

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: Three



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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.

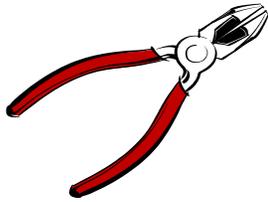
These tools are:

- ✓ 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

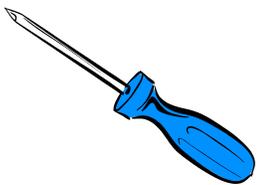
These tools are not:

- ✓ 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.



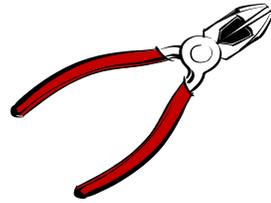
Website Resources - lists of web addresses where a variety of educational ideas can be found.

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.

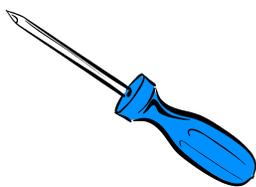
The Essential Elements are highlighted to indicate the importance of their focus.

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. _____

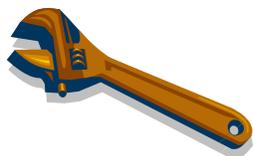
Thurs. _____

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 3 Math

3.OA.1-2 Element Card

Domain: Operations and Algebraic Thinking

Cluster: Represent and Solve Problems Involving Multiplication and Division

Standard 3.OA.1: Interpret products of whole numbers, e.g., interpret 5×7 as the total number of objects in 5 groups of 7 objects each. For example, describe a context in which a total number of objects can be expressed as 5×7 .

Standard 3.OA.2: Interpret whole-number quotients of whole numbers, e.g., interpret $56 \div 8$ as the number of objects in each share when 56 objects are partitioned equally into 8 shares, or as a number of shares when 56 objects are partitioned into equal shares of 8 objects each. For example, describe a context in which a number of shares or a number of groups can be expressed as $56 \div 8$.

Essential Element EE.3.OA.1-2: Use repeated addition to find the total number of objects and determine the sum.

Grade 2 Essential Element EE.2.OA.1:

- Not applicable
- See EE.3.OA.4

Grade 2 Essential Element EE.2.OA.2:

- Not applicable
- See EE.2.NBT.6-7 and EE.3.OA.4.

Grade 4 Essential Element EE.4.OA.1-2:

- Demonstrate the connection between repeated addition and multiplication.

I Can Statements:

- I can use repeated addition to find the sum in a rectangular array.
- I can use addition to find the total number of objects.

Key Vocabulary:

- array
- addition
- sum
- rectangular

Supports (specific to student): (e.g., assistive technology, communication system, visual aids, templates, active board, highlighters)

- Manipulatives
- Addition charts
- Addition flash cards

Instructional Examples:

- Students will use manipulatives to show that 5×7 for example is in 5 groups of 7 objects or 7 groups of 5 objects.
- Fill space of squares and rectangles with 1-inch tiles, add tiles in rows or columns to determine total number of tiles it takes to fill the shape (square/rectangle).

Grade 3 Math

3.OA.1-2 Element Card

Domain: Operations and Algebraic Thinking

Cluster: Represent and Solve Problems Involving Multiplication and Division

- Use repeated addition and equal groups to solve problems to find the total number of objects to find the sum.
- Students will use manipulatives to show how a group of objects can be broken down into equal groups or sets to fit the problem.

Real World Connections:

- Shop and buy multiples of any product.
- Plan parties (e.g., how many pizzas to order if we plan on 2 pieces of pizza per person).
- Share costs (e.g., going to the movies – the bill is \$30 – if there are 6 children, each child pays \$5.).
- Prepare meals (number of servings), serve food (divide food into portions).

• **Resources:**

- www.learnzillion.com
- www.ixl.com

Grade 3 Math

3.OA.3 Element Card

Domain: Operations and Algebraic Thinking

Cluster: Represent and Solve Problems Involving Multiplication and Division

<p>Standard 3.OA.3: Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.</p>	<p>Essential Element EE.3.OA.3: Not applicable See EE.3.OA.1 and EE.5.NBT.5.</p>
<p>Grade 2 Essential Element EE.2.OA.3:</p> <ul style="list-style-type: none">Equally distribute even numbers of objects between two groups.	<p>Grade 4 Essential Element EE.4.OA.3:</p> <ul style="list-style-type: none">Solve one-step real-world problems using addition or subtraction within 100.
<p>I Can Statements:</p> <ul style="list-style-type: none">	
<p>Key Vocabulary:</p> <ul style="list-style-type: none">	<p>Supports (specific to student): (e.g., assistive technology, communication system, visual aids, templates, active board, highlighters) (e.g. Graphic organizers, task analysis, manipulatives, real world materials, modeling).</p>
<p>Instructional Examples:</p> <ul style="list-style-type: none">	
<p>Real World Connections:</p> <ul style="list-style-type: none">	
<p>Resources:</p> <ul style="list-style-type: none">	

Grade 3 Math

3.OA.4 Element Card

Domain: Operations and Algebraic Thinking

Cluster: Represent and Solve Problems Involving Multiplication and Division

Standard 3.OA.4: Solve multistep word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which the remainders must be interpreted. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.

Essential Element EE.3.OA.4: Solve addition and subtraction problems when result is unknown, limited to operations and results within 20.

Grade 2 Essential Element EE.2.OA.4:

- Use addition to find the total number of objects arranged within equal groups up to a total of 10.

Grade 4 Essential Element EE.4.OA.4:

- Show one way to arrive at a product.

I Can Statements:

- I can use addition to find the total number of objects in a group.
- I can use addition to find the total number of objects to a total of 10
- I can solve addition and subtraction problems with numbers 0-10.
- I can solve addition and subtraction problems when any number in the problem is unknown (result, start, change, difference) with numbers to 20.

Key Vocabulary:

- addition
- subtraction
- sum

Supports (specific to student): (e.g., assistive technology, communication system, visual aids, templates, active board, highlighters)

- Manipulatives
- Number lines

Instructional Examples:

- Use manipulatives to determine missing digit in problems.
- Use number lines to determine missing digit.
- Use base-10 pieces, add and subtract two-digit numbers to find the sum and the difference.
- Use a 100s chart to find the sum or difference of given problems.

Real World Connections:

- Set extra places at a table when more people are added.

Grade 3 Math

3.OA.4 Element Card

Domain: Operations and Algebraic Thinking

Cluster: Represent and Solve Problems Involving Multiplication and Division

Resources:

- www.ixl.com

Grade 3 Math

3.OA.5 Element Card

Domain: Operations and Algebraic Thinking

Cluster: Represent and Solve Problems Involving Multiplication and Division

<p>Standard 3.OA.5: Apply properties of operations as strategies to multiply and divide.¹ <i>Examples: If $6 \times 4 = 24$ is known, then $4 \times 6 = 24$ is also known. (Commutative property of multiplication.) $3 \times 5 \times 2$ can be found by $3 \times 5 = 15$, then $15 \times 2 = 30$, or by $5 \times 2 = 10$, then $3 \times 10 = 30$. (Associative property of multiplication.) Knowing that $8 \times 5 = 40$ and $8 \times 2 = 16$, one can find 8×7 as $8 \times (5 + 2) = (8 \times 5) + (8 \times 2) = 40 + 16 = 56$. (Distributive property.)</i></p>	<p>Essential Element EE.3.OA.5: Not applicable. See EE.N-CN.2.</p>
<p>Grade 2 Essential Element EE.2.OA.5:</p> <ul style="list-style-type: none">• Not addressed in Grade 2.	<p>Grade 4 Essential Element EE.4.OA.5:</p> <ul style="list-style-type: none">• Use repeating patterns to make predictions.
<p>I Can Statements:</p> <ul style="list-style-type: none">•	
<p>Key Vocabulary:</p> <ul style="list-style-type: none">•	<p>Supports (specific to student): (e.g., assistive technology, communication system, visual aids, templates, active board, highlighters)</p> <ul style="list-style-type: none">•
<p>Instructional Examples:</p> <ul style="list-style-type: none">•	
<p>Real World Connections:</p> <ul style="list-style-type: none">•	
<p>Resources:</p> <ul style="list-style-type: none">•	

Grade 3 Math

3.OA.6 Element Card

Domain: Operations and Algebraic Thinking

Cluster: Represent and Solve Problems Involving Multiplication and Division

<p>Standard 3.OA.6: Understand division as an unknown-factor problem. <i>For example, find $32 \div 8$ by finding the number that makes 32 when multiplied by 8.</i></p>	<p>Essential Element EE.3.OA.6: Not applicable See EE.5.NBT.6-7.</p>
<p>Grade 2 Essential Element EE.2.OA.6:</p> <ul style="list-style-type: none">• Not addressed in Grade 2.	<p>Grade 4 Essential Element EE.4.OA.6:</p> <ul style="list-style-type: none">• Not addressed in Grade 4.
<p>I Can Statements:</p> <ul style="list-style-type: none">•	
<p>Key Vocabulary:</p> <ul style="list-style-type: none">•	<p>Supports (specific to student): (e.g., assistive technology, communication system, visual aids, templates, active board, highlighters)</p>
<p>Instructional Examples:</p> <ul style="list-style-type: none">•	
<p>Real World Connections:</p> <ul style="list-style-type: none">•	
<p>Resources:</p> <ul style="list-style-type: none">•	

Grade 3 Math

3.OA.7 Element Card

Domain: Operations and Algebraic Thinking

Cluster: Multiply and Divide within 100

Standard 3.OA.7: Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that $8 \times 5 = 40$, one knows $40 \div 5 = 8$) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.

Essential Element EE.3.OA.7: Not applicable
See **EE.7.NS.2.a** and **EE.7.NS.2.b**.

Grade 2 Essential Element EE.2.OA.7:

- Not addressed in Grade 2.

Grade 4 Essential Element EE.4.OA.7:

- Not addressed in Grade 4.

I Can Statements:

-

Key Vocabulary:

-

Supports (specific to student): (e.g., assistive technology, communication system, visual aids, templates, active board, highlighters)

Instructional Examples:

-

Real World Connections:

-

Resources:

-

Grade 3 Math

3.OA.8 Element Card

Domain: Operations and Algebraic Thinking

Cluster: Solve Problems Involving the Four Operations, and Identify and Explain Patterns in Arithmetic

Standard 3.OA.8: Solve two-step word problems using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.

Essential Element EE.3.OA.8: Solve one-step real-world problems using addition or subtraction within 20.

Grade 5 Essential Element EE.2.OA.8:

- Not addressed in 2nd. grade

Grade 7 Essential Element EE.4.OA.8:

- Not addressed in 4th. grade

I Can Statements EE:

- I can identify the object(s) that appear in a real world one-step story problem.
- I can add to solve word problems identified through the use of symbol representation
- I can add to solve real world one-step story problems from 0-30. Represent the problem in pictures or with objects.

Key Vocabulary EE:

- Real world
- addition
- solve
- subtraction

Supports (specific to student): (e.g., assistive technology, communication system, visual aids, templates, active board, highlighters)

- manipulatives
- 100 chart
- number line

Instructional Examples EE:

- Given a simple word problem and asked “What is the problem about?” point to an object from a choice of two that represents what the problem was about (e.g., box, toy).
- Solve by adding (e.g., “Here are 10 pencils. We need 10 more for each person to get a pencil. How many will we need in all?”)
- Solve by adding (e.g., “There are 25 birds in a tree and 10 more joined them. How many birds are in a tree?”).

Real World Connections:

- Determining how long it will take to pay off a small loan from a friend.

Resources:

Grade 3 Math

3.OA.8 Element Card

Domain: Operations and Algebraic Thinking

Cluster: Solve Problems Involving the Four Operations, and Identify and Explain Patterns in Arithmetic

- <http://www.primaryresources.co.uk/maths/mathsD1.htm>
- www.ilx.com

Grade 3 Math

3.OA.9 Element Card

Domain: Operations and Algebraic Thinking

Cluster: Solve Problems Involving the Four Operations, and Identify and Explain Patterns in Arithmetic

Standard 3.OA.9: Identify arithmetic patterns (including patterns in the addition table or multiplication table), and explain them using properties of operations. *For example, observe that 4 times a number is always even, and explain why 4 times a number can be decomposed into two equal addends*

Essential Element EE.3.OA.9: Identify arithmetic patterns.

Grade 2 Essential Element EE.2.OA.9:

- Not addressed in Grade 2.

Grade 4 Essential Element EE.4.OA.9:

- Not addressed in Grade 4.

I Can Statements:

- I can find arithmetic (number) patterns in addition and subtraction problems.
- I can identify arithmetic (number) patterns in addition and subtraction problems.
- I can complete a complex arithmetic pattern in addition and subtraction problems.

Key Vocabulary:

- arithmetic
- addition
- pattern
- subtraction

Supports (specific to student): (e.g., assistive technology, communication system, visual aids, templates, active board, highlighters)

- Manipulatives
- Number line/charts

Instructional Examples:

- Introduce patterns that occur in addition and subtraction.
- Work in groups to determine which patterns they can find, and have them report on/share what they have found. Fill in missing patterns.
- Make pattern jumps on a number line.
- Teach patterns as they relate to properties of operations.

Real World Connections:

- Show patterns of addition and multiplication.
- Serve meals, leisure activities (such as playing cards), finances.

Resources:

- www.k-5mathteachingresources.com
- www.ilx.com

Grade 3 Math

3.NBT.1 Element Card

Domain: Numbers and Operations in Base Ten

Cluster: Use Place Value Understanding and Properties of Operations to Perform Multi-digit Arithmetic

Standard NBT.1: Use place value understanding to round whole numbers to the nearest 10 or 100.

Essential Element EE.3.NBT.1: Use decade numbers (10, 20, 30) as benchmarks to demonstrate understanding of place value for numbers 0-30.

Grade 2 Essential Element EE.2.NBT.1:

- Represent numbers up to 30 with sets of tens and ones using objects in columns or arrays.

Grade 4 Essential Element EE.4.NBT.1:

- Not applicable. See EE.5.NBT.1.

I Can Statements:

- I can identify numbers.
- I can identify tens on a number line.

Key Vocabulary:

- place value

Supports (specific to student): (e.g., assistive technology, communication system, visual aids, templates, active board, highlighters)

- Tablet applications
- Number line
- Graphic organizer

Instructional Examples:

- Stand on 10, 20, 30 on a number chart.
- Circle the 10's on a number line.
- Point to any number from one to three on a number line.
- Participate in a cake walk. When the music stops, look to see if they are on the number that is called out.
- Identify a number when point to or presented on a card.
- Given a number from one to three, point to the number symbol.

Real World Connections:

- Determine if you have enough money to buy a list of items at the grocery store.

Resources:

- <http://www.free-training-tutorial.com/rounding-games.html>

Grade 3 Math

3.NBT.2 Element Card

Domain: Numbers and Operations in Base Ten

Cluster: Use Place Value Understanding and Properties of Operations to Perform Multi-digit Arithmetic

Standard 3.NBT.2: Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.

Essential Element EE.3.NBT.2: Demonstrate understanding of place value to tens.

Grade 2 Essential Element EE.2.NBT.2 :

- **EE.2.NBT.2.a.** Count from 1 to 30 (count with meaning; cardinality).
- **EE.2.NBT.2.b.** Name the next number in a sequence between 1 and 10.

Grade 4 Essential Element EE.4.NBT.2:

- Compare whole numbers to 10 using symbols (<, >, =).

I Can Statements:

- I can identify more or less.
- I can count to 10 using one-to-one correspondence.
- I can identify place value to tens.
- I can identify place value to 50.

Key Vocabulary:

- place value
- tens

Supports (specific to student): (e.g., assistive technology, communication system, visual aids, templates, active board, highlighters)

- Tablet applications
- Money
- Manipulatives
- Skittles
- Dominoes

Instructional Examples:

- Given a container of pennies, count out 10 from the container.
- Shown a set of 10 objects, create a duplicate collection.
- Select a domino and tell what number the dots represent.
- When given a bag of Skittles, pull 10 Skittles out of the bag.
- I saw three groups of 10 and five extras, so three groups of 10 = 30 and 5 more makes 35.

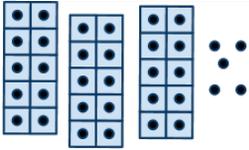
- When given a group of 10 frame models, arrange and count the value of the number.

Grade 3 Math

3.NBT.2 Element Card

Domain: Numbers and Operations in Base Ten

Cluster: Use Place Value Understanding and Properties of Operations to Perform Multi-digit Arithmetic



- When given two-digit number cards, identify the number in the tens place value.
- Write the number in expanded form – $43 = 40 + 3$.
- Identify the number in the ones and tens place value (i.e., the price of an item).
- Build numbers with place value pieces.

Real World Connections:

- Understand the cost of items when shopping.
- Develop a budget.

Resources:

- <http://www.free-training-tutorial.com/rounding-games.html>

Grade 3 Math

3.NBT.3 Element Card

Domain: Numbers and Operations in Base Ten

Cluster: Use Place Value Understanding and Properties of Operations to Perform Multi-digit Arithmetic

Standard 3.NBT.3: Multiply one-digit whole numbers by multiples of 10 in the range 10–90 (e.g., 9×80 , 5×60) using strategies based on place value and properties of operations.

Essential Element EE.3.NBT.3: Count by tens using models such as objects, base ten blocks, or money.

Grade 2 Essential Element EE.2.NBT.3:

- Identify numerals 1 to 30.

Grade 4 Essential Element EE.4.NBT.3:

- Round any whole number 0-30 to the nearest ten.

I Can Statements:

- I can count pennies to 10.
- I can identify whole numbers to 10.
- I can count by tens using money.
- I can compare the value of money based on place value.

Key Vocabulary:

- multiply
- tens
- count

Supports (specific to student): (e.g., assistive technology, communication system, visual aids, templates, active board, highlighters)

- Money application on smart board
- Base ten blocks on smart board
- Tablet applications
- Money

Instructional Examples:

- Count pennies to 10.
- Given five dimes, count by 10 to determine total.
- Given 15 pennies, create a one group of 10 and a group of five ones.
- Given three dimes, count by 10 to determine total.
- Use money (dimes and pennies) to represent place value.

Real World Connections:

- Count currency and coins when shopping.

Resources:

- www.ixl.com

Grade 3 Math

3.NF.1-3 Element Card

Domain: Numbers and Operations - Fractions

Cluster: Develop Understanding of Fractions as Numbers

Standard 3.NF.1: Understand a fraction $1/b$ as the quantity formed by 1 part when a whole is partitioned into b equal parts; understand a fraction a/b as the quantity formed by a parts of size $1/b$.

Standard 3.NF.2: Understand a fraction as a number on the number line; represent fractions on a number line diagram.

- a. Represent a fraction $1/b$ on a number line diagram by defining the interval from 0 to 1 as the whole and partitioning it into b equal parts. Recognize that each part has size $1/b$ and that the endpoint of the part based at 0 locates the number $1/b$ on the number line.
- b. Represent a fraction a/b on a number line diagram by marking off a lengths $1/b$ from 0. Recognize that the resulting interval has size a/b and that its endpoint locates the number a/b on the number line.

Standard 3.NF.3: Explain equivalence of fractions in special cases, and compare fractions by reasoning about their size.

- a. Understand two fractions as equivalent (equal) if they are the same size, or the same point on a number line.
- b. Recognize and generate simple equivalent fractions, e.g., $1/2 = 2/4$, $4/6 = 2/3$. Explain why the fractions are equivalent, e.g., by using a visual fraction model.
- c. Express whole numbers as fractions, and recognize fractions that are equivalent to whole numbers. *Examples: Express 3 in the form $3 = 3/1$; recognize that $6/1 = 6$; locate $4/4$ and 1 at the same point of a number line diagram.*
- d. Compare two fractions with the same numerator or the same denominator by reasoning about their size. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with the symbols $>$, $=$, or $<$, and justify the conclusions, e.g., by using a visual fraction model.

Essential Element EE.3.NF.1–3: Differentiate a fractional part from a whole.

Grade 2 Essential Element EE.2.NF.1-3:

- Not addressed in Grade 2.

Grade 4 Essential Element EE.4.NF.1-2:

- Identify models of one half ($1/2$) and one fourth ($1/4$).

Grade 4 Essential Element EE.4.NF.3:

- Differentiate between whole and half.

Grade 3 Math

3.NF.1-3 Element Card

Domain: Numbers and Operations - Fractions

Cluster: Develop Understanding of Fractions as Numbers

I Can Statements:

- I can point to or touch a whole.
- I can recognize that fractions are part of a whole.
- I can differentiate a fractional part from a whole.
- I can identify halves or fourths as related to the whole.

Key Vocabulary:

- denominator
- equivalent fractions
- unit fractions
- numerator

Supports (specific to student): (e.g., assistive technology, communication system, visual aids, templates, active board, highlighters)

- Fraction bars
- Fraction stamps
- Number line
- I-Pad or other digital device

Instructional Examples:

- Given a part of and the whole real-world object (pizza, segmented chocolate bar, segmented toy pie, etc.), point to the whole.
- Utilize wooden shapes, separate into halves and put back together into whole.
- Sort pictures of whole objects and parts into the appropriate category.
- Identify pictures or objects that are split into fourths.

Real World Connections:

- Make conversions in cooking.

Resources:

- <http://www.uen.org/Lessonplan/preview.cgi?LPid=28280>
- <http://www.free-training-tutorial.com/equivalent-fractions-games.html>
- <http://www.visualfractions.com/compare.htm>

Grade 3 Math

3.MD.1 Element Card

Domain: Measurement and Data

Cluster: Solve Problems Involving Measurement and Estimation of Intervals of Time, Liquid Volumes, and Masses of Objects

Standard 3.MD.1: Tell and write time to the nearest minute, and measure time intervals in minutes. Solve word problems involving addition and subtraction of time intervals in minutes, e.g., by representing the problem on a number line diagram

Essential Element EE.3.MD.1: Tell time to the hour on a digital clock.

Grade 2 Essential Element EE.2.MD.1:

- Measure the length of objects using non-standard units.

Grade 4 Essential Element EE.4.MD.1:

- Identify the smaller measurement unit that comprises a larger unit within a measurement system (inches/foot, centimeter/meter, minutes/hour).

I Can Statements:

- I can differentiate a digital clock from other measurement tools as a tool for telling time.
- I can identify which is the hour on a digital clock.
- I can tell time to the hour on a digital clock.

Key Vocabulary:

- clock
- “tell time”
- hour
- time

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)

- Time telling and time matching apps for tablet
- Appropriate size of digital clock for student use
- Digital watch for student use
- Cell phone with timer for time telling on the hour of each school day

Instructional Examples:

- Match times of the day with events on school schedule
- (Re)Set an auditory timer on the hour and asking, “What time is it?” when it rings. Providing verbal and/or written response on chart.
- Match digital time flashcards showing the time to the hour. Eventually a.m. and p.m. could be added to these.
- Look at a schedule, identify the hour.
- Given cards showing digital clocks - with one clock having the hour circled and one clock with the minutes circled, indicate the clock with the hour circled.

Real World Connections:

Grade 3 Math

3.MD.1 Element Card

Domain: Measurement and Data

Cluster: Solve Problems Involving Measurement and Estimation of Intervals of Time, Liquid Volumes, and Masses of Objects

- Tell time for home and community activities.
- Help others when they ask, "What time is it?"

Resources:

- www.khake.com/page47.htm
- www.ixl.com

Grade 3 Math

3.MD.2 Element Card

Domain: Measurement and Data

Cluster: Solve Problems Involving Measurement and Estimation of Intervals of Time, Liquid Volumes, and Masses of Objects

Standard 3.MD.2: Measure and estimate liquid volumes and masses of objects using standard units of grams (g), kilograms (kg), and liters (l). Add, subtract, multiply, or divide to solve one-step word problems involving masses or volumes that are given in the same units, e.g., by using drawings (such as a beaker with a measurement scale) to represent the problem.

Essential Element EE.3.MD.2: Identify the appropriate measurement tool to solve one-step word problems involving mass and volume.

Grade 2 Essential Element EE.2.MD.2:

- Not applicable.

Grade 4 Essential Element EE.4.MD.2.a:

- Tell time using a digital clock. Tell time to the nearest hour using an analog clock.

Grade 4 Essential Element EE.4.MD.2.b:

- Measure mass or volume using standard tools

Grade 4 Essential Element EE.4.MD.2.c:

- Use standard measurement to compare lengths of objects.

Grade 4 Essential Element EE.4.MD.2.d:

- Identify coins (penny, nickel, dime, quarter) and their values.

I Can Statements:

- I can determine if an object is a solid and a liquid.
- I can select the appropriate tool to measure a solid or a liquid.
- I can use a scale to measure weight.
- I can use beakers, liquid measuring cups, and other containers to measure liquids.
- I can identify standard units of measure for mass and liquid.
- I can measure liquid volumes and masses of objects using standard units of grams (g), kilograms (kg), and liters (l).

Key Vocabulary:

- beaker
- liters
- scale
- solid
- grams
- kilograms
- liquid

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)

- User-friendly measuring tools such as scales, beakers, liquid measuring cups, liquid measuring containers, etc.
- Students' favorite liquids for practicing liquid measure: pop, milk, juice, etc.
- One-step word problems that are individualized and made meaningful according to student interests

Instructional Examples:

Grade 3 Math

3.MD.2 Element Card

Domain: Measurement and Data

Cluster: Solve Problems Involving Measurement and Estimation of Intervals of Time, Liquid Volumes, and Masses of Objects

- Given a rock and a glass of water, identify which is solid.
- When provided two tools, a measuring cup and a scale, identify which tool measures liquid.
- When provided two tools, a measuring cup and a scale, identify which tool measures liquid.
- Sort the following real-world items as being measured by grams or liters when shown the measurement tools (apple measured in grams and juice in liters).
- Measure out items in a recipe.
- Given standard unit scale, weigh 10 grams of sand.

Real World Connections:

- Measuring and weighing ingredients accurately for a recipe

Resources:

- www.khake.com/page47.html
- www.ixl.com

Grade 3 Math

3.MD.3 Element Card

Domain: Measurement and Data

Cluster: Represent and Interpret Data

Standard 3.MD.3: Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step “how many more” and “how many less” problems using information presented in scaled bar graphs. *For example, draw a bar graph in which each square in the bar graph might represent 5 pets.*

Essential Element EE.3.MD.3: Use picture or bar graph data to answer questions about data.

Grade 2 Essential Element EE.2.MD.3:

- Order by length using non-standard units.

Grade 4 Essential Element EE.4.MD.3:

- Determine the area of a square or rectangle by counting units of measure (unit squares).

I Can Statements:

- I can collect data.
- I can organize data.
- I can use picture or bar graph data to answer questions about data.
- I can count the number of objects in a picture graph.
- I can count the number of units in a bar graph.
- I can interpret data to answer questions.
- I can use the key to interpret graphs.

Key Vocabulary:

- “how many more/less”
- picture graph
- graph
- bar graph

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)

- Tactile objects of interest and meaningful for student in sufficient numbers to use for counting to make picture and bar graphs
- Tablet apps for graphing
- Graph paper with large, medium, and small squares and in various sizes

Instructional Examples:

Grade 3 Math

3.MD.3 Element Card

Domain: Measurement and Data

Cluster: Represent and Interpret Data

- Use three posters, one for the students with brown hair, one for students with red hair, and one for the students with blonde hair, place their picture on the poster board that indicates what color hair they have.
- Use a daily survey to collect data on different interest such as the number of students who are wearing t-shirts.
- After counting the number of objects on a picture graph showing the number of boys/girls in the class, point to the corresponding numeral on a number chart (print or e-form).
- After counting the number of units in a single bar of a bar graph showing the number of desks in the math room, tell/point to the corresponding numeral on a chart (print or e-form).
- State how many days were sunny as charted on a weather chart.
- Identify how they know there were no rainy days that week based on the chart.
- State two facts about the data on a graph.

Real World Connections:

- Make and interpret graphs of items of importance to the student
- Participate in family projects involving graphing or other visual depictions of reality (or at least be able to connect the 2 dimensional drawing with the 3-dimensional object/s). Examples include garden planning, furniture rearranging in rooms, swimming pool installation in yard area, etc.

Resources:

- www.khake.com/page47.html
- www.ixl.com

Grade 3 Math

3.MD.4 Element Card

Domain: Measurement and Data

Cluster: Represent and Interpret Data

Standard 3.MD.4: Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. Show the data by making a line plot, where the horizontal scale is marked off in appropriate units—whole numbers, halves, or quarters.

Essential Element EE.3.MD.4: Measure length of objects using standard tools, such as rulers, yardsticks, and meter sticks.

Grade 2 Essential Element EE.2.MD.4:

- Order by length using non-standard units.

Grade 4 Essential Element EE.4.MD.4.a:

- Represent data on a picture or bar graph given a model and a graph to complete.

Grade 4 Essential Element EE.4.MD.4.b:

- Interpret data from a picture or bar graph.

I Can Statements:

- I can place a standard measuring tool where one would begin to measure the length of an object.
- I can measure length with non-standard units of measurement (example: use 16 yardsticks to measure the width of the playground).
- I can measure length of objects using standard tools, such as rulers, yardsticks, and meter sticks.
- Using a ruler, I can measure the length/height/width of my favorite book/game/pizza box.
- Using a yardstick/meter stick, I can measure the length/width/height of my favorite classroom.
- Using a yardstick/meter stick, I can measure the length of the playground.
- I can measure length of objects using standard tools, such as rulers, yardsticks, and meter sticks, by repeating the use of the measurement tool/unit.

Key Vocabulary:

- Measure
- Ruler
- Yardstick
- Inch
- Foot
- yard
- Length
- Long
- Meter stick
- Centimeter
- meter

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)

- Electronic, enlarged rulers, yardsticks, and meter sticks, example: the 6 inch tall and 1 yard long fish measuring tool
- Objects of interest to the student for him/her to measure
- Surveyor's measuring wheel with built-in counter

Instructional Examples:

- Given a string, place the ruler at the end of the string where one would begin a measure.
- Identify the length of items in the classroom using a yardstick end-to-end and record as number of yardsticks.
- Given a ruler and snowfall, mark the depth of the snow with a ruler.
- Given a row of three tile squares on the floor, measure the length of the tiles by repeating a ruler end to end.

Grade 3 Math

3.MD.4 Element Card

Domain: Measurement and Data

Cluster: Represent and Interpret Data

- Task 1: Measure the length of the playground using a surveyor's measuring wheel. Task 2: measure the length of the playground using a yardstick, metal tape measure, or multiples of these to see if the result matches the results found in Task 1.

Real World Connections:

- Measure meaningful objects in the child's world.
- Measure fish s/he catches on a family fishing trip.
- Measure and compare the length of various swimming pools (Extend this by graphing to compare various pool lengths. See EE.3.MD.3).

Resources:

- www.ixl.com

Grade 3 Math

3.MD.5-7 Element Card

Domain: Measurement and Data

Cluster: Geometric Measurement: Understand Concepts of Area, and Relate Area to Multiplication and Addition

Standard 3.MD.5: Recognize area as an attribute of plane figures and understand concepts of area measurement.

- a. A square with side length of 1 unit, called “a unit square,” is said to have “one square unit” of area, and can be used to measure area.
- b. A plane figure, which can be covered without gaps or overlaps by n unit squares, is said to have an area of n square units.

Standard 3.MD.6: Measure areas by counting unit squares (square cm, square m, square in., square ft, and improvised units).

Standard 3.MD.7: Relate area to the operations of multiplication and addition.

- a. Find the area of a rectangle with whole-number side lengths by tiling it, and show that the area is the same as would be found by
- b. Multiply side lengths to find areas of rectangles with whole-number side lengths in the context of solving real-world and mathematical problems, and represent whole-number products as rectangular areas in mathematical reasoning.
- c. Use tiling to show in a concrete case that the area of a rectangle with whole-number side lengths a and $b + c$ is the sum of $a \times b$ and $a \times c$. Use area models to represent the distributive property in mathematical reasoning.
- d. Recognize area as additive. Find areas of rectilinear figures by decomposing them into non-overlapping rectangles and adding the areas of the non-overlapping parts, applying this technique to solve real-world problems.

Essential Element EE.3.MD.5-7: Not Applicable; See EE.4.MD.2

Grade 2 Essential Element EE.2.MD.5:

- Increase or decrease length by adding or subtracting unit(s).

Grade 2 Essential Element EE.2.MD.6:

- Use a number line to add one more unit of length.

Grade 2 Essential Element EE.2.MD.7:

- Identify on a digital clock the hour that matches a routine activity.

Grade 4 Essential Element EE.4.MD.5:

- Recognize angles in geometric shapes.

Grade 4 Essential Element EE.4.MD.6:

- Identify angles as larger and smaller.

Grade 4 Essential Element EE.4.MD.7:

- Not applicable.
- See EE.4.G.2.a.

Grade 3 Math

3.MD.5-7 Element Card

Domain: Measurement and Data

Cluster: Geometric Measurement: Understand Concepts of Area, and Relate Area to Multiplication and Addition

I Can Statements: <ul style="list-style-type: none">•	
Key Vocabulary: <ul style="list-style-type: none">•	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">•	
Real World Connections: <ul style="list-style-type: none">•	
Resources: <ul style="list-style-type: none">•	

Grade 3 Math

3.MD.8 Element Card

Domain: Measurement and Data

Cluster: Geometric Measurement: Recognize Perimeter as an Attribute of Plane Figures, and Distinguish Between Linear and Area Measures

Standard 3.MD.8: Solve real world and mathematical problems involving perimeters of polygons, including finding the perimeter given the side lengths, finding an unknown side length, and exhibiting rectangles with the same perimeter and different areas or with the same area and different perimeters.

Essential Element EE.3.MD.8: Not applicable; See **EE.7.G.4** and **EE.8.G.9**.

Grade 2 Essential Element EE.2.MD.8:

- Recognize that money has value

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

- Not addressed in Grade 4.

I Can Statements:

-

Key Vocabulary:

-

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:

-

Real World Connections:

-

Resources:

-

Grade 3 Math

3.G.1 Element Card

Domain: Geometry

Cluster: Reason with Shapes and their Attributes

<p>Standard 3.G.1: Understand that shapes in different categories (e.g., rhombuses, rectangles, and others) may share attributes (e.g., having four sides), and that the shared attributes can define a larger category (e.g., quadrilaterals). Recognize rhombuses, rectangles, and squares as examples of quadrilaterals, and draw examples of quadrilaterals that do not belong to any of these subcategories.</p>	<p>Essential Element EE.4.G.1: Describe attributes of two-dimensional shapes.</p>
<p>Grade 2 Essential Element EE.2.G.1:</p> <ul style="list-style-type: none">Identify common two-dimensional shapes: square, circle, triangle, and rectangle.	<p>Grade 4 Essential Element EE.4.G.1:</p> <ul style="list-style-type: none">Recognize parallel lines and intersecting lines.
<p>I Can Statements:</p> <ul style="list-style-type: none">I can match shapes (e.g., squares, rectangles, circles, triangles).I can sort shapes by attributes.I can recognize that shapes in different categories can share attributes.I can identify the shared attributes of shapes in different categories.	
<p>Key Vocabulary:</p> <ul style="list-style-type: none">squarecircletrianglerectangle	<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">Manipulative examples of two-dimensional shapesPictures of two-dimensional shapes on i-pad or active boardVenn diagram
<p>Instructional Examples:</p> <ul style="list-style-type: none">Match shapes to the shape of objects within the classroom.Match shapes that are the same.Sort different size same shapes into the same category (e.g., large and small triangle would go in the same category).Shown different shapes answers, “What is the same?”Place in the appropriate category shapes with common attributes.Given a Venn diagram, sort attributes of shapes (i.e., straight edges, curved edges, both).Trace the shared attributes of two different shapes.	
<p>Real World Connections:</p>	

Grade 3 Math

3.G.1 Element Card

Domain: Geometry

Cluster: Reason with Shapes and their Attributes

- Recognize safety signs by their shapes.

Resources:

- <http://illuminations.nctm.org/activitydetail.aspx?id=80>
- www.ixl.com

Grade 3 Math

3.G.2 Element Card

Domain: Geometry

Cluster: Reason with Shapes and their Attributes

Standard 3.G.2: Partition shapes into parts with equal areas. Express the area of each part as a unit fraction of the whole. *For example, partition a shape into 4 parts with equal area, and describe the area of each part as $\frac{1}{4}$ of the area of the shape.*

Essential Element EE.3.G.2: Recognize that shapes can be partitioned into equal areas.

Grade 2 Essential Element EE.2.G.2:

- Not applicable

Grade 4 Essential Element EE.4.G.2:

- Describe the defining attributes of two-dimensional shapes.

I Can Statements:

- I can provide the shape requested.
- I can match shapes.
- I can create shapes.
- I can recognize that shapes can be partitioned into equal areas.

Key Vocabulary:

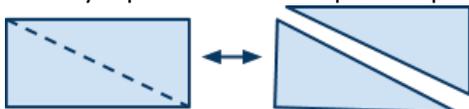
- congruent
- equal
- fraction

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)

- i-pad
- Paper with pre-drawn folding lines
- Tangram shapes

Instructional Examples:

- Match a picture of a shape, to a shape in the classroom.
- Match two shapes from an array of three in which one is different.
- Work a pattern block puzzle that results in a shape.
- Given three small rectangles, rearrange them into a larger rectangle.
- Given a shape, cut the shape into equal areas.
- Cut a pizza into equal areas to hand out to students in the class.
- Complete simple tangram puzzles with tangram pieces.
- Identify equal areas on complex shapes (i.e., stars, rectangle cut on the diagonal).



- Use a geoboard . Have students make a large shape and divide that shape using smaller rubber bands into equal areas. Have the students chart how

Grade 3 Math

3.G.2 Element Card

Domain: Geometry

Cluster: Reason with Shapes and their Attributes

many different ways they can divide the larger shape.

- Pair up students and provide print-outs of rectangles. Have the students divide the rectangles into fourths or eighths two different ways.
- Give students pieces of paper and have them fold into equal fourths and/or eighths.

Real World Connections:

- Measure ingredients when cooking.
- Develop patterns in art.
- Put puzzles together.

Resources:

- <http://www.k-5mathteachingresources.com/support-files/fractionswithcolortiles.pdf>
- <http://illuminations.nctm.org/activitydetail.aspx?id=80>

Resources:

Math Resources grades 3-5:

<http://www.visualfractions.com/compare.htm>

interactive fractions

<http://www.free-training-tutorial.com/equivalent-fractions-games.html>

<http://www.uen.org/Lessonplan/preview.cgi?LPid=28280>

http://eduplace.com/math/mthexp/g5/mathbkg/pdf/mb_g5_u1.pdf

http://www.mathplayground.com/common_core_state_standards_for_mathematics_grade_5.html

http://www.mathplayground.com/locate_aliens.html

<http://ixl.com>

<http://jc-schools.net/tutorials/interactive.htm>

<http://www.k-5mathteachingresources.com/support-files/capacity-mass-word-problems.pdf>

Capacity word problems with pictures

<http://www.k-5mathteachingresources.com/support-files/moreorlessthanaliter.pdf>

more or less than a liter

<http://www.superteacherworksheets.com/>

work sheets to choose from

<http://illuminations.nctm.org/activitydetail.aspx?id=80>

Equivalent fractions

<http://www.k-5mathteachingresources.com/>

everything

<http://www.esl-lab.com/time.htm>

Telling Time

<http://www.fuelthebrain.com/Guides/>

<http://www.brainpopjr.com/math/measurement/area/grownups.weml>

<http://www.free-training-tutorial.com/equivalent-fractions-games.html>

Equivalent Fractions

<http://www.multiplication.com/games>

multiplication games

<http://www.apples4theteacher.com/math.html>

<http://primaryresources.co.uk/maths/mathsD1.htm>

word and real-life problems

<http://www.khake.com/page47.html>

Math Resources-Tutorials, formulas, calculators, directories

http://eduplace.com/math/mthexp/g5/mathbkg/pdf/mb_g5_u1.pdf

Multiplication and division in real-world contexts

<http://www.sheppardsoftware.com/math.htm>

Math games of all different types: Basic operations/mixed operations/time/place value/ money/fractions/decimals/algebra/geometry

<http://www.mathsisfun.com/rounding-numbers.html>

rounding numbers

<http://www.webmath.com/k8round.html>

rounding numbers