interpret data

that indicates what color shoes they have.

- Draw a bar graph with single-unit scale to represent a data set with up to four categories. Solve simple put-together, take-apart, and compare problems using information presented in a bar graph.
- **Videos**
 - Khan Academy (khanacademy.org)
 - [Creating Picture and Bar Graphs](#)
 - Lucky Little Learners (luckylittlelearners.com)
 - [Videos That Teach Graphing](#)

COURSE: Alternate Mathematics 3rd Grade

DOMAIN: Measurement and Data (MD)

CLUSTER: Represent and interpret data

Standard		Performance Objectives	
A.3.MD.4 Measure the length of objects to the nearest whole unit using standard tools such as rulers, yardsticks, and meter sticks.		A.3.MD.4.1 Measure the length of objects to the nearest whole unit using standard tools such as rulers, yardsticks, and meter sticks.	
I Can Statements			
MOST COMPLEX ←		→ LEAST COMPLEX	
A.3.MD.4.1 (A) Measure the length of objects to the nearest whole unit using standard tools such as rulers, yardsticks, and meter sticks.	A.3.MD.4.1 (B) Place a standard measuring tool where one would begin to measure the length of an object.	A.3.MD.4.1 (C) Identify a ruler as a standard tool for measuring the length of objects.	
Real World Connections: <ul style="list-style-type: none"> • Use standard tools to measure items for a building project. • Use a tape measure to measure wood before cutting. • Measure items needed to build or construct something. • Estimate lengths using units of inches, feet, centimeters, and meters. 		Vocabulary <ul style="list-style-type: none"> • Length • Standard measuring tools • Meter sticks • Whole unit • Ruler • Yardstick 	
Resources: <ul style="list-style-type: none"> ○ Websites, articles, and other collections <ul style="list-style-type: none"> ○ CK-12 Foundation(ck12.org) <ul style="list-style-type: none"> ▪ Appropriate Measurement Tools ○ Khan Academy (Khanacademy.org) <ul style="list-style-type: none"> ▪ Common Core Math Skills—Grade 2: Measurement and Data ▪ Practice Measure Lengths (cm, m) ○ K5 Learning (k5learning.com) <ul style="list-style-type: none"> ▪ Measurement Worksheets ○ Activities <ul style="list-style-type: none"> ○ Give one ruler length of yarn to each student for a project. ○ Measure the length of a row of three tile squares on the floor by repeating a ruler end to end. ○ Given a yardstick, measure different lengths or widths of the room and record the measurement. ○ When provided two non-standard measuring units, identify the one most appropriate for what is to be measured (e.g., a pencil or long stick to measure the length of the classroom). ○ Videos <ul style="list-style-type: none"> ○ Khan Academy (khanacademy.org) <ul style="list-style-type: none"> ▪ Measuring Lengths in Different Units ▪ Practice Measuring Length in Different Units 			

No alternate standard for 3.MD.5-8

COURSE: Alternate Mathematics 3rd Grade

DOMAIN: Geometry (G)

CLUSTER: Reason with shapes and their attributes

Standard	Performance Objectives	
A.3.G.1 Use vocalization, sign language, augmentive communication, or assistive technology to describe the attributes of two-dimensional shapes.	A.3.G.1.1 Describe the attributes of two-dimensional shapes (i.e., number of sides and angles).	
I Can Statements		
MOST COMPLEX ←—————→ LEAST COMPLEX		
A.3.G.1.1 (A) Describe the attributes of two-dimensional shapes (i.e., number of sides and angles).	A.3.G.1.1 (B) Sort shapes by attributes (i.e., number of sides and angles).	A.3.G.1.1 (C) Match shapes (i.e., squares, rectangles, circles, triangles).
Real World Connections: <ul style="list-style-type: none">• Read symbols on maps.• Sort items based upon attributes.• Draw pictures using different shapes.• Design artwork with various shapes.	Vocabulary <ul style="list-style-type: none">• Angle• Attribute• Circle• Hexagon• Octagon• Pentagon• Rectangle• Sides• Square• Triangle• Two-dimensional shapes	
Resources: <ul style="list-style-type: none">○ Websites, articles, and other collections<ul style="list-style-type: none">○ Math Worksheets Land (mathworksheetsland.com)<ul style="list-style-type: none">▪ Making Two-Dimensional Shapes—Guided Lesson▪ Making Two-Dimensional Shapes—Guided Lesson Explanation▪ Making Two-Dimensional Shapes—Independent Practice▪ Making Two-Dimensional Shapes—Step-by-Step Lesson○ Math 4 Texas Education Service Center Region 11 (Math4texas.org)<ul style="list-style-type: none">▪ Two-Dimensional Shapes○ EasyTeaching (easyteaching.net)<ul style="list-style-type: none">▪ 2D Shape Worksheets○ Parenting for the Science Minded by Gwen Dewar, Ph.D. (parentingscience.com)<ul style="list-style-type: none">▪ Tangrams for Kids: Educational Tips and a Printable Tangram Template○ Activities<ul style="list-style-type: none">○ Play with flashcards showing the different two-dimensional shapes.○ Play “Guess who?” using shapes.○ Find shapes in real-world areas.○ Videos		

COURSE: Alternate Mathematics 3rd Grade

DOMAIN: Geometry (G)

CLUSTER: Reason with shapes and their attributes

- Khan Academy (Khanacademy.org)
 - [Recognizing Shapes](#)
- YouTube by Homeschool Pop
 - [2D Shapes for Kids](#)
- YouTube by Icon Math
 - [Angles in Two-Dimensional Figures](#)
- BrainPOP Jr. (jr.brainpop.com)
 - [Plane Shapes](#)
- Investigations 3 Math Words and Ideas (schoolcontent.pk12ls.com)
 - [Geometry—Math Words and Ideas](#)

COURSE: Alternate Mathematics 3rd Grade

DOMAIN: Geometry (G)

CLUSTER: Reason with shapes and their attributes

Standard	Performance Objectives	
A.3.G.2 Recognize that shapes can be partitioned into equal areas.	A.3.G.2.1 Recognize that shapes can be partitioned into equal areas.	
I Can Statements		
MOST COMPLEX ←—————→ LEAST COMPLEX		
A.3.G.2.1 (A) Recognize that shapes can be partitioned into equal areas.	A.3.G.2.1 (B) Divide a shape in half (e.g., fold, draw, cut, etc.)	A.3.G.2.1 (C) Put two halves of a shape together to make a whole.
Real World Connections: <ul style="list-style-type: none">• Read symbols on maps.• Sort items based upon attributes.• Draw pictures using different shapes.• Design artwork with various shapes.	Vocabulary <ul style="list-style-type: none">• Equal• Line of symmetry• Mirror• Partitioned• Shapes• Symmetry	
Resources: <ul style="list-style-type: none">○ Websites, articles, and other collections<ul style="list-style-type: none">○ Math Salamanders Limited(math-salamanders.com)<ul style="list-style-type: none">▪ Symmetry Worksheets -Line Symmetry Easier○ Tutoring Hour (tutoringhour.com)<ul style="list-style-type: none">▪ Symmetry Worksheets○ Education.com (education.com)<ul style="list-style-type: none">▪ Lines of Symmetry Resources○ Math Worksheets 4 Kids (mathworksheets4kids.com)<ul style="list-style-type: none">▪ Symmetry Worksheets○ SparkleBox (sparklebox.co.uk)<ul style="list-style-type: none">▪ Symmetry Teaching Resources○ EasyTeaching (easyteaching.net)<ul style="list-style-type: none">▪ Symmetry Worksheets○ Activities<ul style="list-style-type: none">○ Use sticky notes and a mirror and have students look for symmetry in letters.○ Use inkblots to show symmetry.○ Videos<ul style="list-style-type: none">○ YouTube by Melissa Morey<ul style="list-style-type: none">▪ Symmetry○ YouTube by Periwinkle<ul style="list-style-type: none">▪ Line of Symmetry Maths for Kids○ YouTube by NUMBEROCK		

COURSE: Alternate Mathematics 3rd Grade

DOMAIN: Geometry (G)

CLUSTER: Reason with shapes and their attributes

- [Symmetry Song for Kids | A Day at Symmetry Land | Lines of Symmetry](#)

COURSE: Alternate Mathematics 4th Grade

DOMAIN: Operations and Algebraic Thinking (OA)

CLUSTER: Represent and solve problems involving multiplication and division

Standard		Performance Objectives	
A.4.OA.1-2 Demonstrate the connection between repeated addition and multiplication.		A.4.OA.1-2.1 Demonstrate the connection between repeated addition and multiplication.	
I Can Statements			
MOST COMPLEX ←		→ LEAST COMPLEX	
A.4.OA.1-2.1 (A) Demonstrate the connection between repeated addition and multiplication.	A.4.OA.1-2.1 (B) Match a picture of repeated addition to the corresponding multiplication equation.	A.4.OA.1-2.1 (C) Recognize a multiplication sign.	
Real World Connections: <ul style="list-style-type: none">• Use muffin tins to place manipulatives inside and visually show arrays.• Cut an egg carton in half. Have students count each section.		Vocabulary <ul style="list-style-type: none">• Addition• Equation• Multiplication	
Resources: <ul style="list-style-type: none">○ Websites, articles, and other collections<ul style="list-style-type: none">○ A+ Teaching Resources (Aplusteachingresources.com.au)<ul style="list-style-type: none">▪ Top Tips for Teaching Repeated Addition○ Education.com (education.com)<ul style="list-style-type: none">▪ Lesson Plan—Repeated Addition and Multiplication○ Khan Academy (Khanacademy.org)<ul style="list-style-type: none">▪ Understand equal groups as multiplication.▪ Relate repeated addition to multiplication.○ LearnZillion (learnzillion.com)<ul style="list-style-type: none">▪ Use repeated addition to find the total number of objects in an array.○ Activities<ul style="list-style-type: none">○ Find the number of objects in equal groups using skip counting and repeated addition, then multiply to find the total number in all the equal groups.○ Show a picture of puppies and try to figure out how many puppies there are by just counting the puppies. Then group the puppies into equal groupings and count the groupings to help figure out the total number of puppies.○ Videos<ul style="list-style-type: none">○ YouTube by SpeedyMind<ul style="list-style-type: none">▪ Multiplication as Repeated Addition Multiplication for Kids○ YouTube by Math Songs by NUMBEROCK			

COURSE: Alternate Mathematics 4th Grade

DOMAIN: Operations and Algebraic Thinking (OA)

CLUSTER: Represent and solve problems involving multiplication and division

- [Equal Groups Multiplication Song | Repeated Addition Using Arrays](#)
- YouTube by MatholiaChannel
 - [Multiplication as Repeated Addition](#)
- Khan Academy (Khanacademy.org)
 - [Multiplication as Repeated Addition](#)

COURSE: Alternate Mathematics 4th Grade

DOMAIN: Operations and Algebraic Thinking (OA)

CLUSTER: Represent and solve problems involving multiplication and division

Standard	Performance Objectives	
A.4.OA.3 Solve one-step word problems <i>involving real-life situations</i> using addition or subtraction within 100 <i>without regrouping</i> .	A.4.OA.3.1 Solve one-step word problems involving real-life situations using addition or subtraction within 100 without regrouping.	
I Can Statements		
MOST COMPLEX ←	→ LEAST COMPLEX	
A.4.OA.3.1 (A) Solve one-step addition or subtraction word problems involving real-life situations within 100 <i>without regrouping</i> .	A.4.OA.3.1 (B) Solve one-step addition or subtraction word problems involving real-life situations within 50 <i>without regrouping</i> .	A.4.OA.3.1 (C) Solve one-step addition or subtraction word problems involving real-life situations within 20 <i>without regrouping</i> .
Real World Connections: <ul style="list-style-type: none"> • Pay for groceries. • Count mileage when traveling. • Recognize professions that involve extensive addition and subtraction include bank tellers, accountants, cashiers and food servers and toll booth operators. 	Vocabulary <ul style="list-style-type: none"> • Addition • Equation • Regrouping • Subtraction 	
Resources: <ul style="list-style-type: none"> ○ Websites, articles, and other collections <ul style="list-style-type: none"> ○ Math Worksheets 4 Kids (mathworksheets4kids.com) <ul style="list-style-type: none"> ▪ Addition Word Problems Worksheets ▪ Subtraction Word Problem Worksheets ○ Khan Academy (khanacademy.org) <ul style="list-style-type: none"> ▪ Unit: Addition and Subtraction ○ Autism Classroom Wonderful Workers blog (Mrwinter.com) <ul style="list-style-type: none"> ▪ Math One-Step Real-World Problems Using Addition & Subtraction Within 20 ○ Activities <ul style="list-style-type: none"> ○ Use drawings and equations with a symbol for the unknown number to represent a real-world problem. Use addition and subtraction within 100 to solve one- and two-step word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions. ○ Ask students to solve a two-step word problem that combines a Put Together (Result Unknown) problem and a Take From (Result Unknown) problem using marbles in a bag. ○ Videos <ul style="list-style-type: none"> ○ Khan Academy (khanacademy.org) <ul style="list-style-type: none"> ▪ Basic Addition 		

COURSE: Alternate Mathematics 4th Grade

DOMAIN: Operations and Algebraic Thinking (OA)

CLUSTER: Represent and solve problems involving multiplication and division

- [Basic Subtraction](#)
- YouTube by K12 Mojo
 - [Use addition and subtraction within 100 to solve one- and two-step word problems—2OAA1.](#)

COURSE: Alternate Mathematics 4th Grade
 DOMAIN: Operations and Algebraic Thinking (OA)
 CLUSTER: Gain familiarity with factors and multiples

Standard		Performance Objectives	
A.4.OA.4 Show how a whole number is a result of two factors.		A.4.OA.4.1 Show how a whole number is a result of two factors.	
I Can Statements			
MOST COMPLEX ←		→ LEAST COMPLEX	
A.4.OA.4.1 (A) Show how a whole number is a result of two factors.	A.4.OA.4.1 (B) Identify a factor of a whole number (e.g., two is a factor of eight because six can be divided by two exactly three times.)	A.4.OA.4.1 (C) Using manipulatives, divide a whole number into two equal parts.	
Real World Connections: <ul style="list-style-type: none"> • Break a graham cracker into two parts, then again into four. • Equally distribute treats to guests at a birthday party. 		Vocabulary <ul style="list-style-type: none"> • Divide • Equal parts • Factor • Whole number 	
Resources: <ul style="list-style-type: none"> ○ Websites, articles, and other collections <ul style="list-style-type: none"> ○ Math is Fun by Rod Pierce (Mathsisfun.com) <ul style="list-style-type: none"> ▪ Factors and Multiples ○ Activities <ul style="list-style-type: none"> ○ Do you think that it makes sense to split a day into 24 hours? Would another number have been a better choice? Why or why not? ○ Videos <ul style="list-style-type: none"> ○ Khan Academy (khanacademy.org) <ul style="list-style-type: none"> ▪ Understanding Factor Pairs ▪ Finding Factors of a Number ○ YouTube by eHowEducation <ul style="list-style-type: none"> ▪ How are Whole Numbers Used in Everyday Life? ○ YouTube by National Numeracy <ul style="list-style-type: none"> ▪ Everyday maths! How do we use numbers in everyday life? 			

COURSE: Alternate Mathematics 4th Grade

DOMAIN: Operations and Algebraic Thinking (OA)

CLUSTER: Generate and analyze patterns

Standard		Performance Objectives	
A.4.OA.5 Use repeating patterns to make predictions.		A.4.OA.5.1 Use repeating patterns to predict what comes next in the pattern.	
I Can Statements			
MOST COMPLEX ←		→ LEAST COMPLEX	
A.4.OA.5.1 (A) Use repeating patterns to predict what comes next in the pattern.	A.4.OA.5.1 (B) Continue a pattern with shapes or numbers when given the rule (e.g., +2, +5, triangle, circle, etc.).	A.4.OA.5.1 (C) Replicate a pattern with shapes.	
Real World Connections: <ul style="list-style-type: none"> Recognize that a zebra’s back has repeating stripes (black, white, black, white). Repeat colors of beads on a necklace. Observe repeating patterns in structures of buildings. Help set the table following an appropriate pattern. 		Vocabulary <ul style="list-style-type: none"> Pattern Prediction Repeating 	
Resources: <ul style="list-style-type: none"> Websites, articles, and other collections <ul style="list-style-type: none"> Education.com (education.com) <ul style="list-style-type: none"> Patterns Worksheets and Printables Class Ace (Classace.io) <ul style="list-style-type: none"> Learn About Repeating Patterns NRICH in the Millennium Mathematics Project, University of Cambridge (nrich.maths.org) <ul style="list-style-type: none"> Developing Pattern Awareness with Young Children Activities <ul style="list-style-type: none"> Focus on repeating patterns and help increase awareness of developing patterns with prompts for considering children’s responses. Have students copy patterns and compare their construction with the original pattern. Play “spot the mistake” in a pattern and discuss how to repair it. Make a sequence with fruit by alternating pears and apples. Make the sequence more complex by adding another type of fruit! Collect various leaves and flowers to make patterns, encouraging students to look at the differences between the leaves. The students could then create patterns using smooth and rough leaves. Make a pattern with toy cars Are they going to make a size pattern? A color pattern? Encourage students to create sound patterns by making noise with their mouths, clapping, and clicking their fingers. Get into the rhythm! Sing songs such as “Head, Shoulders, Knees, and Toes” to learn repeating patterns using parts of the body. Videos 			

COURSE: Alternate Mathematics 4th Grade
DOMAIN: Operations and Algebraic Thinking (OA)
CLUSTER: Generate and analyze patterns

- Khan Academy (khanacademy.org)
 - [Finding Patterns in Numbers](#)
 - [Recognizing Number Patterns](#)

No alternate standard for 4.NBT.1

COURSE: Alternate Mathematics 4th Grade

DOMAIN: Number and Operations in Base Ten (NBT)

CLUSTER: Generalize place value understanding for multi-digit whole numbers

- [Greater Than and Less Than Symbols](#)

COURSE: Alternate Mathematics 4th Grade

DOMAIN: Number and Operations in Base Ten (NBT)

CLUSTER: Generalize place value understanding for multi-digit whole numbers

Standard		Performance Objectives	
A.4.NBT.3 Round any whole number 0-30 to the nearest ten.		A.4.NBT.3.1 Round any whole number 0-30 to the nearest ten.	
I Can Statements			
MOST COMPLEX ←		→ LEAST COMPLEX	
A.4.NBT.3.1 (A) Round any whole number 0-30 to the nearest ten.	A.4.NBT.3.1 (B) Round ones place numbers, five and above, to the next 10.	A.4.NBT.3.1 (C) Identify the tens to 30.	
Real World Connections: <ul style="list-style-type: none"> • Round price of food items on a menu. • Round number of boys and girls in class to nearest ten. • Round calendar date to nearest ten. 		Vocabulary <ul style="list-style-type: none"> • Nearest ten • Ones place • Round • Whole number 	
Resources: <ul style="list-style-type: none"> ○ Websites, articles, and other collections <ul style="list-style-type: none"> ○ Monterey Institute for Technology and Education, the NROC Project (montereyinstitute.org) <ul style="list-style-type: none"> ▪ Rounding Whole Numbers ○ Basic Mathematics (basic-mathematics.com) <ul style="list-style-type: none"> ▪ Rounding Whole Numbers ○ Education.com (education.com) <ul style="list-style-type: none"> ▪ Rounding to Whole Numbers Worksheet ○ Iknowit (Iknowit.com) <ul style="list-style-type: none"> ▪ Rounding to the Nearest Ten (Up to 99) ○ Activities <ul style="list-style-type: none"> ○ Roll the dice to count up the rounding tape and state the nearest 10. ○ Distribute poster boards labeled by tens up to 30 around the room. Give students a number and ask them to go to the nearest 10. ○ Using pennies earned, exchange for dimes. ○ Using paper plates labeled zero and 10 and a card with a number zero to 10, place the card on the correct plate. ○ Use a number line to round to the nearest 10. ○ Place fingers on five on a number line and count to find a number greater than five. ○ Shown five on a number line, identify a number that is less than five. ○ Videos <ul style="list-style-type: none"> ○ YouTube by patrickJMT <ul style="list-style-type: none"> ▪ Rounding Whole Numbers: Round to the Nearest Ten ○ LearnZillion (learnzillion.com) <ul style="list-style-type: none"> ▪ Round Whole Numbers to the Nearest 10 or 100 (3.NBT.A.1) ○ YouTube by tenframe 			

COURSE: Alternate Mathematics 4th Grade

DOMAIN: Number and Operations in Base Ten (NBT)

CLUSTER: Generalize place value understanding for multi-digit whole numbers

- [Rounding to the Nearest Ten](#)
- Khan Academy (khanacademy.org)
 - [Rounding to the Nearest 10](#)
 - [Rounding to the Nearest 10 on the Number Line](#)
- Online Math Learning Resources (OnlineMathLearning.com)
 - [Rounding Numbers](#)

COURSE: Alternate Mathematics 4th Grade

DOMAIN: Number and Operations in Base Ten (NBT)

CLUSTER: Use place value understanding and properties of operations to perform multi-digit arithmetic

Standard		Performance Objectives	
A.4.NBT.4 Add and subtract two-digit whole numbers.		A.4.NBT.4.1 Add and subtract two-digit whole numbers.	
I Can Statements			
MOST COMPLEX ←		→ LEAST COMPLEX	
A.4.NBT.4.1 (A) Add and subtract two-digit whole numbers.	A.4.NBT.4.1 (B) Add and subtract two-digit whole numbers using a place value chart and manipulatives.	A.4.NBT.4.1 (C) Add one-digit whole numbers on a place value chart using manipulatives.	
Real World Connections: <ul style="list-style-type: none"> Use addition and subtraction to create and obtain information from tables, bar graphs, and tally charts. Recognize relationships between counting and addition and subtraction. 		Vocabulary <ul style="list-style-type: none"> Add (addition) Digits Subtract (subtraction) Whole numbers 	
Resources: <ul style="list-style-type: none"> Websites, articles, and other collections <ul style="list-style-type: none"> Math 4 Texas Education Service Center Region 11 (Math4texas.org) <ul style="list-style-type: none"> Adding Four Two-Digit Numbers & Subtracting Two-Digit Numbers What I Have Learned (whatihavelearnedteaching.com) <ul style="list-style-type: none"> Models & Strategies for Two-Digit Addition & Subtraction Two-Digit Addition Activities for Math Stations Math-Aids.com (math-aids.com) <ul style="list-style-type: none"> Adding and Subtracting 2, 3, or 4 Digit Problems Worksheets Activities <ul style="list-style-type: none"> Use counters to add and subtract. Produce addends to 10 fluently. State $13-1=12$ and use magnetic symbols to display the problem. Use a sorting box divided into two sections with manipulatives to add, subtract, and regroup to solve addition and subtraction problems. Given base-10 pieces, make exchanges to solve multi-digit addition and subtraction problems. Use a calculator and show how a problem is solved. Use break-apart numbers (e.g., $20+30=50$, $3+5=8$, $40+8=48$). Use a number line to demonstrate addition by tens. Videos <ul style="list-style-type: none"> Khan Academy (khanacademy.org) <ul style="list-style-type: none"> Subtracting 2-Digit Numbers Without Regrouping 1 Example: Adding 2-Digit Numbers (No Carrying) 			

COURSE: Alternate Mathematics 4th Grade

DOMAIN: Number and Operations in Base Ten (NBT)

CLUSTER: Use place value understanding and properties of operations to perform multi-digit arithmetic

- YouTube by JoAnn's School
 - [Grade 2 Math 6.4, Using Models to Subtract \(2-Digit Numbers\)](#)
- YouTube by Math Mammoth
 - [Add and Subtract 2-Digit Numbers Without Regrouping \(1st Grade Math\)](#)

No alternate standard for 4.NBT.6

COURSE: Alternate Mathematics 4th Grade

DOMAIN: Number and Operations in Base Ten (NBT)

CLUSTER: Extend understanding of fraction equivalence and ordering

Standard		Performance Objectives	
A.4.NF.1-2 Identify models of one half (1/2) and one fourth (1/4).		A.4.NF.1-2.1 Identify models of one half (1/2) and one fourth (1/4).	
I Can Statements			
MOST COMPLEX ←		→ LEAST COMPLEX	
A.4.NF.1-2.1 (A) Identify models of one half (1/2) and one fourth (1/4).	A.4.NF.1-2.1 (B) Identify models of one fourth (1/4).	A.4.NF.1-2.1 (C) Identify models of one half (1/2).	
Real World Connections: <ul style="list-style-type: none"> Complete two- and four-piece puzzles. 		Vocabulary <ul style="list-style-type: none"> Fraction One fourth One half Whole 	
Resources: <ul style="list-style-type: none"> Websites, articles, and other collections <ul style="list-style-type: none"> K-5 Math Teaching Resources LLC.(k-5mathteachingresources.com) <ul style="list-style-type: none"> Fraction Models The Story of Mathematics by Luke Mastin (storyofmathematics.com) <ul style="list-style-type: none"> Equivalent Fractions—Explanation & Examples JSTOR Digital Library, a part of ITHAKA (Jstor.org) <ul style="list-style-type: none"> Engaging Students with Multiple Models of Fractions SplashLearn by Studypad, Inc. (splashlearn.com) <ul style="list-style-type: none"> Fraction Games for 4th Graders Pearson Education, Inc. (pearson.com) <ul style="list-style-type: none"> Developing Fraction Concepts Activities <ul style="list-style-type: none"> Use manipulatives such as rectangular or circular fraction sets, pattern blocks, geoboards and tangrams. See how shapes can be partitioned into other shapes using pattern blocks. Break plastic eggs in half and put them back to whole. Given two squares of paper, one scored for 1/2s and one scored for 1/4s, fold each paper as scored. Unfold the papers and compare to each other (e.g., $2/4=1/2$). Given two rectangles, cut one rectangle into half and a second into fourths and compare the rectangles to determine how many fourths equal a half. Using a picture of two circles, cut one in half and the other in fourths and compare them to find how many fourths equal a half. Videos <ul style="list-style-type: none"> YouTube by SparklesOnlineSchool 			

COURSE: Alternate Mathematics 4th Grade

DOMAIN: Number and Operations in Base Ten (NBT)

CLUSTER: Extend understanding of fraction equivalence and ordering

- [Fractions Part 1—Grade 1 2 3 Mathematics—Whole—Half—Quarter](#)
- Nagwa Limited (Nagwa.com)
 - [Question Video: Identifying One-Half of Circles and Rectangles](#)
- Khan Academy (khanacademy.org)
 - [Equivalent Fraction Models](#)

COURSE: Alternate Mathematics 4th Grade

DOMAIN: Number and Operations – Fractions (NF)

CLUSTER: Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers.

Standard		Performance Objectives	
A.4.NF.3 Differentiate between whole and half.		A.4.NF.3.1 Differentiate between whole and half.	
I Can Statements			
MOST COMPLEX ←		→ LEAST COMPLEX	
A.4.NF.3.1 (A) Differentiate between whole and half.	A.4.NF.3.1 (B) Recognize that two halves make a whole.	A.4.NF.3.1 (C) Identify a whole.	
Real World Connections: <ul style="list-style-type: none"> • Measuring ingredients for a recipe. • Share half of a sandwich. • Complete two- and four-piece puzzles. • Practice equal sharing. • Divide candy into equal shares. • Explore estimation. • Grocery shop for a whole chicken or just the parts (e.g., leg, thigh, tenders, etc.). • Explore phases of the moon. 		Vocabulary <ul style="list-style-type: none"> • Differentiate • Fraction • Part • One fourth • One half • Whole 	
Resources: <ul style="list-style-type: none"> ○ Websites, articles, and other collections <ul style="list-style-type: none"> ○ Cpalms (cpalms.org) <ul style="list-style-type: none"> ▪ Halves and Wholes ▪ Half of This, A Quarter of That, A Whole Lot of Fun! ○ SplashLearn by Studypad, Inc. (splashlearn.com) <ul style="list-style-type: none"> ▪ Halves —Definition with Examples ▪ Fraction Games for 4th Graders ○ Math-Only-Math.com (math-only-math.com) <ul style="list-style-type: none"> ▪ Fraction as a Part of a Whole ○ K-5 Math Teaching Resources LLC. (k-5mathteachingresources.com) <ul style="list-style-type: none"> ▪ Fraction Models ○ The Story of Mathematics by Luke Mastin (storyofmathematics.com) <ul style="list-style-type: none"> ▪ Equivalent Fractions—Explanation & Examples ○ JSTOR Digital Library, a part of ITHAKA (jstor.org) <ul style="list-style-type: none"> ▪ Engaging Students with Multiple Models of Fractions ○ Pearson Education, Inc. (pearson.com) 			

COURSE: Alternate Mathematics 4th Grade

DOMAIN: Number and Operations – Fractions (NF)

CLUSTER: Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers.

▪ [Developing Fraction Concepts](#)

○ **Activities**

- Given a whole sandwich versus half a sandwich, cut horizontally, vertically, and diagonally and select the whole or half upon request.
- Show the halfway point on a number line.
- Use manipulatives such as rectangular or circular fraction sets, pattern blocks, geoboards, and tangrams.
- See how shapes can be partitioned into other shapes using pattern blocks.
- Break plastic eggs in half and put them back to whole.
- Given two squares of paper, one scored for $1/2$ s and one scored for $1/4$ s, fold each paper as scored. Unfold the papers and compare to each other (e.g., $2/4=1/2$).
- Given two rectangles, cut one rectangle into half and a second into fourths and compare the rectangles to determine how many fourths equal a half.
- Using a picture of two circles, cut one in half and the other in fourths and compare them to find how many fourths equal a half.

○ **Videos**

- YouTube by Skwirk Online Education
 - [Stage 1 Maths—Wholes, Halves and Quarters](#)
- Khan Academy (khanacademy.org)
 - [Equivalent Fractions](#)
 - [Equivalent Fractions and Different Wholes](#)
- YouTube by SparklesOnlineSchool
 - [Fractions Part 1—Grade 1 2 3 Mathematics—Whole—Half—Quarter](#)
- YouTube by Periwinkle
 - [A Whole and a Half | Maths Concepts for Kids | Maths Grade 2](#)
- Nagwa Limited (Nagwa.com)
 - [Question Video: Identifying One-Half of Circles and Rectangles](#)

No alternate standard for 4.NF.4-7

COURSE: Alternate Mathematics 4th Grade

DOMAIN: Measurement and Data (MD)

CLUSTER: Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit.

Standard		Performance Objectives	
A.4.MD.1 Identify the smaller measurement unit that comprises a larger unit within a measurement system (e.g., inches/foot, centimeter/meter, minutes/hour).		A.4.MD.1.1 Identify the smaller measurement unit that comprises a larger unit within a measurement system (e.g., inches/foot, centimeter/meter, minutes/hour).	
I Can Statements			
MOST COMPLEX ←		→ LEAST COMPLEX	
A.4.MD.1.1 (A) Identify the smaller measurement unit that comprises a larger unit within a measurement system (e.g., inches/foot, centimeter/meter, minutes/hour).	A.4.MD.1.1 (B) Identify standard units of measurement (e.g., minutes make up hours, inches make up a foot, etc.).	A.4.MD.1.1 (C) Given two units of measurement, identify the smallest unit (e.g., an inch is smaller than a foot, a minute is smaller than an hour, etc.).	
Real World Connections: <ul style="list-style-type: none"> Select measuring cups and spoons when baking/cooking at home. Use units of measurement in daily life. (e.g., A motorist goes to the gas station and pumps 13 gallons—a measure of volume—into an automobile. To pay for the gas, the motorist uses dollars—another unit of measure, economic rather than scientific—in the form of paper money, a debit card, or a credit card.). 		Vocabulary <ul style="list-style-type: none"> Larger Measurement Smaller Unit 	
Resources: <ul style="list-style-type: none"> Websites, articles, and other collections <ul style="list-style-type: none"> Ducksters (ducksters.com) <ul style="list-style-type: none"> Kids Math Glossary and Terms: Units of Measurement BCcampus Open Publishing Pressbooks (Opentextbc.ca) <ul style="list-style-type: none"> Imperial and U.S. Systems of Measurement Howard County Public School System, Ellicott City, Maryland <ul style="list-style-type: none"> Grade 4 Measurement and Data (4.Md.1) About the Math, Learning Targets, and Rigor Activities <ul style="list-style-type: none"> Compare the smallest unit of measurement to the next largest unit of measure using manipulatives (e.g., hour/minute, week/day, year/month, yard/foot/inch, etc.) Select the measurement tool to measure units for weight, length, volume, time, etc. Videos <ul style="list-style-type: none"> YouTube by Lucky’s <ul style="list-style-type: none"> From Smallest to the Largest Units of Measurement Khan Academy (khanacademy.org) 			

COURSE: Alternate Mathematics 4th Grade

DOMAIN: Measurement and Data (MD)

CLUSTER: Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit.

- [Same Length in Different Units](#)
- [U.S. Customary Units: Distance](#)

COURSE: Alternate Mathematics 4th Grade

DOMAIN: Measurement and Data (MD)

CLUSTER: Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit.

Standard		Performance Objectives	
A.4.MD.2.a Tell time using a digital clock. Tell time to the nearest hour using an analog clock.		A.4.MD.2.a.1 Tell time using a digital clock. Tell time to the nearest hour using an analog clock.	
I Can Statements			
MOST COMPLEX ←		→ LEAST COMPLEX	
A.4.MD.2.a.1 (A) Tell time using a digital clock. Tell time to the nearest hour using an analog clock.	A.4.MD.2.a.1 (B) Tell time to the nearest hour using an analog clock.	A.4.MD.2.a.1 (C) Differentiate a digital and analog clock from other measurement tools as a tool for telling time.	
Real World Connections: <ul style="list-style-type: none"> • Make a schedule for planning important activities (e.g., get ready for school, catch the bus, go to bed, etc.) • Know when to leave for activities, (e.g., doctor’s appointment, sporting event, etc.) • Set a digital clock to set an alarm to get up in the morning. • Know when a TV show is aired. 		Vocabulary <ul style="list-style-type: none"> • Analog clock • Digital clock • Hour • Minute • Time • Nearest 	
Resources: <ul style="list-style-type: none"> ○ Websites, articles, and other collections <ul style="list-style-type: none"> ○ Class Ace (Classace.io) <ul style="list-style-type: none"> ▪ Learn to Read Digital Clocks ○ IXL Learning (IXL.com) <ul style="list-style-type: none"> ▪ 2nd Grade Math Skills Digital Clock ○ Education.com (education.com) <ul style="list-style-type: none"> ▪ What Time is It—Online Game ▪ Lesson Plan—Time to Tell Time: Showing and Writing Time ○ Activities <ul style="list-style-type: none"> ○ Make a clock out of a paper plate. ○ Match pictures of digital and analog clocks to each other that represent same time. ○ Ask students what the difference is between an analog clock and a digital clock. Ask them which clock is easier to use to tell time and why. Show the students the digital clock and explain that a digital clock shows the time with numbers. Point to the colon on the clock and explain that a colon is a punctuation mark used to separate the hours from the minutes in time. Explain to the students that the numbers on the left of the colon show the hour and the numbers on the right of the colon show the minutes. ○ Videos <ul style="list-style-type: none"> ○ YouTube by ChuChu School Learning Videos <ul style="list-style-type: none"> ▪ Telling Time for Children—Learning the Clock—Digital Clock and Analog Clock 			

COURSE: Alternate Mathematics 4th Grade

DOMAIN: Measurement and Data (MD)

CLUSTER: Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit.

- YouTube by Maendy Primary
 - [Reading and Understanding Digital Time](#)
- YouTube by Jack Hartmann Kids Music Channel
 - [This Is a Digital Clock | Digital Clock Song for Kids | Telling Time](#)

COURSE: Alternate Mathematics 4th Grade

DOMAIN: Measurement and Data (MD)

CLUSTER: Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit.

Standard		Performance Objectives	
A.4.MD.2.b Measure mass or volume using standard tools.		A.4.MD.2.b.1 Measure mass or volume using standard tools.	
I Can Statements			
MOST COMPLEX ←		→ LEAST COMPLEX	
A.4.MD.2.b.1 (A) Measure mass or volume using standard tools.	A.4.MD.2.b.1 (B) Select the appropriate measurement tool from two related options to solve problems.	A.4.MD.2.b.1 (C) Identify mass or volume measurement tools.	
Real World Connections: <ul style="list-style-type: none">• Measure ingredients when cooking.• Measure how much water you drink each day.• Use a produce scale at the grocery store to estimate the weight of produce.• Fill up a vehicle with gas.• Add the correct amount of liquid laundry detergent to the washing machine.		Vocabulary <ul style="list-style-type: none">• Mass• Measure• Standard tools• Volume	
Resources: <ul style="list-style-type: none">○ Websites, articles, and other collections<ul style="list-style-type: none">○ SplashLearn by Studypad, Inc. (splashlearn.com)<ul style="list-style-type: none">▪ Weight and Capacity—Customary Units—Practice○ Varsity Tutors (varsitytutors.com)<ul style="list-style-type: none">▪ Choosing Appropriate Units of Measure○ Class Ace (Classace.io)<ul style="list-style-type: none">▪ Learn About Measuring Tools○ Activities<ul style="list-style-type: none">○ Work with units like pounds and gallons or grams and liters to estimate the weight and volume of real-world objects.○ Use liquids, regular solids, and irregular solids to demonstrate that volume is a measure of how much space an object occupies.○ Display standard unit measurement tools and ask students to select the appropriate tool to measure solids, liquids, etc.○ Videos<ul style="list-style-type: none">○ YouTube by Region 10 ESC<ul style="list-style-type: none">▪ Measuring Volume○ YouTube by TurtleDiary<ul style="list-style-type: none">▪ Science for Kids: Measuring Video○ TurtleDiary (turtlediary.com)<ul style="list-style-type: none">▪ How to Measure Matter			

COURSE: Alternate Mathematics 4th Grade

DOMAIN: Measurement and Data (MD)

CLUSTER: Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit.

Standard		Performance Objectives	
A.4.MD.2.c Use standard measurement to compare lengths of objects.		A.4.MD.2.c.1 Use standard measurement to compare lengths of objects.	
I Can Statements			
MOST COMPLEX ←		→ LEAST COMPLEX	
A.4.MD.2.c.1 (A) Use standard measurement to compare lengths of objects.	A.4.MD.2.c.1 (B) Measure the length of objects using standard tools such as rulers, yardsticks, and meter sticks.	A.4.MD.2.c.1 (C) Identify items as long or short.	
Real World Connections: <ul style="list-style-type: none">• Measure the distance you will travel to visit your family member.• Measure the height and size of your waste.• Measure to compare the size of two objects.• Identify length as an attribute (e.g., That snake is long.).• Measure seed spacing when planting a garden.• Measure your growth over time.• Measure plants to compare growth.		Vocabulary <ul style="list-style-type: none">• Compare• Length Measure• Long• Measure• Short• Standard unit	
Resources: <ul style="list-style-type: none">○ Websites, articles, and other collections<ul style="list-style-type: none">○ janicenovkam.typepad.com<ul style="list-style-type: none">▪ Linear Measurement○ You've Got This Math<ul style="list-style-type: none">▪ 15 Task Cards to Help Students Practice Length Comparison○ K5 Learning (k5learning.com)<ul style="list-style-type: none">▪ 4th Grade Math Worksheets: Measurement○ Activities<ul style="list-style-type: none">○ Engage students in experiences that uncover their concept of measurement and use of language. If a student uses the term “big,” model and encourage the student to identify what is meant and what attribute is being described. Provide materials such as nesting toys for students to play with when comparing concepts.○ Compare lengths of manipulatives by measuring using a ruler.○ Videos<ul style="list-style-type: none">○ Khan Academy (khanacademy.org)<ul style="list-style-type: none">▪ Comparing Lengths○ YouTube by MatholiaChannel<ul style="list-style-type: none">▪ Comparing Length			

COURSE: Alternate Mathematics 4th Grade

DOMAIN: Measurement and Data (MD)

CLUSTER: Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit.

Standard		Performance Objectives	
A.4.MD.2.d Identify coins (e.g., penny, nickel, dime, quarter) and their values.		A.4.MD.2.d.1 Identify coins (e.g., penny, nickel, dime, quarter) and their values.	
I Can Statements			
MOST COMPLEX ←		→ LEAST COMPLEX	
A.4.MD.2.d.1 (A) Identify coins (e.g., penny, nickel, dime, quarter) and their values.		A.4.MD.2.d.1 (B) Match a coin to its corresponding value.	A.4.MD.2.d.1 (C) Select money from other items.
Real World Connections: <ul style="list-style-type: none"> Select the appropriate coins to pay for a good or service. Give change in coins to pay for items. 		Vocabulary <ul style="list-style-type: none"> Coin Dime Nickel Quarter Half-dollar Value 	
Resources: <ul style="list-style-type: none"> Websites, articles, and other collections <ul style="list-style-type: none"> U.S. Mint (usmint.gov) <ul style="list-style-type: none"> An Introduction to Coins Education.com (education.com) <ul style="list-style-type: none"> Identifying Coins Activities <ul style="list-style-type: none"> Practice coin identification and sorting coins by type. Play store to associate how coins are used in the real world and build an understanding of money in the real world. Videos <ul style="list-style-type: none"> Khan Academy (khanacademy.com) <ul style="list-style-type: none"> Counting American Coins Lucky Little Learners (luckylittlelearners.com) <ul style="list-style-type: none"> Videos That Teach Money YouTube by Rock 'N Learn <ul style="list-style-type: none"> Learn to Name and Count U.S. Coins YouTube by Homeschool Pop <ul style="list-style-type: none"> Coins for Kids Math Learning Video 			

COURSE: Alternate Mathematics 4th Grade

DOMAIN: Measurement and Data (MD)

CLUSTER: Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit.

Standard		Performance Objectives	
A.4.MD.3 Determine the area of a square or rectangle by counting units of measurement (e.g., unit squares).		A.4.MD.3.1 Determine the area of a square or rectangle by counting units of measurement (e.g., unit squares).	
I Can Statements			
MOST COMPLEX ←		→ LEAST COMPLEX	
A.4.MD.3.1 (A) Determine the area of a square or rectangle by counting units of measurement (e.g., unit squares).	A.4.MD.3.1 (B) Show how unit squares can be used to measure the area of a square or rectangle.	A.4.MD.3.1 (C) Show how unit squares can be used to measure a square.	
Real World Connections: <ul style="list-style-type: none"> • Measure the area of a garden. • Determine the area needed to construct a building. • Measure to figure out whether a piece of carpet will fit in your bedroom. 		Vocabulary <ul style="list-style-type: none"> • Area • Measure • Rectangle • Square • Unit • Unit squares 	
Resources: <ul style="list-style-type: none"> ○ Websites, articles, and other collections <ul style="list-style-type: none"> ○ Common Sense Education (commonsense.org) <ul style="list-style-type: none"> ▪ Perimeter and Area Real-World Practice ○ Class Ace (Classace.io) <ul style="list-style-type: none"> ▪ Learn About Area ○ Education.com (education.com) <ul style="list-style-type: none"> ▪ Online Game: Alfalfa's Out of the Box: Perimeter, Area, and Addition ○ Activities <ul style="list-style-type: none"> ○ Find the perimeter of a square or rectangle by adding side lengths. ○ Count unit squares to find the area of a square or rectangle. ○ Videos <ul style="list-style-type: none"> ○ Khan Academy (khanacademy.org) <ul style="list-style-type: none"> ▪ Counting Unit Squares to Find Area Formula ▪ Transitioning from Unit Squares to Area Formula ○ YouTube by mathantics <ul style="list-style-type: none"> ▪ Math Antics—Area ○ YouTube by EasyTeaching <ul style="list-style-type: none"> ▪ An Introduction to Area Teaching Maths 			

COURSE: Alternate Mathematics 4th Grade

DOMAIN: Measurement and Data (MD)

CLUSTER: Geometric measurement: Understand concepts of angle and measure angles

Standard	Performance Objectives	
A.4.MD.4.a Represent data on a picture or bar graph given a model and a graph to complete.	A.4.MD.4.a.1 Represent data on a picture or bar graph given a model and a graph to complete.	
I Can Statements		
MOST COMPLEX ←—————→ LEAST COMPLEX		
A.4.MD.4.a.1 (A) Represent data on a picture or bar graph given a model and a graph to complete.	A.4.MD.4.a.1 (B) Identify the data that should be entered on a picture or bar graph given a model.	A.4.MD.4.a.1 (C) Identify the parts of a picture or bar graph.
Real World Connections: <ul style="list-style-type: none">Recall how many different animals are seen on a nature walk.Show the ages of family members.	Vocabulary <ul style="list-style-type: none">Bar graphDataPicture graph	
Resources: <ul style="list-style-type: none">Websites, articles, and other collections<ul style="list-style-type: none">Better Lesson (betterlesson.com)<ul style="list-style-type: none">Make Picture GraphsEducation.com (education.com)<ul style="list-style-type: none">Worksheet—Pick a Flower PictographTeacherVision (teachervision.com)<ul style="list-style-type: none">Explaining How to Make a Bar GraphLearnZillion (learnzillion.com)<ul style="list-style-type: none">Draw Picture Graphs to Represent DataActivities<ul style="list-style-type: none">Using a bowl of fruit, organize data; create a key, title, and labels; then draw the picture graph.Direct students to Think-Pair-Share to explain the purpose of a bar graph portraying animals at the zoo.Videos<ul style="list-style-type: none">YouTube by Freckle by Renaissance<ul style="list-style-type: none">[2.MD.10] Picture and Bar GraphsKhan Academy (khanacademy.org)<ul style="list-style-type: none">Picture GraphsMaking Picture Graphs and Line PlotsCreating picture and Bar Graphs		

COURSE: Alternate Mathematics 4th Grade

DOMAIN: Measurement and Data (MD)

CLUSTER: Geometric measurement: Understand concepts of angle and measure angles

Standard		Performance Objectives	
A.4.MD.4.b Using vocalization, sign language, augmentive communication, or assistive technology, interpret the data from a picture or bar graph.		A.4.MD.4.b.1 Interpret the data from a picture or bar graph.	
I Can Statements			
MOST COMPLEX ←		→ LEAST COMPLEX	
A.4.MD.4.b.1 (A) Interpret the data from a picture or bar graph.	A.4.MD.4.b.1 (B) Identify the data from a picture or bar graph.	A.4.MD.4.b.1 (C) Identify the parts of a picture or bar graph.	
Real World Connections: <ul style="list-style-type: none"> • Explain the data from a picture graph that shows how many different animals are seen on a nature walk. • Describe the ages of family members shown in a bar graph. • Compare monthly sales at the school store using a bar graph. • Describe sports statistics shown in a bar graph. 		Vocabulary <ul style="list-style-type: none"> • Bar graph • Data • Picture graph 	
Resources: <ul style="list-style-type: none"> ○ Websites, articles, and other collections <ul style="list-style-type: none"> ○ Better Lesson (betterlesson.com) <ul style="list-style-type: none"> ▪ Make Picture Graphs ▪ Pick a Flower Pictograph ○ Education.com (education.com) <ul style="list-style-type: none"> ▪ Worksheet—Pick a Flower Pictograph ○ TeacherVision (teachervision.com) <ul style="list-style-type: none"> ▪ Explaining How to Make a Bar Graph ○ LearnZillion (learnzillion.com) <ul style="list-style-type: none"> ▪ Draw Picture Graphs to Represent Data ○ Activities <ul style="list-style-type: none"> ○ Using a bowl of fruit, organize data; create a key, title, and labels; then draw the picture graph. ○ Direct students to Think-Pair-Share to explain the purpose of a bar graph portraying animals at the zoo. ○ Videos <ul style="list-style-type: none"> ○ YouTube by Freckle by Renaissance <ul style="list-style-type: none"> ▪ [2.MD.10] Picture and Bar Graphs ○ Khan Academy (khanacademy.org) <ul style="list-style-type: none"> ▪ Picture Graphs 			

COURSE: Alternate Mathematics 4th Grade

DOMAIN: Measurement and Data (MD)

CLUSTER: Geometric measurement: Understand concepts of angle and measure angles

- [Making Picture Graphs and Line Plots](#)
- [Creating Picture and Bar Graphs](#)

COURSE: Alternate Mathematics 4th Grade

DOMAIN: Measurement and Data (MD)

CLUSTER: Geometric measurement: Understand concepts of angle and measure angles

Standard		Performance Objectives	
A.4.MD.5 Recognize angles in geometric shapes.		A.4.MD.5.1 Recognize angles in geometric shapes.	
I Can Statements			
MOST COMPLEX ←		→ LEAST COMPLEX	
A.4.MD.5.1 (A) Recognize angles in geometric shapes.	A.4.MD.5.1 (B) Identify shapes that contain angles.	A.4.MD.5.1 (C) Identify an angle.	
Real World Connections: <ul style="list-style-type: none">• Notice angles such as in spider webs, the letters in your name, and building/architecture/construction.• Cut a pizza into slices and notice the angles.		Vocabulary <ul style="list-style-type: none">• Angles• Geometric• Shapes	
Resources: <ul style="list-style-type: none">○ Websites, articles, and other collections<ul style="list-style-type: none">○ Better Lesson (betterlesson.com)<ul style="list-style-type: none">▪ Angle and line art○ Internet4Classrooms (internet4classrooms.com)<ul style="list-style-type: none">▪ Online Lessons - Recognize angles as geometric shapes that are formed wherever two rays share a common endpoint, and understand concepts of angle measurement:○ Education.com (education.com)<ul style="list-style-type: none">▪ Worksheet—Shapes with Right Angles○ Activities<ul style="list-style-type: none">○ Draw an angular picture of a dog or cat then have students identify each of the angles.○ Draw pictures of stick people and have students find the angles.○ Discuss the angles in a pizza cut into pieces.○ Videos<ul style="list-style-type: none">○ YouTube by NUMBEROCK<ul style="list-style-type: none">▪ Angles Song Acute, Obtuse, & Right Angles 3rd & 4th Grade○ EG Videos (egvideos.com)<ul style="list-style-type: none">▪ New York—Grade 4—Math—Measurement and Data—Angles—4.MD.5○ YouTube by Khan Academy<ul style="list-style-type: none">▪ Recognizing Angles Geometry 4th Grade▪ Shapes and Angles			

COURSE: Alternate Mathematics 4th Grade

DOMAIN: Measurement and Data (MD)

CLUSTER: Geometric measurement: Understand concepts of angle and measure angles

Standard		Performance Objectives	
A.4.MD.6 Identify angles as larger and smaller.		A.4.MD.6.1 Identify angles as larger and smaller.	
I Can Statements			
MOST COMPLEX ←		→ LEAST COMPLEX	
A.4.MD.6.1 (A) Identify angles as larger and smaller.	A.4.MD.6.1 (B) Identify a right angle.	A.4.MD.6.1 (C) Identify an angle.	
Real World Connections: <ul style="list-style-type: none"> • Find angles in nature. • Find angles in building structures. • Find angles in the food you eat. 		Vocabulary <ul style="list-style-type: none"> • Angle • Larger • Right angle • Smaller 	
Resources: <ul style="list-style-type: none"> ○ Websites, articles, and other collections <ul style="list-style-type: none"> ○ Education.com (education.com) <ul style="list-style-type: none"> ▪ Classifying Angles Resources ▪ Lesson Plan—All About Angles ○ Helping with Math (helpingwithmath.com) <ul style="list-style-type: none"> ▪ Measuring Angles ○ Activities <ul style="list-style-type: none"> ○ Once students understand what an angle is, challenge them to find and sort angles (i.e., smaller/larger). ○ Set up themed stations around the room with photographs of items (e.g., aquarium, a park, amusement park, a city, the beach, etc.). Make a worksheet with matching pictures of the photographs for students to use to find and identify angles in the photographs. Provide students with colored pencils or thin-tipped markers to record the angles on the worksheet's pictures. ○ Videos <ul style="list-style-type: none"> ○ YouTube by Alton Price <ul style="list-style-type: none"> ▪ Where are the Largest and Smallest Angles in Triangles? ○ Khan Academy (khanacademy.org) <ul style="list-style-type: none"> ▪ Identify the Angle ▪ Recognizing Angles 			

No alternate standard for 4.MD.7

COURSE: Alternate Mathematics 4th Grade

DOMAIN: Geometry (G)

CLUSTER: Draw and identify lines and angles, and classify shapes by properties of their lines and angles

Standard		Performance Objectives	
A.4.G.1 Recognize parallel lines and intersecting lines.		A.4.G.1.1 Recognize parallel lines and intersecting lines.	
I Can Statements			
MOST COMPLEX ←		→ LEAST COMPLEX	
A.4.G.1.1 (A) Recognize parallel lines and intersecting lines.	A.4.G.1.1 (B) Identify an intersecting line.	A.4.G.1.1 (C) Identify a line.	
Real World Connections: <ul style="list-style-type: none"> • Read symbols on maps. • Sort items according to attributes. • Draw pictures using different shapes. • Design artwork with various shapes. 		Vocabulary <ul style="list-style-type: none"> • Intersecting • Lines • Parallel 	
Resources: <ul style="list-style-type: none"> ○ Websites, articles, and other collections <ul style="list-style-type: none"> ○ K5 Learning (k5learning.com) <ul style="list-style-type: none"> ▪ Parallel and Perpendicular Lines ○ DadsWorksheets LLC (dadsworksheets.com) <ul style="list-style-type: none"> ▪ Basic Geometry: Parallel, Perpendicular, Intersecting ○ Tutoring Hour (tutoringhour.com) <ul style="list-style-type: none"> ▪ Parallel and Perpendicular Lines Worksheets ○ Common Core Sheets (commoncoresheets.com) <ul style="list-style-type: none"> ▪ Common Core Sheets—Identifying Lines ○ Math Worksheets 4 Kids (mathworksheets4kids.com) <ul style="list-style-type: none"> ▪ Parallel, Perpendicular and Intersecting Lines Worksheets ○ Class Ace (classace.io) <ul style="list-style-type: none"> ▪ Learn About Parallel, Perpendicular and Intersecting Lines ○ Activities <ul style="list-style-type: none"> ○ Use a map to show parallel and intersecting lines. ○ Find intersecting and parallel lines in the school environment (e.g., sidewalks, concrete walls, etc.). ○ Videos <ul style="list-style-type: none"> ○ Online Math Learning Resources (OnlineMathLearning.com) <ul style="list-style-type: none"> ▪ Pairs of Lines 			

COURSE: Alternate Mathematics 4th Grade

DOMAIN: Geometry (G)

CLUSTER: Draw and identify lines and angles, and classify shapes by properties of their lines and angles

○ NUMBEROCK (numberock.com)

▪ [Types of Lines](#)

COURSE: Alternate Mathematics 4th Grade

DOMAIN: Geometry (G)

CLUSTER: Draw and identify lines and angles, and classify shapes by properties of their lines and angles

Standard		Performance Objectives	
A.4.G.2 Using vocalization, sign language, augmentive communication, or assistive technology, describe the defining attributes of two-dimensional shapes (e.g., number of sides, number of angles).		A.4.G.2.1 Describe the defining attributes of two-dimensional shapes (e.g., number of sides, number of angles).	
I Can Statements			
MOST COMPLEX ←		→ LEAST COMPLEX	
A.4.G.2.1 (A) Describe the defining attributes of two-dimensional shapes (i.e., number of sides, number of angles).	A.4.G.2.1 (B) Sort shapes by defining attributes (i.e., number of sides, number of angles).	A.4.G.2.1 (C) Match shapes (e.g., squares, rectangles, circles, triangles).	
Real World Connections: <ul style="list-style-type: none"> • Read symbols on maps. • Sort items based upon attributes. • Draw pictures using different shapes. • Design artwork with various shapes. • Identify angles in real life. 		Vocabulary <ul style="list-style-type: none"> • Angles • Attributes • Circle • Hexagon • Octagon • Pentagon • Rectangle • Sides • Square • Triangle • Two-dimensional shapes 	
Resources: <ul style="list-style-type: none"> ○ Websites, articles, and other collections <ul style="list-style-type: none"> ○ Math Worksheets Land (mathworksheetsland.com) <ul style="list-style-type: none"> ▪ Making Two-Dimensional Shapes—Guided Lesson ▪ Making Two-Dimensional Shapes—Guided Lesson Explanation ▪ Making Two-Dimensional Shapes—Independent Practice ▪ Making Two-Dimensional Shapes—Step-by-Step Lesson ○ EasyTeaching (easyteaching.net) <ul style="list-style-type: none"> ▪ 2D Shape Worksheets ▪ Angles Worksheets ○ Parentingscience.com <ul style="list-style-type: none"> ▪ Tangrams for Kids: Educational Tips and a Printable Tangram Template ○ Math 4 Texas Education Service Center Region 11 (Math4texas.org) <ul style="list-style-type: none"> ▪ Two-Dimensional Shapes ○ Activities <ul style="list-style-type: none"> ○ Use flashcards to describe the defining attributes of two-dimensional shapes (e.g., number of sides, number of angles). ○ Play “Guess who?” using shapes. 			

COURSE: Alternate Mathematics 4th Grade

DOMAIN: Geometry (G)

CLUSTER: Draw and identify lines and angles, and classify shapes by properties of their lines and angles

- Find shapes in real work areas.
- **Videos**
 - Khan Academy (khanacademy.org)
 - [Recognizing Shapes](#)

COURSE: Alternate Mathematics 4th Grade

DOMAIN: Geometry (G)

CLUSTER: Draw and identify lines and angles, and classify shapes by properties of their lines and angles

Standard		Performance Objectives	
A.4.G.3 Recognize that lines of symmetry partition shapes into equal areas.		A.4.G.3.1 Recognize that lines of symmetry partition shapes into equal areas.	
I Can Statements			
MOST COMPLEX ←		→ LEAST COMPLEX	
A.4.G.3.1 (A) Recognize that lines of symmetry partition shapes into equal areas.		A.4.G.3.1 (B) Divide a shape into equal halves (e.g., fold, draw, cut, etc.).	A.4.G.3.1 (C) Put two equal halves of a shape together to make a whole.
Real World Connections: <ul style="list-style-type: none">• Find lines of symmetry using boundary lines on maps.• Find lines of symmetry in pictures of buildings.• Design a play area depicting lines of symmetry with manipulatives.• Fine the lines of symmetry on highway center stripes.		Vocabulary <ul style="list-style-type: none">• Equal• Line of symmetry• Mirror image• Partitioned• Shapes• Symmetry	
Resources: <ul style="list-style-type: none">○ Websites, articles, and other collections<ul style="list-style-type: none">○ Math Worksheets 4 Kids (mathworksheets4kids.com)<ul style="list-style-type: none">▪ Symmetry Worksheets○ Education.com (education.com)<ul style="list-style-type: none">▪ Lines of Symmetry Resources○ SparkleBox (sparklebox.co.uk)<ul style="list-style-type: none">▪ Symmetry Teaching Resources○ EasyTeaching (easyteaching.net)<ul style="list-style-type: none">▪ Symmetry Worksheets○ Activities<ul style="list-style-type: none">○ Create symmetrical necklaces and bracelets.○ Use sticky notes and a mirror and have students look for symmetry in letters.○ Use inkblots to show symmetry.○ Videos<ul style="list-style-type: none">○ YouTube by Melissa Morey<ul style="list-style-type: none">▪ Symmetry○ YouTube by Periwinkle<ul style="list-style-type: none">▪ Line of Symmetry Maths for Kids○ YouTube by NUMEROCK<ul style="list-style-type: none">▪ Symmetry Song for Kids A Day at Symmetry Land Lines of Symmetry			

COURSE: Alternate Mathematics 4th Grade

DOMAIN: Geometry (G)

CLUSTER: Draw and identify lines and angles, and classify shapes by properties of their lines and angles

COURSE: Alternate Mathematics 5th Grade

DOMAIN: Operations and Algebraic Thinking (OA)

CLUSTER: Analyze patterns and relationships

Standard		Performance Objectives	
A.5.OA.3 Identify and extend numerical patterns (e.g., given the rule “Add 3” and the starting number 0).		A.5.OA.3.1 Identify and extend numerical patterns. (e.g., given the rule “Add 3” and the starting number 0).	
I Can Statements			
MOST COMPLEX ←		→ LEAST COMPLEX	
A.5.OA.3.1 (A) Identify and extend numerical patterns. (e.g., given the rule “Add 3” and the starting number 0).	A.5.OA.3.1 (B) Extend a numerical pattern.	A.5.OA.3.1 (C) Repeat a numerical pattern.	
Real World Connections: <ul style="list-style-type: none"> • Make triangles with sticks. • Notice a tree trunk branching off from one trunk to three branches to six smaller branches. • Set a table with three forks. 		Vocabulary <ul style="list-style-type: none"> • Add • Extend • Pattern • Repeat • Sequence 	
Resources: <ul style="list-style-type: none"> ○ Websites, articles, and other collections <ul style="list-style-type: none"> ○ The Teacher Studio (theteacherstudio.com) <ul style="list-style-type: none"> ▪ Teaching Patterns and Patterning in Upper Grades ○ Kidskonnect (kidskonnet.com) <ul style="list-style-type: none"> ▪ How to Teach Kids Number Patterns and Sequences (+5 worksheet bundles to lean on) ○ Activities <ul style="list-style-type: none"> ○ Find patterns in printed fabric. Discuss the terms of the patterns. ○ Use manipulatives to demonstrate different types of number patterns. ○ Videos <ul style="list-style-type: none"> ○ Khan Academy (khanacademy.org) <ul style="list-style-type: none"> ▪ Finding Patterns in Numbers ○ YouTube by MsBashforth <ul style="list-style-type: none"> ▪ Grade 4 Math Lesson on Extending Number Patterns (1.2) ○ YouTube by JoAnn’s School <ul style="list-style-type: none"> ▪ Grade 4 Math 5.6, What are Patterns and Terms? 			

COURSE: Alternate Mathematics 5th Grade

DOMAIN: Number and Operations in Base Ten (NBT)

CLUSTER: Understand the place value system

Standard		Performance Objectives	
A.5.NBT.1 Compare base-10 models up to 99 using symbols (<, >, =).		A.5.NBT.1.1 Compare base-10 models up to 99 using symbols (<, >, =).	
I Can Statements			
MOST COMPLEX ←		→ LEAST COMPLEX	
A.5.NBT.1.1 (A) Compare base-10 models up to 99 using symbols (<, >, =).	A.5.NBT.1.1 (B) Compare base-10 models up to 50 using symbols (<, >, =).	A.5.NBT.1.1 (C) Identify less than, greater than, or equal to symbols (<, >, =).	
Real World Connections: <ul style="list-style-type: none"> • Use dimes and pennies to make connections to place value and bundling groups of 10. • Add and subtract using base-10 blocks and models. • Recognize concrete objects to indicate the number system used (e.g., base-10 blocks, rods representing a group of 10, etc.) • Compare bags of candy for a party. 		Vocabulary <ul style="list-style-type: none"> • Base-10 • Equal to • Greater than • Less than 	
Resources: <ul style="list-style-type: none"> ○ Websites, articles, and other collections <ul style="list-style-type: none"> ○ Illustrative Mathematics (Tasks.illustrativemathematics.org) <ul style="list-style-type: none"> ▪ Using Pictures to Explain Number Comparisons ○ LearnZillion (learnzillion.com) <ul style="list-style-type: none"> ▪ Model and Write Numbers Using Base-10 Blocks ○ Cortney Ward Jacobs Road Elementary School (learningwardinstruction.wordpress.com) <ul style="list-style-type: none"> ▪ Place Value ○ Georgia Standards of Excellence Curriculum Frameworks <ul style="list-style-type: none"> ▪ GSE First Grade Unit 5: Understanding Place Value ○ Hand to Mind (hand2mind.com) <ul style="list-style-type: none"> ▪ Learning About Base-10 Blocks ○ Alisal Union School District, Salinas, California (alisal.org) <ul style="list-style-type: none"> ▪ Grade 2—Module 3 Place Value, Counting, and Comparison of Numbers to 1,000 ○ National Council of Teachers of Mathematics (nctm.org) <ul style="list-style-type: none"> ▪ Base-10 and Place Value NCTM Interactive Institute, 2015 ○ Keeping My Kiddo Busy Educational Activities for Toddlers—Primary Students (keepingmykiddobusy.com) <ul style="list-style-type: none"> ▪ Kindergarten Math—Teen Numbers and Place Value ○ Activities <ul style="list-style-type: none"> ○ Practice place value by collecting objects, placing them on the mat, and bundling when possible. ○ Given two numbers, indicate which one is greater or less, or which comes first or last. 			

COURSE: Alternate Mathematics 5th Grade

DOMAIN: Number and Operations in Base Ten (NBT)

CLUSTER: Understand the place value system

- Decompose numbers by place value and compare by tens and ones (e.g., Two 10s and three ones combined is 23 ones).
- Compose numbers based on place value and compare to another number on the number line.
- Compare two numbers with different numbers in the tens place (e.g., 20 compared to 60 on the number line and explain 20 has two 10s or 20 ones and 60 is made of six 10s or 60 ones as it is written).
- Demonstrate the difference between two numbers using dimes (e.g., 10 compared to 50).
- Compare two numbers on a table of ones and tens.
- **Videos**
 - Mississippi Public Broadcasting Learning Media (mpb.pbslearningmedia.org)
 - [Number & Operations in Base-10](#)
 - Khan Academy.(khanacademy.org)
 - [Comparing Multi-Digit Numbers](#)
 - LearnZillion (learnzillion.com)
 - [Model and Write Numbers Using Base-10 Blocks](#)
 - Two Boys and a Dad (twoboysandadad.com)
 - [Ideas on How to Effectively Teach Place Value in a Virtual Setting](#)

COURSE: Alternate Mathematics 5th Grade

DOMAIN: Number and Operations in Base Ten (NBT)

CLUSTER: Understand the place value system

Standard		Performance Objectives	
A.5.NBT.2 Use the number of zeros in numbers that are powers of 10 to determine which values are equal, greater than, or less than.		A.5.NBT.2.1 Use the number of zeros in numbers that are powers of 10 to determine which values are equal, greater than, or less than.	
I Can Statements			
MOST COMPLEX ←		→ LEAST COMPLEX	
A.5.NBT.2.1 (A) Use the number of zeros in numbers that are powers of 10 to determine which values are equal, greater than, or less than.	A.5.NBT.2.1 (B) Order multiples of 10 in sequential order of least to greatest (e.g., 10, 100, 1,000, etc.).	A.5.NBT.2.1 (C) Count the zeros in a given number.	
Real World Connections: <ul style="list-style-type: none"> • Represent numbers starting with a one and followed by only zeros (such 10, 100, 1,000, 10,000, etc.) as powers of 10, the result of multiplying 10 times itself any number of times. • Extend patterns in the number of zeros when multiplying by the powers of 10. • Keep up with your points for a video game. 		Vocabulary <ul style="list-style-type: none"> • Values • Powers of 10 • Number zero 	
Resources: <ul style="list-style-type: none"> ○ Websites, articles, and other collections <ul style="list-style-type: none"> ○ John Wiley & Sones. Inc.(dummies.com) <ul style="list-style-type: none"> ▪ Counting Zeros and Writing Exponents ▪ Exponents and Powers of 10 Patterns ○ Duvall County Public Schools, Jacksonville, Florida (dcps.cuvalschools.org) <ul style="list-style-type: none"> ▪ Lesson 7 Understand Powers of 10 ○ Activities <ul style="list-style-type: none"> ○ Arrange numbers in order when presented with out of order tens place value number cards. ○ Indicate the next correct number in the sequence when presented with numbers 10, 100, ___. ○ Given 10 dimes, count from 10 to 100 by tens and indicate that is \$1. ○ Videos <ul style="list-style-type: none"> ○ Khan Academy (khanacademy.org) <ul style="list-style-type: none"> ▪ Introduction to Powers of 10 ○ YouTube by Math and Science <ul style="list-style-type: none"> ▪ Multiply by Powers of 10—5th Grade Math 			

COURSE: Alternate Mathematics 5th Grade

DOMAIN: Number and Operations in Base Ten (NBT)

CLUSTER: Understand the place value system

Standard		Performance Objectives	
A.5.NBT.3 Compare whole numbers up to 100 using symbols (<, >, =).		A.5.NBT.3.1 Compare whole numbers up to 100 using symbols (<, >, =).	
I Can Statements			
MOST COMPLEX ←		→ LEAST COMPLEX	
A.5.NBT.3.1 (A) Compare whole numbers up to 100 using symbols (<, >, =).	A.5.NBT.3.1 (B) Compare whole numbers up to 50 using symbols (<, >, =).	A.5.NBT.3.1 (C) Identify less than, greater than, or equal to symbols (<, >, =).	
Real World Connections: <ul style="list-style-type: none">• Count and compare the coins in your piggy bank.• Compare Little League scores.• When using your allowance to buy something, determine if you have saved enough allowance to make the purchase.• When shopping for groceries, select the box of with more cherries.		Vocabulary <ul style="list-style-type: none">• Compare• Greater than• Equal to• Less than• Symbols• Whole numbers	
Resources: <ul style="list-style-type: none">○ Websites, articles, and other collections<ul style="list-style-type: none">○ HomeSchoolMath.net (homeschoolmath.net)<ul style="list-style-type: none">▪ Which Number is Greater?○ Teachers Pay Teachers (teacherspayteachers.com)—subscription required<ul style="list-style-type: none">▪ Comparing Whole Numbers Using Symbols○ Super Teacher Worksheets (superteacherworksheets.com)<ul style="list-style-type: none">▪ Greater Than/less Than Worksheets○ Activities<ul style="list-style-type: none">○ Using a pegboard with pegs placed in the holes divided into two different sets, indicate which has more or less.○ Given two sets of manipulatives, one with five and another with a different number, indicate if second set is more or less than five.○ Given three pennies and five pennies, choose which is more.○ Given a number line, indicate if two or four is closer to five.○ Given a number between one and nine, indicate if the number is closer to zero or 10.○ Using a number line, indicate if given number is closer to zero or 10.○ Videos<ul style="list-style-type: none">○ Study.com (study.com)<ul style="list-style-type: none">▪ How to Compare Numbers with Math Symbols			

COURSE: Alternate Mathematics 5th Grade

DOMAIN: Number and Operations in Base Ten (NBT)

CLUSTER: Understand the place value system

- YouTube by Math & Learning Videos 4 Kids
 - [Comparing Numbers—Greater Than Less Than](#)
- YouTube by Math Songs by NUMBEROCK
 - [Comparing Numbers to 100 Song | Kindergarten-1st Grade](#)
- Khan Academy (khanacademy.org)
 - [Comparing Multi-Digit Numbers](#)

COURSE: Alternate Mathematics 5th Grade
 DOMAIN: Number and Operations in Base Ten (NBT)
 CLUSTER: Understand the place value system

Standard	Performance Objectives	
A.5.NBT.4 Round two-digit whole numbers to the nearest 10 from 0-90.	A.5.NBT.4.1 Round two-digit whole numbers to the nearest 10 from 0-90.	
I Can Statements		
MOST COMPLEX ←—————→ LEAST COMPLEX		
A.5.NBT.4.1 (A) Round two-digit whole numbers to the nearest 10 from 0-90.	A.5.NBT.4.1 (B) Round two-digit whole numbers to the nearest 10 from 0-50.	A.5.NBT.4.1 (C) Identify 10s to 50.
Real World Connections: <ul style="list-style-type: none"> Round whole numbers to specific place values (e.g., Estimate the cost of produce that is \$1.25 a pound by rounding its weight to the nearest pound.). Determine which pizza place is closest to your present location by rounding the distance. Estimate how many people will visit the museum on a given Saturday. 	Vocabulary <ul style="list-style-type: none"> Nearest Rounding Ones place Two-digit Whole number 	
Resources: <ul style="list-style-type: none"> ○ Websites, articles, and other collections <ul style="list-style-type: none"> ○ Math is Fun by Rod Pierce(Mathsisfun.com) <ul style="list-style-type: none"> ▪ Rounding Numbers ○ Monterey Institute for Technology and Education, the NROC Project (montereyinstitute.org) <ul style="list-style-type: none"> ▪ Rounding Whole Numbers ○ Iknowit (Iknowit.com) <ul style="list-style-type: none"> ▪ Rounding to the Nearest Ten (Up to 99) ○ Activities <ul style="list-style-type: none"> ○ Choose the card with the correct answer after being presented a three-digit number and told to round to nearest hundreds place value. ○ Given a three-digit number, communicate (i.e., speak, type, etc.) the answer by rounding to the nearest hundreds place value. ○ Given a number between 1-89 and cards with the answer on one, pick the correct number when asked to round to nearest 10. ○ Using a number line, round to the nearest 10. ○ Given a number between one and nine, indicate if the number is closer to zero or 10. ○ Using a number line, indicate if a given number is closer to zero or 10. ○ Using a pegboard with pegs placed in the holes divided into two different sets, indicate which has more or less. ○ Presented two sets, one with five and another with a different number, indicate if second set is more or less than five. 		

COURSE: Alternate Mathematics 5th Grade

DOMAIN: Number and Operations in Base Ten (NBT)

CLUSTER: Understand the place value system

- Presented with three pennies and five pennies, choose which is more.
- Given a number line, indicate if two or four is closer to five.
- **Videos**
 - LearnZillion (learnzillion.com)
 - [Round in Real-Life Situations](#)
 - Khan Academy (khanacademy.org)
 - [Rounding to Nearest 10 and 100](#)
 - Cortney Ward Jacobs Road Elementary School (learningwardinstruction.wordpress.com)
 - [Rounding](#)
 - Online Math Learning Resources (OnlineMathLearning.com)
 - [Rounding to Tens or Hundreds \(Grade 3\)](#)

COURSE: Alternate Mathematics 5th Grade

DOMAIN: Number and Operations in Base Ten (NBT)

CLUSTER: Perform operations with multi-digit whole numbers and with decimals to the hundredths place

Standard		Performance Objectives	
A.5.NBT.5 Multiply whole numbers up to 5×5 .		A.5.NBT.5.1 Multiply whole numbers to 5×5 .	
I Can Statements			
MOST COMPLEX ←		→ LEAST COMPLEX	
A.5.NBT.5.1 (A) Multiply whole numbers up to 5×5 .	A.5.NBT.5.1 (B) Use repeated addition to show multiplication up to 5×5 .	A.5.NBT.5.1 (C) Use concrete representations to show repeated addition up to 5×5 .	
Real World Connections: <ul style="list-style-type: none">• A recipe calls for $\frac{1}{3}$ cup of flour. If you double the recipe, how much flour do you need?• You collect one bag of leaves and your friend collected five times as many bags. How many bags did your friend collect?• Divide shares of prizes between friends.• Split up money earned in a group project.		Vocabulary <ul style="list-style-type: none">• Multiply• Multiplication• Whole number	
Resources: <ul style="list-style-type: none">○ Websites, articles, and other collections<ul style="list-style-type: none">○ Varsity Tutors (Varsitytutors.com)<ul style="list-style-type: none">▪ Multiplication: Whole Numbers▪ Common Core: 5th Grade Math: Solve Real-World Problems Involving Multiplication of Fractions and Mixed Numbers: CCSS.Math.Content.5.NF.B.6 Study Concepts, Example Questions & Explanations for Common Core: 5th Grade Math○ Tarheelstate Teacher, LLC (tarheelstateteacher.com)<ul style="list-style-type: none">▪ Multiplying Whole Numbers: Ideas for 4th and 5th Grade○ SplashLearn by Studypad, Inc. (splashlearn.com)<ul style="list-style-type: none">▪ Multiplication Games for 5th Graders○ Matific Digital Math Platform (matific.com)<ul style="list-style-type: none">▪ Chapter 2: Multiply Whole Numbers Activities & Worksheets○ Activities<ul style="list-style-type: none">○ Create multiplication game boards for two-by-one, three-by-one, four-by-one, two-by-two, and three-by-two digit multiplication.○ When asked what 4×4 equals, identify 16 from an array of choices.○ Add $2+2+2$ to justify 2×3.○ Given a picture of a garden with two rows of five carrot plants in each, identify $5+5$.○ Given pictures of five cars, arrange them into one row.○ Count four chairs in a row.○ Videos<ul style="list-style-type: none">○ YouTube by Math with Mr. J			

COURSE: Alternate Mathematics 5th Grade

DOMAIN: Number and Operations in Base Ten (NBT)

CLUSTER: Perform operations with multi-digit whole numbers and with decimals to the hundredths place

- [Multiplying Whole Numbers \(Part 2\) | 5th Grade Math](#)
- YouTube by TenMarks Amazon
 - [Multiply Whole Numbers: 5.NBT.5](#)

COURSE: Alternate Mathematics 5th Grade

DOMAIN: Number and Operations in Base Ten (NBT)

CLUSTER: Perform operations with multi-digit whole numbers and with decimals to the hundredths place

Standard		Performance Objectives	
A.5.NBT.6-7 Illustrate the concept of division using fair and equal shares.		A.5.NBT.6-7.1 Illustrate the concept of division using fair and equal shares. (i.e., fold paper in equal shares).	
I Can Statements			
MOST COMPLEX ←		→ LEAST COMPLEX	
A.5.NBT.6-7.1 (A) Illustrate the concept of division using fair and equal shares (i.e., fold paper in equal shares).	A.5.NBT.6-7.1 (B) Construct equal sets.	A.5.NBT.6-7.1 (C) Replicate an equal set from a model.	
Real World Connections: <ul style="list-style-type: none"> • Divide up snacks to make sure each friend gets an equal share. • Count the money earned in a group project and divide it to give each group member an equal share. 		Vocabulary <ul style="list-style-type: none"> • Division • Equal • Fair • Illustrate 	
Resources: <ul style="list-style-type: none"> ○ Websites, articles, and other collections <ul style="list-style-type: none"> ○ Fig Leaf Promotions Limited as Maths No Problem (mathsnoproblem.com) <ul style="list-style-type: none"> ▪ Exploring the Difference Between Equal Sharing and Equal Grouping in Division ○ PBS Kids (pbskids.org) <ul style="list-style-type: none"> ▪ Fair Sharing ○ SplashLearn by Studypad, Inc. (splashlearn.com) <ul style="list-style-type: none"> ▪ Equal Shares—Definition with Examples ○ Parent Homework Help by Laurie Laurendeau (parent-homework-help.com) <ul style="list-style-type: none"> ▪ Beginning Division: Concept of Equal Sharing ○ Activities <ul style="list-style-type: none"> ○ Given a set of three objects, finding a matching set. ○ Divide a snack equally among classmates. ○ Divide a square piece of paper equally among classmates. ○ Given 10 counting cubes divided among three students, recognize when students have the same number (i.e., equal share) and when students do not have the same number (i.e., unequal share). ○ Divide classmates into equal teams. ○ Divide a quantity into equal shares (e.g., “If I find \$10, how could five people share this?” $10 \div 5 = 2$ [division structure partitive/fair shares]). ○ Use sorting trays and colored blocks to construct equal sets. ○ Use an organizer to group or partition objects into two or more sets. ○ Create a model of equal sets by counting the objects in each set. ○ Videos 			

COURSE: Alternate Mathematics 5th Grade

DOMAIN: Number and Operations in Base Ten (NBT)

CLUSTER: Perform operations with multi-digit whole numbers and with decimals to the hundredths place

- YouTube by Learningvids4kids
 - [How to Share Equally—Introduction to Division](#)
- YouTube by Ramy Melhem
 - [Dividing by Sharing](#)

COURSE: Alternate Mathematics 5th Grade

DOMAIN: Number and Operations – Fractions (NF)

CLUSTER: Use equivalent fractions as a strategy to add and subtract fractions

Standard		Performance Objectives	
A.5.NF.1 Identify models of halves (e.g., 1/2, 2/2) and fourths (e.g., 1/4, 2/4, 3/4, 4/4).		A.5.NF.1.1 Identify models of halves (e.g., 1/2, 2/2) and fourths (e.g., 1/4, 2/4, 3/4, 4/4).	
I Can Statements			
MOST COMPLEX ←		→ LEAST COMPLEX	
A.5.NF.1.1 (A) Identify models of halves (e.g., 1/2, 2/2) and fourths (e.g., 1/4, 2/4, 3/4, 4/4).	A.5.NF.1.1 (B) Identify models of 1/4, 2/4, 3/4, and 4/4.	A.5.NF.1.1 (C) Select the whole and the parts.	
Real World Connections: <ul style="list-style-type: none"> • Use fractions when measuring lumber to build things. • Explore fractions in measurements while baking. • Distribute a pizza between two or four people • Split a bill while eating at a restaurant. • Make sure you have enough gas in your tank to make it to your destination (e.g., 1/2 tank, 1/4 tank). 		Vocabulary <ul style="list-style-type: none"> • Fourths • Fractions • Halves • Identify • Part • Whole 	
Resources: <ul style="list-style-type: none"> ○ Websites, articles, and other collections <ul style="list-style-type: none"> ○ Rader’s Numbernut.com (numbernut.com) <ul style="list-style-type: none"> ▪ Finding Fractions Around You ○ Smartick University of Oxford (smartick.com) <ul style="list-style-type: none"> ▪ Learn About Fractions: Halves, Thirds and Fourths ○ OK Math and Reading Lady by Cindy Elkins, Educational Consultant (cindyelkins.edublogs.org) <ul style="list-style-type: none"> ▪ Fractions Part I: Basics K-2nd Grade ○ Math 4 Texas Education Service Center Region 11 (Math4texas.org) <ul style="list-style-type: none"> ▪ Understanding Halves and Fourths. ○ Activities <ul style="list-style-type: none"> ○ Cut a pizza in half, then fourths, and discuss how two pieces make a whole and four pieces make a whole. ○ Explain how you might share half of your hamburger with a friend by dividing it in half. ○ Videos <ul style="list-style-type: none"> ○ YouTube by Tuesgray <ul style="list-style-type: none"> ▪ Fractions in Real Life with Ms. Gray ○ YouTube by Boddle Learning <ul style="list-style-type: none"> ▪ Identify Halves, Thirds, and Fourths—2nd Grade Math (2.G.3) ○ Khan Academy (khanacademy.org) 			

COURSE: Alternate Mathematics 5th Grade

DOMAIN: Number and Operations – Fractions (NF)

CLUSTER: Use equivalent fractions as a strategy to add and subtract fractions

- [Divide into Halves, Fourths](#)

COURSE: Alternate Mathematics 5th Grade

DOMAIN: Number and Operations – Fractions (NF)

CLUSTER: Use equivalent fractions as a strategy to add and subtract fractions

Standard		Performance Objectives	
A.5.NF.2 Identify models of thirds (e.g., $\frac{1}{3}$, $\frac{2}{3}$, $\frac{3}{3}$) and tenths (e.g., $\frac{1}{10}$, $\frac{2}{10}$, $\frac{3}{10}$, $\frac{4}{10}$, $\frac{5}{10}$, $\frac{6}{10}$, $\frac{7}{10}$, $\frac{8}{10}$, $\frac{9}{10}$, $\frac{10}{10}$).		A.5.NF.2.1 Identify models of thirds (e.g., $\frac{1}{3}$, $\frac{2}{3}$, $\frac{3}{3}$) and tenths (e.g., $\frac{1}{10}$, $\frac{2}{10}$, $\frac{3}{10}$, $\frac{4}{10}$, $\frac{5}{10}$, $\frac{6}{10}$, $\frac{7}{10}$, $\frac{8}{10}$, $\frac{9}{10}$, $\frac{10}{10}$).	
I Can Statements			
MOST COMPLEX ←		→ LEAST COMPLEX	
A.5.NF.2.1 (A) Identify models of thirds (e.g., $\frac{1}{3}$, $\frac{2}{3}$, $\frac{3}{3}$) and tenths (e.g., $\frac{1}{10}$, $\frac{2}{10}$, $\frac{3}{10}$, $\frac{4}{10}$, $\frac{5}{10}$, $\frac{6}{10}$, $\frac{7}{10}$, $\frac{8}{10}$, $\frac{9}{10}$, $\frac{10}{10}$).	A.5.NF.2.1 (B) Identify models of $\frac{1}{3}$, $\frac{2}{3}$, $\frac{3}{3}$.	A.5.NF.2.1 (C) Recognize that fractions are part of a whole.	
Real World Connections: <ul style="list-style-type: none"> • Use fractions when measuring lumber to build things. • Explore fractions in measurements while baking. • Distribute a pizza between two or four people • Split a bill while eating at a restaurant. • Make sure you have enough gas in your tank to make it to your destination (e.g., $\frac{1}{3}$ tank, $\frac{2}{3}$ tank). 		Vocabulary <ul style="list-style-type: none"> • Fractions • Identify • Part • Thirds • Whole 	
Resources: <ul style="list-style-type: none"> ○ Websites, articles, and other collections <ul style="list-style-type: none"> ○ Rader’s Numbernut.com (numbernut.com) <ul style="list-style-type: none"> ▪ Finding Fractions Around You ○ Smartick University of Oxford (smartick.com) <ul style="list-style-type: none"> ▪ Learn About Fractions: Halves, Thirds, and Fourths ○ OK Math and Reading Lady by Cindy Elkins, Educational Consultant (cindyelkins.edublogs.org) <ul style="list-style-type: none"> ▪ Fractions Part I: Basics K-2nd Grade ○ Activities <ul style="list-style-type: none"> ○ Cut a pizza into half, then each half into 3 slices, and discuss how two pieces make a whole and six pieces make a whole. ○ Explain how you might share a third of your cookie with a friend by dividing it into three equal pieces. ○ Videos <ul style="list-style-type: none"> ○ YouTube by Tuesgray <ul style="list-style-type: none"> ▪ Fractions in Real Life with Ms. Gray ○ YouTube by Boddle Learning <ul style="list-style-type: none"> ▪ Identify Halves, Thirds, and Fourths—2nd Grade Math (2.G.3) ○ Khan Academy (khanacademy.org) 			

COURSE: Alternate Mathematics 5th Grade

DOMAIN: Number and Operations – Fractions (NF)

CLUSTER: Use equivalent fractions as a strategy to add and subtract fractions

- [Intro to Division](#)
- [Divide by 3](#)

No alternate standard for 5.NF.3-7

COURSE: Alternate Mathematics 5th Grade

DOMAIN: Measurement and Data (MD)

CLUSTER: Convert like measurement units within a given measurement system

Standard		Performance Objectives	
A.5.MD.1.a Tell time using an analog or digital clock to the half or quarter hour.		A.5.MD.1.a.1 Tell time using an analog or digital clock to the half or quarter hour.	
I Can Statements			
MOST COMPLEX ←		→ LEAST COMPLEX	
A.5.MD.1.a.1 (A) Tell time using an analog or digital clock to the half or quarter hour.	A.5.MD.1.a.1 (B) Tell time to the half hour using a digital clock and to the half hour using an analog clock.	A.5.MD.1.a.1 (C) Select the hour represented using a digital clock (e.g., Point to the clock that says 3 o'clock.).	
Real World Connections: <ul style="list-style-type: none"> Carry out daily routines on time. Know when to get up in the morning, when to go to bed, when to eat breakfast, lunch, etc. Leave for activities on time (e.g., doctor’s appointment, sporting event, etc.) Know when a TV show is aired. 		Vocabulary <ul style="list-style-type: none"> Analog clock Digital clock Half hour Quarter hour Time 	
Resources: <ul style="list-style-type: none"> Websites, articles, and other collections <ul style="list-style-type: none"> Education.com (education.com) <ul style="list-style-type: none"> Lesson Plan—Time to Tell Time: Showing and Writing Time Online Game—What Time is It? Class Ace (classace.io) <ul style="list-style-type: none"> Learn to Read Digital Clocks Reading Analog Clocks ESL Kidstuff (eslkidstuff.com) <ul style="list-style-type: none"> Daily Routines & Times of the Day Lesson Plan NRICH in the Millennium Mathematics Project University of Cambridge (nrich.maths.org) <ul style="list-style-type: none"> Times of Day Activities <ul style="list-style-type: none"> Teach time by the hour, half-hour, and quarter-hour with fun activities (e.g., a clock puzzle, an hour “scoot” game, a time picture sort, etc.). Create a picture gram using pictures of a digital clock and an analog clock to teach students to tell time to the hour, half-hour, and quarter-hour. Videos <ul style="list-style-type: none"> Khan Academy (khanacademy.org) <ul style="list-style-type: none"> Telling Time 1 			

COURSE: Alternate Mathematics 5th Grade

DOMAIN: Measurement and Data (MD)

CLUSTER: Convert like measurement units within a given measurement system

- [Telling Time on a Clock](#)
- YouTube by Boodle Learning
 - [How to Tell and Write Time \(Digital and Analog Clocks\)—1st Grade Math \(1.MD.3\)](#)

COURSE: Alternate Mathematics 5th Grade

DOMAIN: Measurement and Data (MD)

CLUSTER: Convert like measurement units within a given measurement system

Standard		Performance Objectives	
A.5.MD.1.b Use standard units to measure the weight and length of objects.		A.5.MD.1.b.1 Use standard units to measure the weight and length of objects.	
I Can Statements			
MOST COMPLEX ←		→ LEAST COMPLEX	
A.5.MD.1.b.1 (A) Use standard units to measure the weight and length of objects.	A.5.MD.1.b.1 (B) Identify standard units of measurement for weight and length.	A.5.MD.1.b.1 © Identify which tools are used to measure weight and length.	
Real World Connections: <ul style="list-style-type: none"> • Use a produce scale at the grocery store. • Measure distance when taking a road trip. 		Vocabulary <ul style="list-style-type: none"> • Length • Measure • Weight 	
Resources: <ul style="list-style-type: none"> ○ Websites, articles, and other collections <ul style="list-style-type: none"> ○ Varsity Tutors (Varsitytutors.com) <ul style="list-style-type: none"> ▪ Choosing Appropriate Units of Measure ○ Education.com (education.com) <ul style="list-style-type: none"> ▪ Measuring Volume ▪ How Much Does It Weigh? ○ Class Ace (Classace.io) <ul style="list-style-type: none"> ▪ Learn About Measuring Tools ○ Activities <ul style="list-style-type: none"> ○ Use a weighted scale and balance scales to find out how much objects weigh (mass). ○ Use a spring scale to measure the weight of objects. ○ Use a ruler to measure the length of manipulatives. ○ Use a yardstick to measure the height of a chair. ○ Videos <ul style="list-style-type: none"> ○ Khan Academy (khanacademy.org) <ul style="list-style-type: none"> ▪ Understanding Mass (Grams and Kilograms) ○ YouTube by Turtlediary <ul style="list-style-type: none"> ▪ Science for Kids: Measuring Matter Video ○ YouTube by LearnFatafat <ul style="list-style-type: none"> ▪ Mass and Volume Measurement 			

COURSE: Alternate Mathematics 5th Grade

DOMAIN: Measurement and Data (MD)

CLUSTER: Convert like measurement units within a given measurement system

Standard		Performance Objectives	
A.5.MD.1.c Indicate the relative value of collections of coins.		A.5.MD.1.c.1 Indicate the relative value of collections of coins.	
I Can Statements			
MOST COMPLEX ←		→ LEAST COMPLEX	
A.5.MD.1.c.1 (A) Indicate the relative value of collections of coins.	A.5.MD.1.c.1 (B) Identify coins (i.e., penny, nickel, dime, quarter) and their values.	A.5.MD.1.c.1 (C) Match coins (i.e., penny, nickel, dime, quarter) that are of equal value.	
Real World Connections: <ul style="list-style-type: none"> • Learn how to purchase things at a store. • Select the appropriate coins to pay for a good or service. • Give change in coins to pay for items. • Predict how much your club will make selling candy at a sporting event. 		Vocabulary <ul style="list-style-type: none"> • Coins • Collections • Dime • Nickle • Penny • Quarter • Value 	
Resources: <ul style="list-style-type: none"> ○ Websites, articles, and other collections <ul style="list-style-type: none"> ○ MCK Kentucky Center for Math(kentuckymathmatics.org) <ul style="list-style-type: none"> ▪ Teaching the Values of Coins ○ U.S. Mint (usmint.gov) <ul style="list-style-type: none"> ▪ An Introduction to Coins ○ Education.com (education.com) <ul style="list-style-type: none"> ▪ Identifying Coins ○ Activities <ul style="list-style-type: none"> ○ Practice coin identification and sorting coins by type. Using penny candy, show how many pieces of candy each coin would purchase. ○ Play store to associate how coins are used in the real world and build an understanding of money in the real world. ○ Videos <ul style="list-style-type: none"> ○ Khan Academy (khanacademy.com) <ul style="list-style-type: none"> ▪ Counting American Coins ○ Lucky Little Learners (luckylittlelearners.com) <ul style="list-style-type: none"> ▪ Videos That Teach Money ○ YouTube by Rock 'N Learn <ul style="list-style-type: none"> ▪ Learn to Name and Count U.S. Coins ○ YouTube by Homeschool Pop <ul style="list-style-type: none"> ▪ Coins for Kids Math Learning Video 			

COURSE: Alternate Mathematics 5th Grade

DOMAIN: Measurement and Data (MD)

CLUSTER: Represent and interpret data.

Standard		Performance Objectives	
A.5.MD.2 Represent and interpret data on a picture, line plot, or bar graph.		A.5.MD.2.1 Represent and interpret data on a picture, line plot, or bar graph.	
I Can Statements			
MOST COMPLEX ←		→ LEAST COMPLEX	
A.5.MD.2.1 (A) Represent and interpret data on a picture, line plot, or bar graph.	A.5.MD.2.1 (B) Represent data on a picture, line plot, or bar graph.	A.5.MD.2.1 (C) Identify a picture, line plot, or a bar graph.	
Real World Connections: <ul style="list-style-type: none"> • Measure plants for growth comparison. • Explain the data from a picture graph that shows how many different animals are seen on a nature walk. • Describe the ages of family members shown in a bar graph. • Compare monthly sales at the school store using a bar graph. • Describe sports statistics shown in a bar graph. 		Vocabulary <ul style="list-style-type: none"> • Bar graph • Data • Line plot • Picture graph 	
Resources: <ul style="list-style-type: none"> ○ Websites, articles, and other collections <ul style="list-style-type: none"> ○ Better Lesson (betterlesson.com) <ul style="list-style-type: none"> ▪ Make Picture Graphs ▪ Pick a Flower Pictograph ○ Education.com (education.com) <ul style="list-style-type: none"> ▪ Worksheet—Pick a Flower Pictograph ○ TeacherVision (teachervision.com) <ul style="list-style-type: none"> ▪ Explaining How to Make a Bar Graph ○ LearnZillion (learnzillion.com) <ul style="list-style-type: none"> ▪ Draw Picture Graphs to Represent Data ○ Activities <ul style="list-style-type: none"> ○ Using a bowl of fruit, organize data; create a key, title, and labels; then draw the picture graph. ○ Direct student to Think-Pair-Share to explain the purpose of a bar graph portraying animals at the zoo. ○ Videos <ul style="list-style-type: none"> ○ YouTube by Freckle by Renaissance <ul style="list-style-type: none"> ▪ [2.MD.10] Picture and Bar Graphs 			

COURSE: Alternate Mathematics 5th Grade

DOMAIN: Measurement and Data (MD)

CLUSTER: Represent and interpret data.

- Khan Academy (khanacademy.org)
 - [Picture Graphs](#)
 - [Making Picture Graphs and Line Plots](#)
 - [Creating Picture and Bar Graphs](#)

COURSE: Alternate Mathematics 5th Grade

DOMAIN: Measurement and Data (MD)

CLUSTER: Geometric measurement: Understand concepts of volume and relate volume to multiplication and to addition

Standard		Performance Objectives	
A.5.MD.3 Identify common three-dimensional shapes (e.g., sphere, cylinder, cone).		A.5.MD.3.1 Identify common three-dimensional shapes (e.g., sphere, cylinder, cone).	
I Can Statements			
MOST COMPLEX ←		→ LEAST COMPLEX	
A.5.MD.3.1 (A) Identify common three-dimensional shapes (e.g., sphere, cylinder, cone).	A.5.MD.3.1 (B) Identify two or more three-dimensional shapes (e.g., sphere, cylinder, cone).	A.5.MD.3.1 (C) Identify a sphere.	
Real World Connections: <ul style="list-style-type: none"> Identify basic types of three-dimensional shapes to better understand shape, size, etc. (e.g., basketball, building, flagpole, etc.) Observe and spot three-dimensional shapes around you. Locate three-dimensional shapes in nature. Find shapes in architecture. 		Vocabulary <ul style="list-style-type: none"> Cone Cylinder Three-dimensional Shape Sphere 	
Resources: <ul style="list-style-type: none"> Websites, articles, and other collections <ul style="list-style-type: none"> SplashLearn by Studypad, Inc. (splashlearn.com) <ul style="list-style-type: none"> Three-Dimensional Shapes BYJU's (byjus.com) <ul style="list-style-type: none"> Three-Dimensional Shapes Skills You Need (skillsyouneed.com) <ul style="list-style-type: none"> Three-Dimensional Shapes: Polyhedrons, Curved Solids, and Surface Area Activities <ul style="list-style-type: none"> Have students observe and spot things around them that have three-dimensional shapes. Make a picture graph that shows the various three-dimensional shapes and allow students to list the major characteristics beside each shape. Videos <ul style="list-style-type: none"> Khan Academy (khanacademy.org) <ul style="list-style-type: none"> Recognizing Shapes YouTube by Learning Time Fun <ul style="list-style-type: none"> 3D Shapes for Kids 3D Shapes Names Geometric Shapes Math for Kids 3D Shapes YouTube by Jack Hartmann Kids Music Channel <ul style="list-style-type: none"> 3D Shapes Song for Kids Learn About 3D Shapes 			

COURSE: Alternate Mathematics 5th Grade

DOMAIN: Measurement and Data (MD)

CLUSTER: Geometric measurement: Understand concepts of volume and relate volume to multiplication and to addition

Standard		Performance Objectives	
A.5.MD.4-5 Determine the volume of a rectangular prism by counting units of measurement (e.g., unit cubes).		A.5.MD.4-5.1 Determine the volume of a rectangular prism by counting units of measurement (e.g., unit cubes).	
I Can Statements			
MOST COMPLEX ←		→ LEAST COMPLEX	
A.5.MD.4-5.1 (A) Determine the volume of a rectangular prism by counting units of measurement (e.g., unit cubes).	A.5.MD.4-5.1 (B) Match rectangular prisms of the same volume.	A.5.MD.4-5.1 (C) Identify rectangular prisms.	
Real World Connections: <ul style="list-style-type: none"> Estimate how much space you need in a drawer to store certain items. Figure out how much space is inside something. Build and fill up rectangular garden planters. 		Vocabulary <ul style="list-style-type: none"> Prism Rectangular Volume Unit cube Units of measurement 	
Resources: <ul style="list-style-type: none"> Websites, articles, and other collections <ul style="list-style-type: none"> Education.com (education.com) <ul style="list-style-type: none"> Lesson Plan—Volume and Rectangular Prisms Math Solutions by Marilyn Burns (mathsolutions.com) <ul style="list-style-type: none"> Volume of Rectangular Prisms Activities <ul style="list-style-type: none"> Measure a cube using the three dimensions to determine the volume and compare your answer by filling the cube with unit cubes. Videos <ul style="list-style-type: none"> YouTube by JoAnn’s School <ul style="list-style-type: none"> Grade 5 Math #11.7, Find Volume with Cube Units (Rectangular Prism) Khan Academy (khanacademy.org) <ul style="list-style-type: none"> Volume of a Rectangular Prism 			

COURSE: Alternate Mathematics 5th Grade

DOMAIN: Geometry (G)

CLUSTER: Graph points on the coordinate plane to solve real-world and mathematical problems

Standard		Performance Objectives	
A.5.G.1-4 Sort two-dimensional figures and identify the attributes (e.g., angles, number of sides, corners, color) they have in common.		A.5.G.1-4.1 Sort two-dimensional figures and identify the attributes (e.g., angles, number of sides, corners, color) they have in common.	
I Can Statements			
MOST COMPLEX ←		→ LEAST COMPLEX	
A.5.G.1-4.1 (A) Sort two-dimensional figures and identify the attributes (e.g., angles, number of sides, corners, color) they have in common.	A.5.G.1-4.1 (B) Sort two-dimensional figures by attributes (e.g., angles, number of sides, corners, color) they have in common.	A.5.G.1-4.1 (C) Match two-dimensional figures with one common attribute (e.g., angles, number of sides, corners, color).	
Real World Connections: <ul style="list-style-type: none"> • Match building blocks to assemble a project. • Sort items in the pantry (e.g., matching colors, shapes, etc.). • Draw pictures of two-dimensional figures with similar characteristics. • Use two-dimensional figures to design things. 		Vocabulary <ul style="list-style-type: none"> • Angles • Attributes • Circle • Hexagon • Octagon • Pentagon • Rectangle • Sides • Square • Triangle • Two-dimensional shapes 	
Resources: <ul style="list-style-type: none"> ○ Websites, articles, and other collections <ul style="list-style-type: none"> ○ Math Worksheets Land (mathworksheetsland.com) <ul style="list-style-type: none"> ▪ Making Two-Dimensional Shapes—Guided Lesson ▪ Making Two-Dimensional Shapes—Guided Lesson Explanation ▪ Making Two-Dimensional Shapes—Independent Practice ▪ Making Two-Dimensional Shapes—Step-by-Step Lesson ○ EasyTeaching (easyteaching.net) <ul style="list-style-type: none"> ▪ 2D Shape Worksheets ▪ Angles Worksheets ○ Parentingscience.com <ul style="list-style-type: none"> ▪ Tangrams for Kids: Educational Tips and a Printable Tangram Template ○ Math 4 Texas Education Service Center Region 11 (Math4texas.org) 			

COURSE: Alternate Mathematics 5th Grade

DOMAIN: Geometry (G)

CLUSTER: Graph points on the coordinate plane to solve real-world and mathematical problems

- [Two-Dimensional Shapes](#)

- **Activities**

- Use flashcards to describe the defining attributes of two-dimensional shapes (e.g., number of sides, number of angles).
- Play “Guess who?” using shapes.
- Find shapes in real world areas.

- **Videos**

- Khan Academy (khanacademy.org)

- [Recognizing Shapes](#)