

Common Core Instructional Tools:

For special education teachers whose students will be assessed using the next generation of alternate assessment based on alternate achievement standards. These materials align with the Common Core State Standards and the Dynamic Learning Maps Essential Elements and are created specifically for use with students with severe cognitive disabilities.



Mathematics

Grade: HS Consumer Math



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This resource is the result of a collaborative effort of North Dakota Teachers, the Dynamics Learning Maps Alternate Assessment Consortium materials, the North Dakota Curriculum Initiative project, and the North Dakota Department of Public Instruction. We would like to thank the following educators for their dedication and diligence in working on these instructional materials to provide tools to help special education teachers whose students will take the alternate assessment based on alternate achievement standards and the Common Core State Standards.

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Resources:

- **Common Core State Standards** documents at http://www.dpi.state.nd.us/standard/common_core.shtm
- **North Dakota Curriculum Initiative** documents at http://ndcurriculuminitiative.org/common_core
- **Dynamic Learning Maps**<http://dynamiclearningmaps.org/>
Common Core Essential Elements and Assessment Achievement Level Descriptors
Dynamic Learning Maps Essential Elements Versions 1 and 2
- **Kansas State Education Department** website: <http://www.ksde.org/>
- **Microsoft Office Clip Art**

Document Description:

This document is arranged by grade level so that teachers can access a single grade or multiple grades as needed. These materials are based on the Common Core State Standards and align with the Dynamic Learning Maps Essential Elements. North Dakota is a member of the Dynamic Learning Maps (DLM) Consortium of states creating the next generation of alternate assessments based on alternate achievement standards for assessing students with severe cognitive disabilities.

These materials are created by North Dakota teachers, for teachers, to assist them in accessing the Common Core State Standards in a meaningful fashion. Our goal was to provide teachers of students with severe cognitive disabilities with tools to get them started with the Common Core. They are intended to be tools for teachers to start with and build upon within their own local curriculum. They are not mandatory, but because they are linked to the DLM Essential Elements, they may be helpful in teaching the new standards which will begin to be assessed in 2014-15.

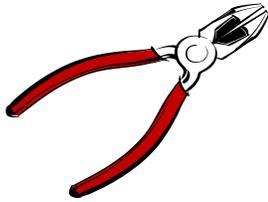
These tools are:

- ✓ Resources for teachers to use to access the Common Core State Standards (CCSS)
- ✓ Linked to the Dynamic Learning Maps (DLM) "Essential Elements"
- ✓ Ideas for learning activities based on CCSS
- ✓ Ideas on how to collect data on student performance
- ✓ Ideas on how to plan collaboration activities with general educators
- ✓ Resources to plan for "Communication Opportunities" for students who are learning a communication mode

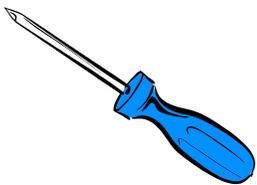
These tools are not:

- ✓ Not meant for test preparation purposes
- ✓ Not mandatory for use by educators
- ✓ Not meant to serve as curriculum

TOOLS FOR TEACHERS



Element Cards - A collection of Common Core State Standards materials specific to the Dynamic Learning Maps Essential Elements at each grade. These are meant to provide you with instructional ideas, key vocabulary, real world connections, and mapping of the concept the grade before and the grade after.



Educator Collaboration Plan - Planning sheets to prepare students for communication needs and for data collection in general education settings. Communication is key in teaching and assessing all students and especially those with severe cognitive disabilities. If a student does not have a consistent and reliable means of communicating what he/she knows and is able to do, it is very difficult to measure progress. More importantly, lack of a consistent communication system (high tech, low tech, or no tech) will affect the student's entire life in a negative way.



"I Can" Checklist - data sheet template for teacher use.



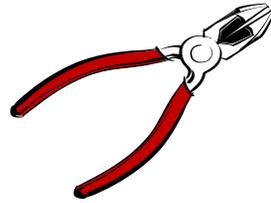
Website Resources - lists of web addresses where a variety of educational ideas can be found.

Element Card-Tool #1

Grade 6 ELA

Strand: Reading Literature

Cluster: Key Ideas and Details



(Element card number) **RL.6.1**

Standard RL.6.1: Cite textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text. (This is the grade level Common Core State Standard for this concept)	Essential Element: Analyze the text to determine what it says explicitly and what inferences must be drawn. (An Essential Element is a term used by Dynamic Learning Maps Consortium identifying 'specific knowledge and skills linked to the grade-level expectations identified in the Common Core State Standards')
Grade 5 Expectations: (What is related to this standard in the prior grade)	Grade 7 Expectations: (What is related to this standard in the next grade)
I Can Statements: (Statements of measures of specific skills related to this standard)	
Key Vocabulary: (Grade level vocabulary related to specific content in this standard)	Supports (specific to student): (IEP accommodations, assistive technology, communication system, visual aids, templates, active board, highlighters, etc.)
Instructional Examples: (Examples of activities that can be done to address this skill such as modeling, small group discussions, etc.)	
Real World Connections: (Activities from everyday life that relate to the content of this standard)	
Resources: (Educational materials or websites that can be accessed for ideas that may support this standard)	

Note: If the Essential Element says "Not Applicable" that means that the Dynamic Learning Maps Consortium did not address this Essential Element.

If the Essential Element says "See EE of a different number" (e.g. S-ID.2) that means that there is another Element Card that addresses some of this standard.

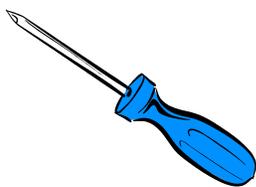
The Essential Elements are highlighted to indicate the importance of their focus.

These are the **Dynamic Learning Maps Claims and Conceptual Areas in Mathematics**.

This document was used by ND teachers who worked on these Tools. The Element cards may correlate or in some cases may not. High School divided the math documents into Consumer Math (measurement and data analysis and number sense), Algebra, and Geometry.

<p>Claim 1</p>	<p>Number Sense: Students demonstrate increasingly complex understanding of number sense.</p> <p>Conceptual Areas in the Dynamic Learning Map:</p> <p>MC 1.1 Understand number structures (counting, place value, fraction) <i>Essential Elements Included:</i> K.CC.1.4 ,5; 1.NBT.1a-b; 2.NBT.2a-b,3; 3.NBT.1,2,3; 4.NBT.3; 3.NF.1-3; 4.NF.1-2,3; 5.NF.1,2; 6.RP.1; 7.RP.1-3; 7.NS.2.c-d; M.EE.8.NS.2.a</p> <p>MC 1.2 Compare, compose, and decompose numbers and sets <i>Essential Elements Included:</i> K.CC.6; 1.NBT.2, 3, 4, 6; 2.NBT.1, 4, 5b; 4.NBT.1, 2; 5.NBT.1, 2, 3, 4; 6.NS.1, 5-8; 7.NS.3; 8.NS.2.b; 8.EE.1-4</p> <p>MC 1.3 Calculate accurately and efficiently using simple arithmetic operations <i>Essential Elements Included:</i> 2.NBT.5.a, 6-7; 3.OA.4; 4.NBT.4, 5, 6-7; 6.NS.2, 3; 7.NS.1, 2a, 2b; 8.NS.1;8.EE.1; HS.N-CN.2, 2.a, 2.b; HS.N-RN.1; HS.S-CP.1-5; HS.S-IC.1-22</p>
<p>Claim 2</p>	<p>Geometry: Students demonstrate increasingly complex spatial reasoning and understanding of geometric principles.</p> <p>Conceptual Areas in the Dynamic Learning Map:</p> <p>MC 2.1 Understand and use geometric properties of two- and three-dimensional shapes <i>Essential Elements Included:</i> K.MD.1; K.G.2-3; 1.G.1, 2; 2.G.1; 3.G.1; 4.G.1, 2, 2a, 2b; 5.G.1-4; 5.MD.3; 7.G.1, 2, 3, 5; 8.G.1, 2, 4, 5; HS.G-CO.1, 4-5; 6-8; HS.G-GMD.1-3, 4</p> <p>MC 2.2 Solve problems involving area, perimeter, and volume <i>Essential Elements Included:</i> 1.G.3; 3.G.2; 4.G.3; 4.MD.2; 5.MD.4-5; 6.G.1, 2; 7.G.4, 6; 8.G.9; HS.G-GMD.1-3; HS.G-GPE.7</p>
<p>Claim 3</p>	<p>Measurement Data and Analysis: Students demonstrate Increasingly complex understanding of measurement, data, and analytic procedures.</p> <p>Conceptual Areas in the Dynamic Learning Map:</p> <p>MC 3.1 Understand and use measurement principles and units of measure <i>Essential Elements Included:</i> 1.MD.1-2, 3a, 3b, 3c, 3d; 2.MD.1, 3-4, 5, 6, 7, 8; 3.MD.1, 2, 4; 4.MD.1, 2a, 2b, 2c, 2e; 5.MD.1a, 1b, 1c; HS.N-Q.1-3</p> <p>MC 3.2 Represent and interpret data displays <i>Essential Elements Included:</i> 1.MD.4; 2.MD.9-10; 3.MD.3; 4.MD.4a, 4b; 5.MD.2; 6.SP.1-2, 5; 7.SP.1-2, 3, 5-7; 8.SP.4; HS.S-ID. 1-2, 3, 4</p>
<p>Claim 4</p>	<p>Algebraic and functional reasoning: Students solve increasingly complex mathematical problems, making productive use of algebra and functions.</p> <p>Conceptual Areas in the Dynamic Learning Map:</p> <p>MC 4.1. Use operations and models to solve problems <i>Essential Elements Included:</i> K.OA.1, 1a, 1b, 2, 5a, 5b; 2.OA.1, 3, 4; 3.OA.1-2, 8; 4.OA.1-2, 3, 4; 6.EE.1-2, 3, 5-7; 7.EE.1-2, 4; 8.EE.7; HS.A-CED.1, 2-4; HS.A-SSE.1, 3</p> <p>MC 4.2 Understand patterns and functional thinking <i>Essential Elements Included:</i> 3.OA.9; 4.OA.5; 5.OA.3; 7.EE.3; 8.EE.5-6; 8.F.1-3, 4, 5; HS.A-REI.10-12; HS.A-SSE.4; HS.F-BF.1, 2; HS.F-IF.1-3, 4-6; HS.F-LE.1</p>

A-CED= creating equations; A-SSE = seeing structure in equations BF= building functions; CC= counting & cardinality; EE = expressions & equations; F-BF = basic fractions; F-IF = interpreting functions; G = geometry; G-GMD=geometric measurement & dimension; G-GPE = general properties & equations: MD= measurement & data; NBT= numbers and operations in base ten; N-CN=complex number system; NF= numbers & operations - fractions; N-RN=real number system; NS= number systems; N-Q= number & quantity; OA = operations & algebraic thinking; RP = ratios & proportional relationships; S-IC- statistics & probability - making inferences/justifying conclusions; S-ID=statistics & probability – interpreting categorical & quantitative data: SP = statistics & probability



Tool # 2 - Educator Collaboration Plan:

This plan is a tool that can be utilized to prepare students and their paraprofessionals for fuller participation in general education classes and an increased communication expectation.

Remember - If communication is planned for, it is much more likely to happen.

Keep the student's Speech Pathologist in the loop so he/she can support and participate in these collaboration efforts.

Suggested Use of this tool:

Meet with the general education teacher once a week (maybe the Thursday before) and identify what concepts he/she will be covering the following week.

1. Fill in the first box (Monday through Friday) with the gen. ed. class lesson plan concepts. (See Sample)
2. Discuss Common Core State Standards (CCSS) being covered. Fill in box two. (See Sample)
3. Communication Plan: Identify the concepts and key words that will be covered in each lesson and identify what you want the student to be able to communicate in class. (See Sample)

Discuss with gen. ed. teacher which concepts student needs to answer during class. Identify (for example) two specific questions he/she will ask the student so the teacher knows ahead of time. If the plan is that the student needs to answer two questions during class every day and the questions are determined ahead of time (so the answers can be made available for the student to use) then expecting student participation becomes second nature.

Talker: preprogram it and allow student to practice ahead of time.

Pictures: prepare the pictures prior to class and practice.

Switches: program choices ahead of time and practice.

4. Identify what accommodations are listed in IEP to be used in the educational setting and make sure the student has them available. (See Sample)
5. Data Collection: Para collects data on the concepts. This can be a plus or minus per questions or item in this section. (See Sample)
6. Para or student brings an extra copy of the plan at the beginning of class on Monday. Para keeps the other copy as a working copy for the week. The copy needs to be brought back to you (special education teacher) so that you are aware of both the success and have data to work with. You will also be able to

see where the student excels or may be struggling. Share this data with the student's Speech Pathologist so he/she is aware of progress and possible problems.

7. Notes section allows Para to identify anything that needs to be brought to your attention. For example, student was distracted, or ill, or something interfered with the lesson getting finished. Para: Don't be afraid to remind the teacher in case he/she forgets to ask a question (even after the class has ended) rather than "just skipping it". Students need to be able to demonstrate their competence and it is not ok to have lower expectations for some students than others.

Educator Collaboration Plan

Gen. Ed. Contact: _____

Name: _____ Week Of: _____

Subject: _____

Gen Ed. Concepts Planned:

Mon.

Tues.

Wed.

Thurs.

Fri.

CCSS Addressed:

Communication Plan:

Mon.

Tues.

Wed

Thurs

Fri.

Accommodations in IEP:

Data Collection:

Mon. _____

Tues. _____

Wed. _____

Thurs. _____

Fri. _____

Notes:

Educator Collaboration PlanName: SampleWeek Of: Oct. 7 to 11, 2013Gen. Ed. Contact: Mrs. JonesSubject: Math

<p>Gen Ed. Concepts Planned:</p> <p>Mon. Fractions – whole, half, quarter</p> <p>Tues. Fractions – quarters, thirds 1/3, 2/3, 3/3 1/4, 2/4, 3/4, 4/4</p> <p>Wed. Halves, quarters, thirds review</p> <p>Thurs. Fractions project (demonstrate understanding of "equal parts" of a whole)</p> <p>Fri. Quiz on whole, halves, thirds, & quarters</p>	<p>CCSS Addressed:</p> <p>1.G.3 Partition circles and rectangles into two and four equal shares using the words halves, fourths, and quarters.</p>	<p>Communication Plan: Pre-program Alpha Talker daily before class (allow student to practice before class).</p> <p>Mon. "That is a whole" "whole" "That is a half" "one-half" That is a quarter" "one-quarter"</p> <p>Tues. " That is" "One-third" "two-thirds" "whole" "One-fourth" "one-half" "three-quarters"</p> <p>Wed. Same as Mon and Tues</p> <p>Thurs. "I have two fractions in my demonstration." "One half, and half of that is one fourth."</p> <p>Fri. Use words from Mon. and Tuesday for Quiz.</p>
<p>Accommodations in IEP:</p> <p>Alpha Talker is communication mode and requires that specific terms and sentences are programmed into the device prior to class.</p> <p>Para will accompany student to class and will be responsible to pre-program Talker with two specific answers according to the Collaboration Plan.</p> <p>Data will be collected on comm. performance and accuracy by Para.</p>	<p>Data Collection:</p> <p>Mon. whole__ half __ quarter__</p> <p>Tues. whole__ half__ 1/4__ 1/3__ 2/3__ 3/4__</p> <p>Wed. whole__ half__ 1/4__ 1/3__ 2/3__ 3/4__</p> <p>Thurs. half__ 1/4__ Used both sentences in demo __</p> <p>Fri. whole__ half__ 1/4__ 1/3__ 2/3__ 3/4__</p>	<p>Notes:</p> <p>Quiz (Friday) may need to be taken in an area where other students cannot hear the answers.</p> <p>Para writes student's answers and gen. ed. teacher corrects quiz.</p>



Tool # 4 - Resources

A Few Communication Resources (See also Resources at end of each grade)

1. <http://www.designtolearn.com>: A good site for introducing communication systems—knowing which ones to use, etc.
2. <http://www.alltogetherwecan.com/2008/06/02/ablenet-how-to-videos-step-by-step-with-levels/>: A set of videos on how to set up communication systems
3. http://www2.edc.org/NCIP/tour/Resources_PictureSym.html: A good overview of how to set up picture communication systems.
4. <http://www.pdictionary.com>: A large, easily searchable library of various pictures for instruction. This website may be used for students of various communication levels.
5. <http://www.tsbvi.edu/component/content/article/53/1116-tactile-symbols-directory-to-standard-tactile-symbol-list>: From Texas School for the Blind and Visually Impaired. This site offers information on developing and using tactile symbols.
6. <http://bookbuilder.cast.org/>: From cast.org—a free resource that allows you or your students to build books online. It provides text to speech and animation for the books so your students can listen to and watch the book. Can also access books others have written. Great if you are creating a modified version of a grade level text.
7. <http://aex.intellitools.com/>: Collection of free IntelliKeys activities posted by other teachers.
8. <http://teachinglearnerswithmultipleneeds.blogspot.com/2008/02/free-boardmaker-boards-and-activities.html>: Collection of free Boardmaker boards. Excellent if you already have Boardmaker. Not all of the links work though.
9. <http://zacbrowser.com/>: An internet engine designed for children with autism.



Tool # 3 - I Can Statements Checklist

Grade 2 Math “I Can” Statements Checklist

Instructions: These checklists are meant to provide a visual to record progress toward Common Core Standard Skills.

Domain: Operations and Algebraic Thinking	Cluster: Work with equal groups of objects to gain foundations for multiplication	Standard: EE.2.OA.3									
I can make two groups of two.	Date										
	DATA										
I can separate objects into two groups.	Date										
	DATA										
I can equally distribute even numbers of objects between two groups.	Date										
	DATA										
I can determine that a quantity of objects is even or odd by separating them into two groups.	Date										
	DATA										

Grade HS Math

F-BF.1 Element Card

Domain: Consumer Math – Functions – Building Functions

Cluster: Build a function that models a relationship between two quantities.

Standard: F-BF.1: Write a function that describes a relationship between two quantities.

F-BF.1.a: Determine an explicit expression, a recursive process, or steps for calculation from a context.

F-BF.1.b: Combine standard function types using arithmetic operations. *For example, build a function that models the temperature of a cooling body by adding a constant function to a decaying exponential, and relate these functions to the model.*

Essential Element EE.F-BF.1: Select the appropriate graphical representation (first quadrant) given a situation involving constant rate of change.

Grade 8 Essential Element EE.8.F.4:

- Determine the values or rule of a function using a graph or a table.

Post-Secondary Essential Element:

- Real Life Application

I Can Statements:

- I can use a table.
- I can use a variety of charts (plot, scatter, etc.)

Key Vocabulary:

- Constant rate
- Graph
- Quantities

Supports (specific to student): (e.g., assistive technology, communication system, visual aids, templates, active board, highlighters, graphic organizers, task analysis, manipulatives, real world materials, modeling)

- Graph paper
- Examples of charts and tables
- Templates of charts and tables
- Newspaper for data collection

Instructional Examples:

- Demonstrate variety of charts and tables.
- Provide data and determine appropriate chart or table to plot information.
- Collect data and combine to create chart.

Real World Connections:

- Charting weather, weight, height.
- Checking and charting baseball scores, football score, and basketball scores.

Grade HS Math

F-BF.1 Element Card

Domain: Consumer Math – Functions – Building Functions

Cluster: Build a function that models a relationship between two quantities.

Resources:

- <http://www.superteacherworksheets.com/graphing.html>
- <http://www.scholastic.com/teachers/lesson-plan/charts-tables-and-graphs-made-fun>

Grade HS Math

F-BF.2 Element Card

Domain: Consumer Math – Functions – Building Functions

Cluster: Build a function that models a relationship between two quantities..

Standard: F-BF.2: Write arithmetic and geometric sequences both recursively and with an explicit formula, use them to model situations, and translate between the two forms.

Essential Element EE.F-BF.2: Determine an arithmetic sequence with whole numbers when provided a recursive rule.

Grade 8 Essential Element EE.8.F.5:

- Describe how a graph represents a relationship between two quantities.

Post-Secondary Essential Element:

- Real Life Application

I Can Statements:

- I can count by 2's.
- I can count by 5's.
- I can count by 10's.
- I can count sequences in partial sections, e.g. 5's beginning at 30.

Key Vocabulary:

- Quantities
- Sequence

Supports (specific to student): (e.g., assistive technology, communication system, visual aids, templates, active board, highlighters, graphic organizers, task analysis, manipulatives, real world materials, modeling)

- Geoboard patterns
- Coins
- Analog clock with moveable hands

Instructional Examples:

- Counting number sequences, e.g., 2's, 5's, 10's.
- Use number chart with certain number sequence omitted.
- Practice counting number sequences in sections, e.g. beginning counting by 5's with the number 30.

Real World Connections:

- Counting coins.
- Telling time with an analog clock.
- Using the city bus schedule.

Resources:

- N/A

Grade HS Math

F-BF.2 Element Card

Domain: Consumer Math – Functions – Building Functions

Cluster: Build a function that models a relationship between two quantities..

- www.mathisfun.com
- <http://pinterest.com/ScarletAris/teaching-sequence-of-events/>

Grade HS Math

F-IF.4-6 Element Card

Domain: Consumer Math – Interpreting Functions

Cluster: Interpret functions that arise in applications in terms of the context.

<p>Standard: F-IF.4: For a function that models a relationship between two quantities, interpret key features of graphs and tables in terms of the quantities, and sketch graphs showing key features given a verbal description of the relationship. <i>Key features include intercepts: intervals where the function is increasing, decreasing, positive, or negative; relative maximums and minimums; symmetries; end behavior; and periodicity.</i></p> <p>F-IF.5. Relate the domain of a function to its graph and, where applicable, to the quantitative relationship it describes. <i>For example, if the function $h(n)$ gives the number of person-hours it takes to assemble n engines in a factory, then the positive integers would be an appropriate domain for the function.</i></p> <p>F-IF.6. Calculate and interpret the average rate of change of a function (presented symbolically or as a table) over a specified interval. Estimate the rate of change from a graph.*</p>	<p>Essential Element EE.F-IF.4-6: Construct graphs that represent linear functions with different rates of change and interpret which is faster/slower, higher/lower, etc.</p>
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<p>Grade 8 Essential Element EE.8.SP.4: Construct a graph or table from given categorical data, and compare data categorized in the graph or table.</p>	<p>Post-Secondary Essential Element:</p> <ul style="list-style-type: none">• Real Life Application
<p>I Can Statements:</p> <ul style="list-style-type: none">• I can identify a graph.• I can make a graph.• I can interpret change on a graph.• I can interpret rate of change to solve a problem.	
<p>Key Vocabulary:</p> <ul style="list-style-type: none">• rate of change• relationship• linear• increase• decrease	<p>Supports (specific to student): (e.g., assistive technology, communication system, visual aids, templates, active board, highlighters, graphic organizers, task analysis, manipulatives, real world materials, modeling)</p> <ul style="list-style-type: none">• Graph templates• Time card• pedometer
<p>Instructional Examples:</p> <ul style="list-style-type: none">• Review graphs and their purposes• Determine the best graph for the data given.	

Grade HS Math

F-IF.4-6 Element Card

Domain: Consumer Math – Interpreting Functions

Cluster: Interpret functions that arise in applications in terms of the context.

- Label the parts of a graph.
- Sort data into separate variables. (X,Y)
- Construct a graph

Real World Connections:

- Track weight, height
- Track weather
- Compare prices between stores
- Keep time card
- Use a pedometer

Resources:

- www.mathisfun.com/data
- <http://pinterest.com/search/pins/?q=graphing>

Grade HS Math

F-LE.1 Element Card

Domain: Consumer Math – Functions – Linear, Quadratic, and Exponential Models

Cluster: Construct and compare linear, quadratic, and exponential models, and solve problems.

Standard: F-LE.1: Distinguish between situations that can be modeled with linear functions and with exponential functions.

F-LE.1.a: Prove that linear functions grow by equal differences over equal intervals, and that exponential functions grow by equal factors over equal intervals.

F-LE.1.b: Recognize situations in which one quantity changes at a constant rate per unit interval relative to another.

F-LE.1.c: Recognize situations in which a quantity grows or decays by a constant percent rate per unit interval relative to another.

Essential Element EE.LE.1-3: Model a simple linear function such as $y = mx$ to show that these functions increase by equal amounts over equal intervals.

Grade 8 Essential Element EE.8.F.5:

- Describe how a graph represents a relationship between two quantities.

Post-Secondary Essential Element:

- Real Life Application

I Can Statements:

- I can model a simple function to show an increase by equal amounts.
- I can model a simple function to show an increase by equal intervals.

Key Vocabulary:

- Interval
- Quantity
- Constant rate

Supports (specific to student): (e.g., assistive technology, communication system, visual aids, templates, active board, highlighters, graphic organizers, task analysis, manipulatives, real world materials, modeling)

- Computer graphing software
- Media flyers to track consumer costs
- Budget sheet

Instructional Examples:

- Demonstrate manipulation of data over time (collaborative learning)
- Demonstrate graphing

Real World Connections:

- Charting the cost of fuel over an extended period.
- Charting the cost of groceries over an extended period.
- Charting your weight while dieting for a week, then compare to charting completed while not dieting.

Grade HS Math

F-LE.1 Element Card

Domain: Consumer Math – Functions – Linear, Quadratic, and Exponential Models

Cluster: Construct and compare linear, quadratic, and exponential models, and solve problems.

- Track budgeting (expenditures) over an extended period.

Resources:

- <http://www.youtube.com/watch?v=G2V-6kjd-No>
- <http://pinterest.com/search/pins/?q=teaching%20math%20intervals>

Consumer Math “I Can” Statements Checklist

Instructions: These checklists are meant to provide a visual to record progress toward Common Core Standard Skills.

Strand: Consumer Math	Cluster: Functions – Building Functions	Standard: F-LE.3
I can model a simple function to show an increase by equal amounts.	Date	
	DATA	
I can model a simple function to show an increase by equal intervals.	Date	
	DATA	
	Date	
	DATA	
	Date	
	DATA	

Grade HS Math

N-CN.2 Element Card

Domain: Number and Quantity

Cluster: Perform arithmetic operations with complex numbers.

Standard: N-CN.2: Use the relation $i^2 = -1$ and the commutative, associate, and distributive properties to add, subtract, and multiply complex numbers.

Essential Element EE.N-CN.2.a: Use the commutative, associative, and distributive properties to add, subtract, and multiply whole numbers.
Essential Element EE.N-CN.2.b: Solve real-world problems involving addition and subtraction of decimals, using models when needed.
Essential Element EE.N-CN.2.c: Solve real-world problems involving multiplication of decimals and whole numbers, using models when needed.

Grade 8 Essential Element : EE.8.EE:3-4:

- Compose and decompose whole numbers up to 999.

Post-Secondary Essential Element:

- Real Life Application

I Can Statements:

- I can add and subtract whole numbers using decimals.
- I can multiple and divide whole numbers using decimals.

Key Vocabulary:

- Decimal
- Addition
- Subtraction
- Multiplication
- Division

Supports (specific to student): (e.g., assistive technology, communication system, visual aids, templates, active board, highlighters, graphic organizers, task analysis, manipulatives, real world materials, modeling)

- calculator

Instructional Examples:

- Demonstrate functions of calculator.
- Demonstrate appropriate use of decimals while inputting data.

Real World Connections:

- Balancing checkbook
- Paying monthly bills
- Budgeting

Grade HS Math

N-CN.2 Element Card

Domain: Number and Quantity

Cluster: Perform arithmetic operations with complex numbers.

Resources:

- <http://pinterest.com/search/pins/?q=teaching%20adding%20and%20subtracting%20with%20decimals>
- http://www.lessonplanet.com/search?keywords=decimals&gclid=CKabm_GM37gCFZBaMgodUDgAKQ
- www.theeducationcenter.com

Grade HS Math

N-Q.1 Element Card

Domain: Number and Quantity

Cluster: Reason quantitatively, and use units to solve problems.

Standard: N-Q.1: Use units as a way to understand problems and to guide the solution of multi-step problems; choose and interpret units consistently in formulas; choose and interpret the scale and the origin in graphs and data displays.

Essential Element EE.N.Q.1-3: Express quantities to the appropriate precision of measurement.

Grade 8 Essential Element : EE.8.EE.3-4:

- Compose and decompose whole numbers up to 999.

Post-Secondary Essential Element:

- Real Life Application

I Can Statements:

- I can measure objects with accuracy.
- I can label items measured with appropriate units, e.g., inches, feet.
- I can distinguish numbers with decimals.

Key Vocabulary:

- precision
- measurement
- units
- label

Supports (specific to student): (e.g., assistive technology, communication system, visual aids, templates, active board, highlighters, graphic organizers, task analysis, manipulatives, real world materials, modeling)

- calculator
- ruler
- scale
- state map
- cooking utensils
- items for measuring (beans, rice, etc.)

Instructional Examples:

- Demonstrate units of ruler and tape measure.
- Demonstrate use of ruler.
- Demonstrate liquid measurement of units.
- Demonstrate use of scale.
- Weigh and measure height of students.

Grade HS Math

N-Q.1 Element Card

Domain: Number and Quantity

Cluster: Reason quantitatively, and use units to solve problems.

Real World Connections:

- Travel in community or outside of city on vacation.
- Use map to determine distances between destinations.
- Cooking and baking - using liquid measurement utensils.
- Grocery shopping.

Resources:

- www.mapquest.com
- <http://www.brightbulbeducation.com/lesson-plans-grades-3-5/62389-teaching-unit-of-length-measurement/>
- www.mathisfun.com

Grade HS Math

N-Q.2 Element Card

Domain: Number and Quantity

Cluster: Reason quantitatively, and use units to solve problems.

Standard: N-Q.2: Define appropriate quantities for the purpose of descriptive modeling.	Essential Element EE.N.Q.1-3: Express quantities to the appropriate precision of measurement.
Grade 8 Essential Element : EE.8.G.9: <ul style="list-style-type: none">Use the formulas for perimeter, area, and volume to solve real-world and mathematical problems (limited to perimeter and area of rectangles and volume of rectangular prisms).	Post-Secondary Essential Element: <ul style="list-style-type: none">Real Life Application
I Can Statements: <ul style="list-style-type: none">I can determine measurements for perimeter.I can determine measurements for area.I can determine measurements for volume.	
Key Vocabulary: <ul style="list-style-type: none">AreaPerimeterVolume	Supports (specific to student): (e.g., assistive technology, communication system, visual aids, templates, active board, highlighters, graphic organizers, task analysis, manipulatives, real world materials, modeling)
Instructional Examples: <ul style="list-style-type: none">Demonstrate formula for determining perimeter.Demonstrate formula for determining area.Demonstrate formula for determining volume.	
Real World Connections: <ul style="list-style-type: none">Measure sq. ft. of room.Use liquid measurements.Measure sq. ft. of house.	
Resources: <ul style="list-style-type: none">www.pinterest.com	

Grade HS Math

N-Q.3 Element Card

Domain: Number and Quantity

Cluster: Reason quantitatively, and use units to solve problems.

Standard: N-Q.3: Choose a level of accuracy appropriate to limitations on measurement when reporting quantities.	Essential Element EE.N.Q.1-3: Express quantities to the appropriate precision of measurement.
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Grade 8 Essential Element : EE.8.G.9: <ul style="list-style-type: none">Use the formulas for perimeter, area, and volume to solve real-world and mathematical problems (limited to perimeter and area of rectangles and volume of rectangular prisms).	Post-Secondary Essential Element: <ul style="list-style-type: none">Real Life Application
I Can Statements: <ul style="list-style-type: none">I can measure objects with accuracy.I can label items measured with appropriate units, e.g., inches, feet.I can distinguish numbers with decimals.	
Key Vocabulary: <ul style="list-style-type: none">precisionmeasurementunitslabel	Supports (specific to student): (e.g., assistive technology, communication system, visual aids, templates, active board, highlighters, graphic organizers, task analysis, manipulatives, real world materials, modeling) <ul style="list-style-type: none">calculatorrulerscalestate mapcooking utensilsitems for measuring (beans, rice, etc.)
Instructional Examples: <ul style="list-style-type: none">Demonstrate units of ruler and tape measure.Demonstrate use of ruler.Demonstrate liquid measurement of units.Demonstrate use of scale.Weigh and measure height of students.	

Grade HS Math

N-Q.3 Element Card

Domain: Number and Quantity

Cluster: Reason quantitatively, and use units to solve problems.

Real World Connections:

- Travel in community or outside of city on vacation.
- Use map to determine distances between destinations.
- Cooking and baking - using liquid measurement utensils.
- Grocery shopping.

Resources:

- www.mapquest.com
- <http://www.mathsisfun.com/measure/index.html>
- <http://www.pinterest.com/primaryjunction/measurement>

Grade HS Math

S-CP.1-5 Element Card

Domain: Consumer Math – Statistics and Probability

Cluster: Understand independence and conditional probability, and use them to interpret data.

Standard: S-CP.1: Describe events as subsets of a sample space (the set of outcomes) using characteristics (or categories) of the outcomes, or as unions, intersections, or complements of other events.

Standard: S-CP.2: Understanding that two events A and B are independent if the probability of A and B occurring together is the product of their probabilities, and use this characterization to determine if they are independent.

Standard: S-CP.3: Understand the conditional probability of A given B as $P(A \text{ and } B) / P(B)$, and interpret independence of A and B as saying that the conditional probability of A given B is the same as the probability of A, and the conditional probability of B given A is the same as the probability of B.

Standard: S-CP.4: Construct and interpret two-way frequency tables of data when two categories are associated with each object being classified. Use the two-way table as a sample space to decide if events are independent and to approximate conditional probabilities. *For example, collect data from a random sample of students in your school on their favorite subject among math, science, and English. Estimate the probability that a randomly selected student from your school will favor science given that the student is in tenth grade. Do the same for other subjects and compare the results.*

Standard: S-CP.5: Recognize and explain the concepts of conditional probability and independence in everyday language and everyday situations. *For example, compare the chance of having lung cancer if you are a smoker with the chance of being a smoker if you have lung cancer.*

Essential Element EE.S-CP.1-5: Identify when events are independent or dependent.

Grade 8 Essential Element : EE.8.F.1-3:

- Given a function table containing at least 2 complete ordered pairs, identify a missing number that completes another ordered pair (limited to linear functions).

Post-Secondary Essential Element:

- Real Life Application

I Can Statements:

- I can use categories to determine an outcome.
- I can predict based on given data.
- I can demonstrate understanding of consequences of choices.

Grade HS Math

S-CP.1-5 Element Card

Domain: Consumer Math – Statistics and Probability

Cluster: Understand independence and conditional probability, and use them to interpret data.

Key Vocabulary:

- independent
- dependent
- category
- predict
- consequences

Supports (specific to student): (e.g., assistive technology, communication system, visual aids, templates, active board, highlighters, graphic organizers, task analysis, manipulatives, real world materials, modeling)

- visuals of personal choices and consequences
- visuals of objects for categorizing (e.g., fruits, animals, furniture)
- Scattergories

Instructional Examples:

- Estimate probability of collected data from random samples.
- Compare everyday situations/choices and brainstorm their consequences.

Real World Connections:

- Personal choices
- Health choices
- Behavior choices
- Play Scattergories
- Chart weather predictions for a month

Resources:

- http://www.ehow.com/info_8050529_math-lesson-activity-7th-graders.html
- http://www.educationworld.com/a_lesson/dailyp/dailyp/dailyp047.shtml
- www.youtube.com/watch?v=Lwz0f2490gs (you tube “Learn Zillion” how to teach probability)

Grade HS Math

S-IC.1-2 Element Card

Domain: Consumer Math – Statistics and Probability

Cluster: Understand and evaluate random processes underlying statistical experiments.

Standard: S-IC.1: Understand statistics as a process for making inferences about population parameters based on a random sample from that population.

Standard: S-IC.2: Decide if a specified model is consistent with results from a given data-generating process, e.g., using simulation. *For example, a model says a spinning coins falls heads up with probability 0.5. Would a result of 5 tails in a row cause you to question the model?*

Essential Element EE.S-IC.1-2: Determine the likelihood of an event occurring when the outcomes are equally likely to occur.

Grade 8 Essential Element : EE.8.SP.4:

- Construct a graph or table from given categorical data, and compare data categorized in the graph or table.

Post-Secondary Essential Element:

- Real Life Application

I Can Statements:

- I can predict likelihood of outcomes.
- I can use probability to project outcomes.

Key Vocabulary:

- Prediction
- Infer
- Probability
- Outcomes

Supports (specific to student): (e.g., assistive technology, communication system, visual aids, templates, active board, highlighters, graphic organizers, task analysis, manipulatives, real world materials, modeling)

- Board game pieces (spinner)
- Coins
- Dice

Instructional Examples:

- Demonstrate the probability of coin and dice tossing
- Make inferences about probability of outcomes

Real World Connections:

- Weather forecast
- Likelihood of sporting events outcomes (predicting scores)
- Conduct census to determine probability of student body who are blonde or brunette

Resources:

Grade HS Math

S-IC.1-2 Element Card

Domain: Consumer Math – Statistics and Probability

Cluster: Understand and evaluate random processes underlying statistical experiments.

- http://www.ehow.com/info_8050529_math-lesson-activity-7th-graders.html
- http://www.educationworld.com/a_lesson/dailyp/dailyp/dailyp047.shtml
- www.youtube.com/watch?v=Lwz0f2490gs (you tube “Learn Zillion” how to teach probability)

Grade HS Math

S-ID.1-2 Element Card

Domain: Consumer Math – Statistics and Probability

Cluster: Summarize, represent, and interpret data on a single count or measurement variable.

Standard: S-ID.1: Represent data with plots on a real number line (dot plots, histograms, and box plots).

Standard: S-ID.2: Use statistics appropriate to the shape of the data distribution to compare center (median, mean) and spread (interquartile range, standard deviation) of two or more different data sets.

Essential Element EE.S-ID.1-2: Given data, construct a simple graph (line, pie, bar, or picture) or table, and interpret the data.

Grade 8 Essential Element : EE.8.SP.4:

- Construct a graph or table from given categorical data, and compare data categorized in the graph or table.

Post-Secondary Essential Element:

- Real Life Application

I Can Statements:

- I can construct and interpret a line graph.
- I can construct and interpret a pie graph.
- I can construct and interpret a bar graph.
- I can construct and interpret a picture graph.
- I can construct and interpret a table.

Key Vocabulary:

- Line graph
- Pie graph
- Bar graph
- Picture graph
- Table

Supports (specific to student): (e.g., assistive technology, communication system, visual aids, templates, active board, highlighters, graphic organizers, task analysis, manipulatives, real world materials, modeling)

- Templates of various graphs
- Graph paper
- Graphing application (Microsoft or Apple)

Instructional Examples:

- Demonstrate the construct of various graphs (line, pie, bar, picture).
- Demonstrate the construct of tables.
- Use daily newspaper to graph weather.
- Take census of student body to graph numbers of males vs. females.
- Graph number of students at each grade level (e.g., freshman, sophomore, junior, senior).

Grade HS Math

S-ID.1-2 Element Card

Domain: Consumer Math – Statistics and Probability

Cluster: Summarize, represent, and interpret data on a single count or measurement variable.

Real World Connections:

- Reading the newspaper.
- Following sports scores.
- Use a budget application to create a chart to track transportation expenses.
- Use a budget application to create a chart to track leisure expenses.

Resources:

- N/A
-

Grade HS Math

S-ID.3 Element Card

Domain: Consumer Math – Statistics and Probability

Cluster: Summarize, represent, and interpret data on a single count or measurement variable.

Standard: S-ID.3: Interpret differences in shape, center, and spread in the context of the data sets, accounting for possible effects of extreme data points (outliers).

Essential Element EE.S-ID.3: Interpret general trends on a graph or chart.

Grade 8 Essential Element : EE.8.SP.4:

- Construct a graph or table from given categorical data, and compare data categorized in the graph or table.

Post-Secondary Essential Element:

- Real Life Application

I Can Statements:

- I can interpret a trend on a graph.
- I can interpret a trend on a chart.
- I understand an increase or decrease in trends.

Key Vocabulary:

- Trend
- Increase
- Decrease

Supports (specific to student): (e.g., assistive technology, communication system, visual aids, templates, active board, highlighters, graphic organizers, task analysis, manipulatives, real world materials, modeling)

- Computer graphing templates/software
- Graph paper
- Items for measuring growth

Instructional Examples:

- Chart the growth of a plant that has been cared for over an extended period.
- Chart the growth of a plant that has not been cared for over an extended period.
- Compare and interpret the trends of the graphing results.
- Graph the results of the school's basketball team for the season and interpret the results.

Real World Connections:

- Track a sporting event statistics for a season
- Track your weight in relationship to intake
- Track the height of two children over an extended period of time
- Track the weather, e.g. rainfall, snowfall

Grade HS Math

S-ID.3 Element Card

Domain: Consumer Math – Statistics and Probability

Cluster: Summarize, represent, and interpret data on a single count or measurement variable.

Resources:

- <http://www.raymondgeddes.com/lesson-plans/math-lesson-2/charting-sales-all.html>
- <http://www.lessonplanet.com/search?keywords=charting+preferences&button=>
- <http://www.learnzillion.com> (need to sign up for free account)

Grade HS Math

S-ID.4 Element Card

Domain: Consumer Math – Statistics and Probability

Cluster: Summarize, represent, and interpret data on a single count or measurement variable.

Standard: S-ID.4: Use the mean and standard deviation of a data set to fit it to a normal distribution and to estimate population percentages. Recognize that there are data sets for which such a procedure is not appropriate. Use calculators, spreadsheets, and tables to estimate areas under the normal curve.

Essential Element EE.S-ID.4: Calculate the mean of a given data set (limit the number of data points to fewer than five).

Grade 8 Essential Element : EE.8.SP.4:

- Construct a graph or table from given categorical data, and compare data categorized in the graph or table.

Post-Secondary Essential Element:

- Real Life Application

I Can Statements:

- I can determine the mean of a limited set of data (five or fewer).

Key Vocabulary:

- Mean
- Average
- Data set

Supports (specific to student): (e.g., assistive technology, communication system, visual aids, templates, active board, highlighters, graphic organizers, task analysis, manipulatives, real world materials, modeling)

Instructional Examples:

- Average test scores for a given month.
- Average daily work scores for a given month.
- Demonstrate the effects of low scores in an overall average.

Real World Connections:

- Average bowling scores
- Average monthly bills and income
- Average monthly leisure expenses

Resources:

- <http://www.teachervision.fen.com/statistics/lesson-plan/4912.html>
- <http://www.learnzillion.com> (need to sign up for free account)

Grade HS Math

S-ID.4 Element Card

Domain: Consumer Math – Statistics and Probability

Cluster: Summarize, represent, and interpret data on a single count or measurement variable.

HS Math Resources

HS Math: DLM Essential Elements

Number and Quantity—The Real Number System

N-RN.1

EE.N-RN.1 – Determine the value of a quantity that is squared or cubed.

<http://www.discoveryeducation.com/teachers/free-lesson-plans/discovering-math-computations.cfm>

http://www.k12math.com/math-concepts/algebra/radical_equations/radicals.html

<http://www.math.com/school/subject1/lessons/S1U1L9GL.html>

N-RN.2-3 – Not Applicable.

Number and Quantity—Quantities

N-Q.1-3

EE.N.Q.1-3 – Express Quantities to the appropriate precision of measurement.

<http://www.ask.com/question/what-is-a-precise-measurement-and-lesson-plans>

<https://www.teachingchannel.org/videos/measurement-lesson-ideas?fd=1>

<https://www.teachingchannel.org/videos/teaching-volume>

Number and Quantity—The Complex Number System

N-CN.1 – Not Applicable.

N-CN.2

EE.N-CN.2.a – Use the commutative, associative, and distributive properties to add, subtract, and multiply whole numbers.

http://alex.state.al.us/lesson_view.php?id=26396

<http://www.purplemath.com/modules/numbprop.htm>

<http://www.math.com/school/subject1/lessons/S1U1L13DP.html>

https://www.khanacademy.org/math/arithmetric/multiplication-division/distributive_property/v/the-distributive-property

EE.N-CN.2.b – Solve real-world problems involving addition and subtraction of decimals, using models when needed.

<http://learnzillion.com/lessons/1150-use-addition-and-subtraction-to-solve-realworld-problems-involving-decimals>

http://alex.state.al.us/lesson_view.php?id=26251

http://www.gvsd.org/cms/lib02/pa01001045/centricity/domain/446/pa5etex_0305.pdf

EE.N.CN.2.c – Solve real-world problems involving multiplication of decimals and whole numbers, using models when needed.

<http://www.ck12.org/user:YmdyZWVvQG1pdGFjYWRIbXkub3Jn/section/Multiplying-Decimals-and-Whole-Numbers-%253A%253Aof%253A%253A-Multiplication-and-Division-of-Decimals/>
<http://mbpms.chatham.k12.nc.us/modules/groups/homepagefiles/cms/2394745/File/6th%20Grade%20Math/6chap04.pdf>
http://www.glencoe.com/sites/common_assets/mathematics/TN_2012/MC1_se/Chapter_01_8_95241.pdf
http://www.ed.gov.nl.ca/edu/k12/curriculum/guides/mathematics/grade6/Unit_8_Multiplication_and_Division_of_Decimals_final.pdf

N-CN.3-9 – Not Applicable.

Number and Quantity—Vector and Matrix Quantities.

N-VM.1-12 – Not Applicable.

Algebra—Seeing Structure in Expressions

A-SSE.1

EE.A-SSE.1 – Identify an algebraic expression involving one arithmetic operation to represent a real-world problem.

http://www.bigideasmath.com/protected/content/ipe/grade%206/01/g6_01_01.pdf
http://www.glencoe.com/sites/common_assets/mathematics/TN_2012/MC1_te/Chapter_05_8_952441.pdf
https://www.khanacademy.org/math/algebra/solving-linear-equations-and-inequalities/why-of-algebra/e/one_step_equation_intuition
<http://www.ixl.com/math/algebra-1/solve-one-step-linear-equations>
<http://www.ixl.com/math/algebra-1/simplify-variable-expressions-involving-like-terms-and-the-distributive-property>

A.SSE.2 – Not Applicable

EE.A-SSE.3 – Solve simple algebraic equations with one variable using multiplication and division.

<http://www.brighthubeducation.com/high-school-math-lessons/127708-solving-one-step-equations-using-multiplication-or-division/>
<http://mathforum.org/library/drmath/view/57529.html>

EE.A-SSE.4 – Determine the successive term in a geometric sequence given the common ratio.

<http://www.ck12.org/book/CK-12-Algebra-II-with-Trigonometry-Concepts/r3/section/11.8/>
<http://www.paulabliss.com/LifeSkillsInstruction.htm>

Algebra—Arithmetic with Polynomials and Rational Expressions

A-APR.1-7 -- Not Applicable

Algebra—Creating Equations

A-CED.1

EE.A-CED.1 – Create an equation involving one operation with one variable, and use it to solve real-world problem.

<http://www.uen.org/Lessonplan/preview.cgi?LPid=23403>

<http://www.paulabliss.com/LifeSkillsInstruction.htm>

A-CED.2-4

EE.A-CED.2-4 – Solve one-step inequalities.

coe.jmu.edu/cta/CTA%20Mathematics/612Math7.15Inequalities2.docx

<http://www.graniteschools.org/depart/teachinglearning/curriculuminstruction/math/secondary/mathematics/Math%207%20Lessons/25-NewMath7LessonEJan3SolvingInequalities.pdf>

<http://betterlesson.com/lesson/19562/introduction-to-inequalities>

<http://www.ixl.com/math/algebra-1/solve-one-step-linear-inequalities-addition-and-subtraction>

Algebra—Reasoning with Equations and Inequalities

A-REI.1 – Not Applicable

A-REI.2 – Not Applicable. See EE.A-CED.1.

A-REI.3 -- Not Applicable. See EE.A-CED.1.

A-REI.4, a-b – Not Applicable

A-REI.5 – Not Applicable

A-REI.6 – Not Applicable. See EE. A-REI.10-12

A-REI.7 – Not Applicable. See EE. A-REI.10-12

A-REI.8 – Not Applicable.

A-REI.9 – Not Applicable.

A-REI.10-12

EE.A-REI.10-12 – Interpret the meaning of a point on the graph of a line. *For example, on a graph of pizza purchases, trace the graph to a point and tell the number of pizzas purchased and the total cost.*

<http://www.brainpopjr.com/math/data/linegraphs/grownups.weml>

<http://www.teach-nology.com/worksheets/math/graph/parts.html>

<http://www.cimt.plymouth.ac.uk/projects/mepres/book8/y8s14lpd.pdf>

Functions—Interpreting Functions

F-IF.1-3

EE.F-F-IF.1-3 – Use the concept of function to solve problems.

http://www.edugains.ca/resourcesLNS/GuidestoEffectiveInstruction/GEI_Math_K-6_PatterningAlgebra_Gr4-6/Guide_Patterning_and_Algebra_456.pdf

<http://www.ixl.com/math/algebra-1>

F-IF.4-6

EE.F-IF.4-6 – Construct graphs that represent linear functions with different rates of change and interpret which is faster/slower, higher/lower, etc.

http://www.teachervision.fen.com/tv/printables/botr/botr_029_27-27.pdf

<http://www.teach-nology.com/worksheets/math/graph/>

<http://lf4eled.tripod.com/teacher/id19.html>

F-IF.7, a-e – Not Applicable. See EE.F-IF.1-3.

F-IF.8, a-b – Not Applicable.

F-IF.9 – Not Applicable.

Functions—Building Functions

F-BF.1.a-b

EE.F-BF.1. Select the appropriate graphical representation (first quadrant) given a situation involving constant rate of change.

<http://nces.ed.gov/nceskids/createagraph/default.aspx>

<http://mrnussbaum.com/coolgraphing/>

<http://www.ixl.com/math/algebra-1>

F-BF.1.c – Not Applicable.

F-BF.2

EE.F-BF.2 – Determine an arithmetic sequence with whole numbers when provided a recursive rule.

http://fym.la.asu.edu/~tturner/MAT_117_online/SequenceAndSeries/Sequences.htm

<http://www.slidermath.com/probs/Pattern4.shtml>

<http://www.topmarks.co.uk/interactive.aspx?cat=20>

F-BF.3-5 – Not Applicable.

Functions—Linear, Quadratic, and Exponential Models

F-LE.1-3

EE.F-FE.1-3 – Model a simple linear function such as $y = mx$ to show that these functions increase by equal amounts over equal intervals.

<https://www.math.okstate.edu/~noell/ebsm/linear.html>

<https://www.teachingchannel.org/videos/graphing-linear-equations-lesson>

<http://www.ixl.com/math/algebra-1>

F-LE.4 – Not Applicable.

F-FE.5 – Not Applicable. See EE.F-IF.1-3

Functions—Trigonometric Functions

F-TF.1-9 – Not Applicable.

Geometry—Congruence

G-CO.1

EE.G-CO.1 – Know the attributes of perpendicular lines, parallel lines, and line segments; angles; and circles.

<http://www.graniteschools.org/depart/teachinglearning/curriculuminstruction/math/secondary/mathematics/Math%207%20Lessons/32->

[NewMath7LessonFFeb3BasicGeometryIdeasandAngleMeasurement.pdf](http://www.graniteschools.org/depart/teachinglearning/curriculuminstruction/math/secondary/mathematics/Math%207%20Lessons/32-NewMath7LessonFFeb3BasicGeometryIdeasandAngleMeasurement.pdf)

<https://www.cohs.com/editor/userUploads/file/Meyn/Geo%20Ch%201%20Student%20WB.pdf>

G-CO.2 – Not Applicable.

G-CO.3 – Not Applicable.

G-CO.4-5

EE.G.CO.4-5 – Given a geometric figure and a rotation, reflection, or translation of that figure, identify the components of the two figures that are congruent.

<http://www.mathopenref.com/congruent.html>

http://www.edugains.ca/resourcesLNS/GuidestoEffectiveInstruction/GEI_Math_K-6_GeomSpatialSense_Gr4-6/Guide_Geometry_Spatial_Sense_456.pdf

<http://www.ixl.com/math/algebra-1/similar-figures-side-lengths-and-angle-measures>

G-CO.6-8

EE.G-CO.6-8 – Identify corresponding congruent and similar parts of shapes.

http://alex.state.al.us/lesson_view.php?id=21195

<http://www.learningpt.org/pdfs/mscLessonPlans/dotson.pdf>

<http://www.ixl.com/math/algebra-1>

G-CO.9-13 – Not Applicable.

Geometry—Similarity, Right Triangles, and Trigonometry

G-SRT.1-3 – Not Applicable. See EE.G-CO.6-8.

G-SRT.4 – Not Applicable.

G.SRT.5 – Not Applicable. See EE.G-CO.6-8

G.SRT.6-11 – Not Applicable.

Geometry—Circles

G-C.1-5 – Not Applicable.

Geometry—Expressing Geometric Properties with Equations

G-GPE.1-4 – Not Applicable.

G-GPE.5-6 – Not Applicable. See EE.G-CO.1

G-GPE.7

EE.G.GPE.7 – Find perimeters and areas of squares and rectangles to solve real-world problems.

<http://www.youtube.com/watch?v=pURnQNzb4uc>

<http://learnzillion.com/lessons/1167-use-a-chart-to-understand-how-rectangles-can-have-the-same-perimeter-with-different-areas>

<http://www.ixl.com/math/algebra-1/perimeter>

<http://www.ixl.com/math/algebra-1/area>

Geometry—Geometric Measurement and Dimension

G-GMD.1

EE.G-GMD.1-3 – Make a prediction about the volume of a container, the area of a figure, and the perimeter of a figure, and then test the prediction using formulas or models.

<http://voices.yahoo.com/math-lesson-plan-defining-perimeter-area-volume-10369677.html>

<http://www.ixl.com/math/algebra-1>

http://www.glencoe.com/sites/common_assets/mathematics/TN_2012/MC1_se/Chapter_09_8_95241.pdf

G-GMD.2 – Not Applicable.

G-GMD.3 – Not Applicable. See EE.8.G.9 and EE.G-GPE.7.

G-GMD.4

EE.G-GMD.4 – Identify the shapes of two-dimensional cross-sections of three-dimensional objects.

<https://www.teachingchannel.org/videos/visualizing-geometry-lesson>

http://www.glencoe.com/sites/common_assets/mathematics/TN_2012/MC1_se/Chapter_09_8_95241.pdf

<http://staff.rentonschools.us/renton/secondary-math/geometry-ccss-m-resources/download/G.GMD.4+lesson+plan-Identifying+Three-Dimensional+Figures+by+Rotating+Two-Dimensional+Figures.docx?id=74464>

http://www.mhschool.com/math/mathconnects/tn/se/030308_chapter_10.pdf

Geometry—Modeling with Geometry

G-MG.1-3

EE.G.MG.1-3 – Use properties of geometric shapes to describe real-life objects.

http://www.mhschool.com/math/mathconnects/tn/se/030308_chapter_10.pdf

<http://www.fayar.net/east/teacher.web/math/Illuminations/lessonplans/prek-2/shape/Shape.pdf>

http://www.teach-nology.com/teachers/lesson_plans/math/shapes/

Statistics and Probability—Interpreting Categorical and Quantitative Data

S-ID.1-2

EE.S-ID.1-2 – Given data, construct a simple graph (line, pie, bar, or picture) or table, and interpret the data.

<http://nces.ed.gov/nceskids/createagraph/>

<http://www.ixl.com/math/algebra-1>

<http://www.800score.com/gre-guided7view1h.html>

http://www.internet4classrooms.com/grade_level_help/embedded_inquiry_data_table_sixth_6th_grade_science.htm

S-ID.3

EE.S-ID.3 – Interpret general trends on a graph or chart.

<http://math.about.com/od/worksheets/ss/graphcharts.htm>

<http://www.teachervision.fen.com/graphs-and-charts/lesson-plan/34514.html>

http://www.internet4classrooms.com/grade_level_help/embedded_inquiry_data_table_sixth_6th_grade_science.htm

S-ID.4

EE.S-ID.4 – Calculate the mean of a given data set (limit the number of data points to fewer than five)

<http://betterlesson.com/lesson/6723/calculate-mean>

<http://curry.virginia.edu/curryedaway/?lesson-plan=calculating-mean-median-mode>

https://www.juab.k12.ut.us/index.php?option=com_content&view=article&id=1229:5th-grade-algebra-lesson-plan-mean-median-mode-and-range&catid=66:grammar&Itemid=58

S-ID.5 – Not Applicable. See EE.F-IF.1 and EE.A-REI.6-7

S-ID.6, a-c – Not Applicable.

S-ID.7 – Not Applicable. See EE. F-IF.4-6

S-ID.8-9 – Not Applicable.

Statistics and Probability—Making Inferences and Justifying Conclusions

S-IC.1-2

EE.S-IC.1-2 – Determine the likelihood of an event occurring when the outcomes are equally likely to occur.

http://www.mathgoodies.com/lessons/vol6/intro_probability.html

<http://www.ixl.com/math/algebra-1/experimental-probability>

<http://stattrek.com/probability/what-is-probability.aspx>

S-IC.3 – Not Applicable. See EE.S-ID.1-2.

S-IC.4 – Not Applicable. See EE.S-ID.1-2.

S-IC.5 – Not Applicable. See EE.S-ID.1-2.

S-IC.6 – Not Applicable. See EE.S-ID.1-2.

Statistics and Probability—Conditional Probability and the Rules of Probability.
S-CP.1-5

EE.S-CP.1-5 – Identify when events are independent or dependent.

<https://www.teachingchannel.org/videos/teaching-dependent-and-independent-events>

<http://www.classzone.com/eservices/home/pdf/student/LA212EAD.pdf>

<http://mste.illinois.edu/courses/educ362sp04/folders/fischer/lesplan1.htm>

S-CP.6-7 – Not Applicable. See EE.S-IC.1-2.

S-CP.8-9 – Not Applicable.

Statistics and Probability—Using Probability to Make Decisions

S-MD.1-7 – Not Applicable.

General

<http://nichcy.org/research/ee/math#ld>

http://www.doe.k12.de.us/infosuites/students_family/specialed/NEW/files/March2011.DE.Incl.Conf.pdf

<http://www.hoagiesgifted.org/eric/faq/lesnplan.html>

https://www.osep-meeting.org/2006conf/Presentations/.../BO_D1.PPT

<http://www.paulabliss.com/LifeSkillsInstruction.htm>

<http://www.eds-resources.com/edexc.htm>

<http://new-to-teaching.blogspot.com/2013/04/math-for-students-with-mild-moderate.html>

<http://www.ixl.com/math/algebra-1>

http://www.edugains.ca/resources/LNS/GuidestoEffectiveInstruction/GEI_Math_K-6_PaterningAlgebra_Gr4-6/Guide_Paterning_and_Algebra_456.pdf

<http://www.cpt.fsu.edu/ese/pdf/dsinlssn.pdf>

http://wvde.state.wv.us/teach21/essd/math9-12_instructionalguide.pdf

http://schools.nyc.gov/NR/rdonlyres/835F949D-A3D9-419E-A54C-A004209AAC80/0/NYCDOEG8MathExpressionsandEquations_Final.pdf

<http://www.ck12.org/book/CK-12-Middle-School-Math---Grade-6/r5/>

http://www.glencoe.com/sites/common_assets/mathematics/TN_2012/MC1_se/Chapter_09_8_95241.pdf

https://www.teachingchannel.org/videos?categories=subjects_math&gclid=CKLBmdv03rgCFQ1gMgodSyYA-w