

# Shifts Demanded by the Core

## 6 Shifts in ELA/Literacy

- Read as much non-fiction as fiction
- Learn about the world by reading
- Read more challenging material closely
- Discuss reading using evidence
- Write non-fiction using evidence
- Increase academic vocabulary

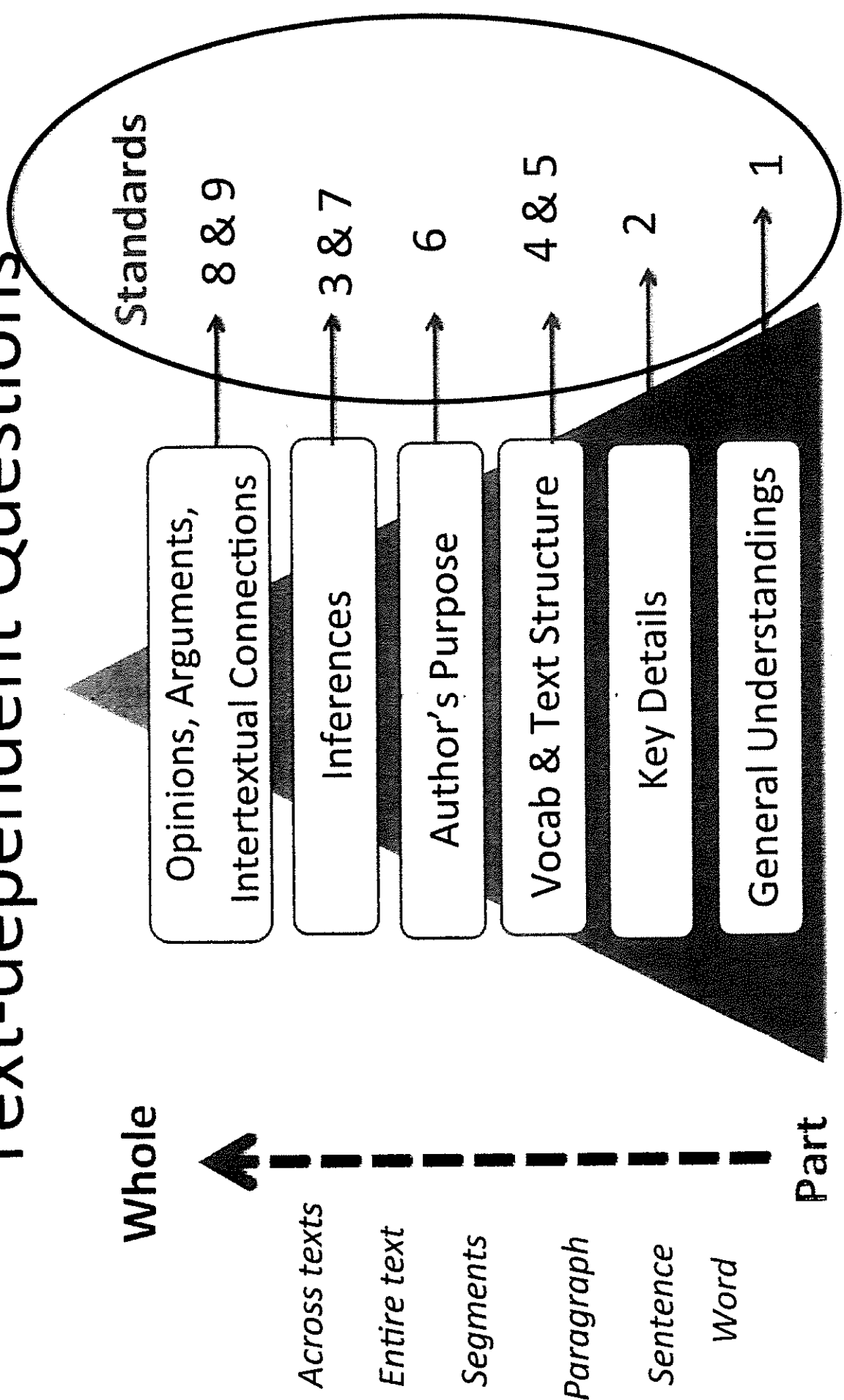
## 6 Shifts in Mathematics

- Focus: learn more about fewer, key topics
- Build skills within and across grades
- Develop speed and accuracy
- Really know it, Really do it
- Use it in the real world
- Think fast AND solve problems

# Close Reading is...

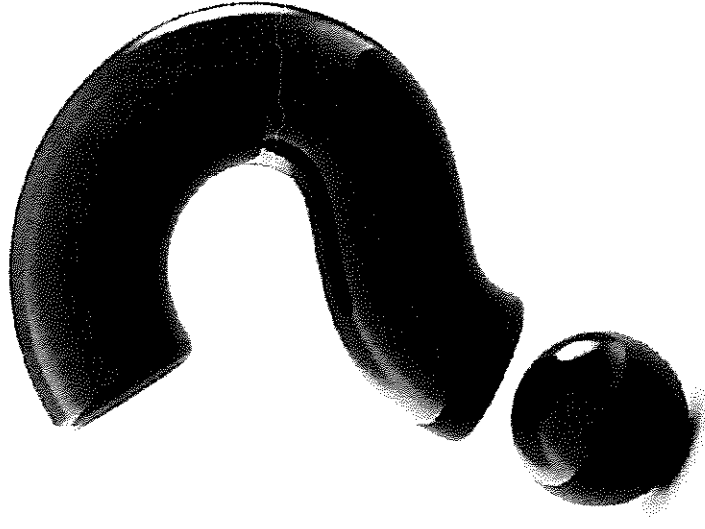
- Using strategic questions to highlight challenges in text.
- “Reading with a pencil” – annotation or “talking back” to text.
- Repeated readings of complex text.
- Done with a short text or passage.
- Done with little to no pre-reading work or building background.
- A chance for students to experience productive struggle.

# Progression of Text-dependent Questions




## Developing Text-Dependent Questions

- Do the questions require the reader to return to the text?
- Do the questions require the reader to use evidence to support his or her ideas or claims?
- Do the questions move from text-explicit to text-implicit knowledge?
- Are there questions that require the reader to analyze, evaluate, and create?



Progression of Text Dependent Questions	CCS Reading Anchor Standard	My Text Dependent Questions
General Understandings	Standard 1	
Key Details	Standard 2	
Vocab & Text Structure	Standards 4 & 5	
Author's Purpose	Standard 6	
Inferences	Standards 3 & 7	
Opinions, Arguments, Intertextual Connections	Standards 8 & 9	

## Common Core Reading Icons

<p style="text-align: center;"><b>Read Closely</b> <b>Cite Evidence from Text</b></p>		<ul style="list-style-type: none"> <li>• Cite several examples of textual evidence.</li> <li>• Show me in the text what makes you think that?</li> <li>• What can you infer from this paragraph?</li> </ul>
<p style="text-align: center;"><b>Determine Ideas or Themes</b> <b>Summarize Key Details or Ideas</b></p>		<ul style="list-style-type: none"> <li>• What is the theme or central idea?</li> <li>• An example of how the theme is developed in the text is _____.</li> <li>• How can you objectively summarize the text?</li> </ul>
<p style="text-align: center;"><b>Analyze the Development and Interaction of Individuals, Events, &amp; Ideas</b></p>		<ul style="list-style-type: none"> <li>• What can you infer about plot and how it is shaped by the setting?</li> <li>• An example of how a character evolves with the plot is _____.</li> <li>• How does the use of dialogue help the reader understand character and plot?</li> </ul>
<p style="text-align: center;"><b>Interpret Words, Phrases, &amp; Meanings</b> <b>Analyze Word Choice</b></p>		<ul style="list-style-type: none"> <li>• What does the word ____ mean in this sentence?</li> <li>• According to this passage, a _____ is like _____ because both _____.</li> </ul>
<p style="text-align: center;"><b>Analyze How Text Structures Relate to Each Other</b></p>		<ul style="list-style-type: none"> <li>• How does the structure of the text contribute to its meaning?</li> <li>• How does the sentence, chapter, scene, or stanza fit into the overall structure of a _____.</li> </ul>
<p style="text-align: center;"><b>Assess How Point of View or Purpose Shapes Content &amp; Style</b></p>		<ul style="list-style-type: none"> <li>• Which words from the text show that it is written in _____ person?</li> <li>• What perspective or point of view does each character have?</li> </ul>
<p style="text-align: center;"><b>Evaluate Diverse Media Content</b></p>		<ul style="list-style-type: none"> <li>• How does reading a story compare to the audio or video version?</li> <li>• Evaluate the effectiveness of the media techniques used to portray the work.</li> </ul>
<p style="text-align: center;"><b>Evaluate Argument and Claims</b></p>		<ul style="list-style-type: none"> <li>• What is the argument in the text?</li> <li>• Is there sufficient evidence to support the claims?</li> <li>• Is the argument well developed and supported?</li> </ul>
<p style="text-align: center;"><b>Analyze Similar Themes or Topics in 2 or More Texts</b></p>		<ul style="list-style-type: none"> <li>• How does the author's portrayal of the character compare to historical accounts?</li> <li>• How does the author use/alter history to _____.</li> </ul>
<p style="text-align: center;"><b>Comprehend Complex Texts Independently &amp; Proficiently</b></p>		<ul style="list-style-type: none"> <li>• What have you read independently lately?</li> <li>• What genres have you recently read?</li> <li>• Have you read multiple books by the same author?</li> </ul>



CCSS ELA Lesson Planning Overview

Reading Lesson

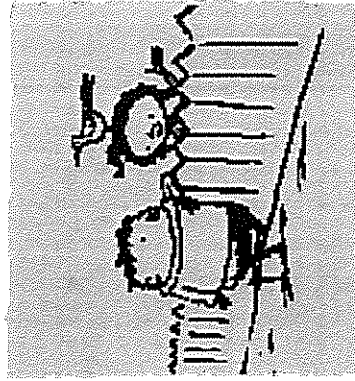
Grade:

Week of \_\_\_\_\_

<p><b>Essential Question:</b></p>	<p><b>Reading Selection:</b></p>  <p><b>Content Area:</b></p>	
<p><b>Common Core Standards:</b></p> <p>Reading Literature:</p> <p>Reading Informational:</p> <p>Writing:</p> <p>Speaking/Listening:</p> <p>History and Social Studies/Science:</p>	<p><b>Strategies:</b></p>	
<p><b>Learning Objectives/Purpose:</b></p>	<p><b>Text Dependent Questions:</b></p>  <p><b>Question Stems:</b></p>	
<p><b>Materials:</b></p>  <p><b>Additional Resources:</b></p>  <p><b>Media Resources:</b></p>  <p><b>Web Resources:</b></p>	<p><b>Content Vocabulary:</b></p>	<p><b>Academic Vocabulary:</b></p>

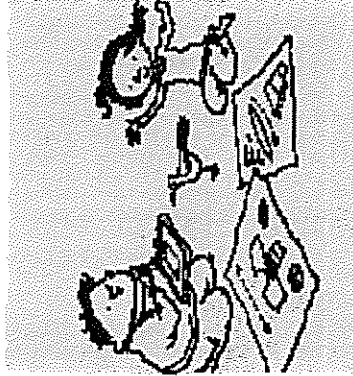
We're taking teaching and learning  
**Above & Beyond**

Today's students are moving beyond the basics  
and embracing the 4C's — "super skills" for the 21st century!



**Communication**

Sharing thoughts, questions,  
ideas, and solutions

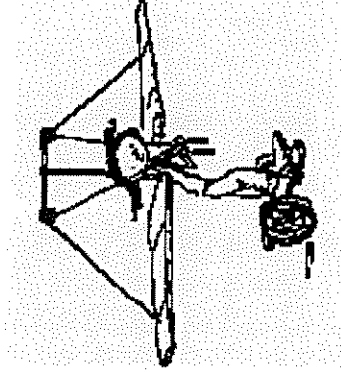


**Collaboration**

Working together to reach a  
goal — putting talent, expertise,  
and smarts to work



Looking at problems in  
a new way, linking learning  
across subjects & disciplines



Trying new approaches  
to get things done equals  
innovation & invention



# English Language Arts

- ELA teachers must teach more informational text
- Teach different modes of writing
  - Argumentative
  - Expository
  - Narrative
- Students must be able to respond to the varying demands of audience, task, purpose, and discipline.



# Science and History

- Teachers will have to teach reading and writing skills in their content area explicitly
- Heavily dependent on authentic text using primary and secondary resources
- The mantra for CCSS in Science and Social Studies is that Literacy is everyone's business.
- [www.corestandards.org/ELA-Literacy](http://www.corestandards.org/ELA-Literacy)



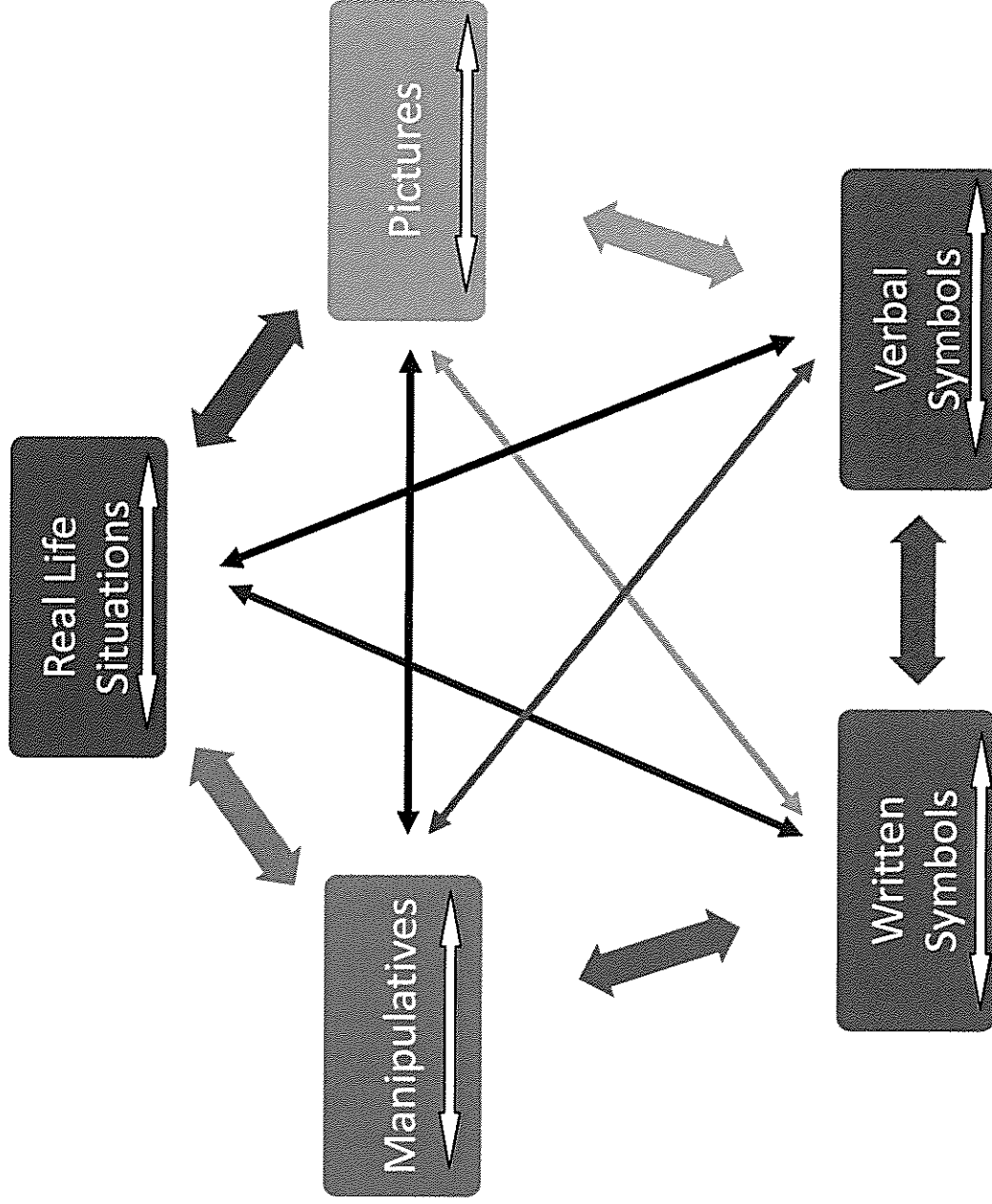
# Math



- 8 Standards for Mathematical Practices
- These 8 are not about the procedure
- Students must demonstrate their learning and describe their thinking processes.
- We are switching from knowing the right answer to problem solving.

Summary of Standards for Mathematical Practice	Questions to Develop Mathematical Thinking
<p><b>1. Make sense of problems and persevere in solving them.</b></p> <ul style="list-style-type: none"> <li>• Interpret and make meaning of the problem to find a starting point. Analyze what is given in order to explain to themselves the meaning of the problem.</li> <li>• Plan a solution pathway instead of jumping to a solution.</li> <li>• Monitor their progress and change the approach if necessary.</li> <li>• See relationships between various representations.</li> <li>• Relate current situations to concepts or skills previously learned and connect mathematical ideas to one another.</li> <li>• Continually ask themselves, "Does this make sense?" Can understand various approaches to solutions.</li> </ul>	<p>How would you describe the problem in your own words?  How would you describe what you are trying to find?  What do you notice about...?  What information is given in the problem?  Describe the relationship between the quantities.  Describe what you have already tried. What might you change?  Talk me through the steps you've used to this point.  What steps in the process are you most confident about?  What are some other strategies you might try?  What are some other problems that are similar to this one?  How might you use one of your previous problems to help you begin?  How else might you organize...represent... show...?</p>
<p><b>2. Reason abstractly and quantitatively.</b></p> <ul style="list-style-type: none"> <li>• Make sense of quantities and their relationships.</li> <li>• Decontextualize (represent a situation symbolically and manipulate the symbols) and contextualize (make meaning of the symbols in a problem) quantitative relationships.</li> <li>• Understand the meaning of quantities and are flexible in the use of operations and their properties.</li> <li>• Create a logical representation of the problem.</li> <li>• Attends to the meaning of quantities, not just how to compute them.</li> </ul>	<p>What do the numbers used in the problem represent?  What is the relationship of the quantities?  How is _____ related to _____?  What is the relationship between _____ and _____?  What does _____ mean to you? (e.g. symbol, quantity, diagram)  What properties might we use to find a solution?  How did you decide in this task that you needed to use...?  Could we have used another operation or property to solve this task? Why or why not?</p>
<p><b>3. Construct viable arguments and critique the reasoning of others.</b></p> <ul style="list-style-type: none"> <li>• Analyze problems and use stated mathematical assumptions, definitions, and established results in constructing arguments.</li> <li>• Justify conclusions with mathematical ideas.</li> <li>• Listen to the arguments of others and ask useful questions to determine if an argument makes sense.</li> <li>• Ask clarifying questions or suggest ideas to improve/revise the argument.</li> <li>• Compare two arguments and determine correct or flawed logic.</li> </ul>	<p>What mathematical evidence would support your solution?  How can we be sure that...? / How could you prove that...?  Will it still work if...?  What were you considering when...?  How did you decide to try that strategy?  How did you test whether your approach worked?  How did you decide what the problem was asking you to find? (What was unknown?)  Did you try a method that did not work? Why didn't it work? Would it ever work? Why or why not?  What is the same and what is different about...?  How could you demonstrate a counter-example?</p>
<p><b>4. Model with mathematics.</b></p> <ul style="list-style-type: none"> <li>• Understand this is a way to reason quantitatively and abstractly (able to decontextualize and contextualize).</li> <li>• Apply the mathematics they know to solve everyday problems.</li> <li>• Are able to simplify a complex problem and identify important quantities to look at relationships.</li> <li>• Represent mathematics to describe a situation either with an equation or a diagram and interpret the results of a mathematical situation.</li> <li>• Reflect on whether the results make sense, possibly improving/revising the model.</li> <li>• Ask themselves, "How can I represent this mathematically?"</li> </ul>	<p>What number model could you construct to represent the problem?  What are some ways to represent the quantities?  What is an equation or expression that matches the diagram, number line., chart..., table...?  Where did you see one of the quantities in the task in your equation or expression?  How would it help to create a diagram, graph, table...?  What are some ways to visually represent...?  What formula might apply in this situation?</p>

Summary of Standards for Mathematical Practice	Questions to Develop Mathematical Thinking
<p><b>5. Use appropriate tools strategically.</b></p> <ul style="list-style-type: none"> <li>• Use available tools recognizing the strengths and limitations of each.</li> <li>• Use estimation and other mathematical knowledge to detect possible errors.</li> <li>• Identify relevant external mathematical resources to pose and solve problems.</li> <li>• Use technological tools to deepen their understanding of mathematics.</li> </ul>	<p>What mathematical tools could we use to visualize and represent the situation?            What information do you have?            What do you know that is not stated in the problem?            What approach are you considering trying first?            What estimate did you make for the solution?            In this situation would it be helpful to use...a graph..., number line..., ruler..., diagram..., calculator..., manipulative?            Why was it helpful to use...?            What can using a _____ show us that _____ may not?            In what situations might it be more informative or helpful to use...?</p>
<p><b>6. Attend to precision.</b></p> <ul style="list-style-type: none"> <li>• Communicate precisely with others and try to use clear mathematical language when discussing their reasoning.</li> <li>• Understand the meanings of symbols used in mathematics and can label quantities appropriately.</li> <li>• Express numerical answers with a degree of precision appropriate for the problem context.</li> <li>• Calculate efficiently and accurately.</li> </ul>	<p>What mathematical terms apply in this situation?            How did you know your solution was reasonable?            Explain how you might show that your solution answers the problem.            What would be a more efficient strategy?            How are you showing the meaning of the quantities?            What symbols or mathematical notations are important in this problem?            What mathematical language..., definitions..., properties can you use to explain...?            How could you test your solution to see if it answers the problem?</p>
<p><b>7. Look for and make use of structure.</b></p> <ul style="list-style-type: none"> <li>• Apply general mathematical rules to specific situations.</li> <li>• Look for the overall structure and patterns in mathematics.</li> <li>• See complicated things as single objects or as being composed of several objects.</li> </ul>	<p>What observations do you make about...?            What do you notice when...?            What parts of the problem might you eliminate..., simplify...?            What patterns do you find in...?            How do you know if something is a pattern?            What ideas that we have learned before were useful in solving this problem?            What are some other problems that are similar to this one?            How does this relate to...?            In what ways does this problem connect to other mathematical concepts?</p>
<p><b>8. Look for and express regularity in repeated reasoning.</b></p> <ul style="list-style-type: none"> <li>• See repeated calculations and look for generalizations and shortcuts.</li> <li>• See the overall process of the problem and still attend to the details.</li> <li>• Understand the broader application of patterns and see the structure in similar situations.</li> <li>• Continually evaluate the reasonableness of their intermediate results</li> </ul>	<p>Explain how this strategy work in other situations?            Is this always true, sometimes true or never true?            How would we prove that...?            What do you notice about...?            What is happening in this situation?            What would happen if...?            Is there a mathematical rule for...?            What predictions or generalizations can this pattern support?            What mathematical consistencies do you notice ?</p>



## Representations Model

Representations Model adapted from Richard Lesh, Tom Post, and Merlyn Behr.

Name: \_\_\_\_\_ Date: \_\_\_\_\_ Concept: \_\_\_\_\_

## Modeling Math Meaningfully

<p>I can write it with numbers</p>	<p>I can draw a picture of it.</p>
<p>I can write a story problem.</p>	<p>I can model it using _____ math tools and explain my thinking.</p>

Name: \_\_\_\_\_ Date: \_\_\_\_\_ Concept: \_\_\_\_\_

## Multiple Representation of Mathematical Thinking



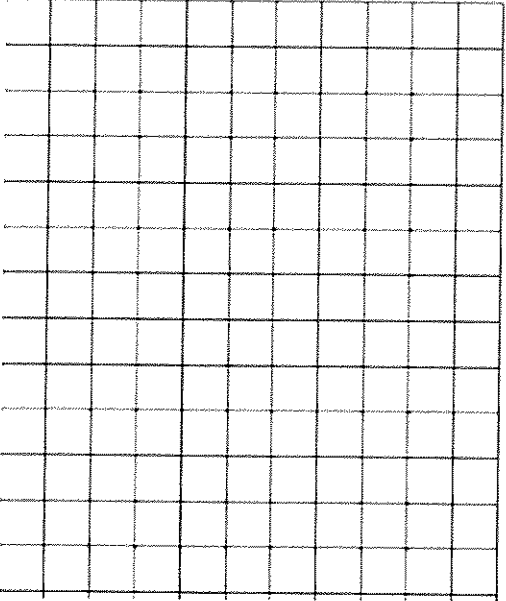

Name: \_\_\_\_\_ Date: \_\_\_\_\_ Concept: \_\_\_\_\_

## Multiple Representation of Mathematical Thinking

<p>Show the problem numerically and/or algebraically.</p>	<p>Construct a diagram and/or drawing.</p>
<p>Use the concept in a contextual setting (word problem).</p>	<p>Explain your thinking about the problem and your solution.</p>

Name: \_\_\_\_\_ Date: \_\_\_\_\_ Concept: \_\_\_\_\_

## Multiple Representation of Mathematical Thinking

<p>Show the problem numerically and/or algebraically.</p>	<p>Construct a diagram and/or drawing.</p> 
<p>Use the concept in a contextual setting (word problem).</p>	<p>Explain your thinking about the problem and your solution.</p>

Name: \_\_\_\_\_

Date: \_\_\_\_\_

Concept: \_\_\_\_\_

## Multiple Representations of Mathematical Thinking

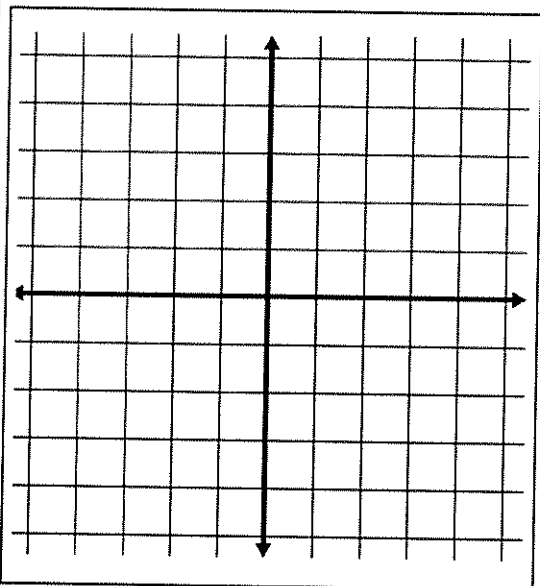
Write a numeric and/or algebraic equation.

Construct a diagram or picture.

Use in contextual setting.



Model or explain your thinking.



Name: \_\_\_\_\_ Date: \_\_\_\_\_ Concept: \_\_\_\_\_

## Modeling Math Meaningfully

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**CCSS Lesson Planning Overview**  
**Math Lesson**  
**Grade: Sixth**

<p><b>Essential Question:</b></p> <p>How does representing quantities in different ways reveal different information about the quantities?</p>	<p><b>Content:</b></p> <p>Numerical Expressions (3 weeks)</p>	
<p><b>Common Core Standards:</b></p> <p>6. NS .4 Find the greatest common factor of two whole numbers less than or equal to 100 and the least common multiple of two whole numbers less than or equal to 12. Use the distributive property to express a sum of two whole numbers 1-100 with a common factor as a multiple of a sum of two whole numbers with no common factor. For example, express <math>36 + 8</math> as <math>4(9 + 2)</math>.</p> <p>6.EE.1 Write and evaluate numerical expressions involving whole-number exponents.</p>	<p><b>Mathematical Practices/ Mathematical Thinking Questions:</b></p> <p>#2 Reason abstractly and quantitatively.</p> <p>*What is the relationship between ____ and _____.</p> <p>#7 Look for and make use of structure.</p> <p>*How can you use factor lists or the prime factorizations to find the GCF?</p> <p>*How can you use multiple lists or the prime factorizations to find the LCM?</p> <p>*Have you divided by the greatest common factor? How do you know?</p>	
<p><b>Learning Objectives/Purpose:</b></p> <p><b>Students will be able to:</b></p> <ol style="list-style-type: none"> <li>Find the greatest common factor of two whole numbers less than or equal to 100.</li> <li>Find the least common multiple of two whole numbers less than or equal to 12.</li> <li>Factor addition expressions using the distributive property and the GCF.</li> <li>Write and evaluate numerical expressions involving whole-number exponents.</li> </ol>	<p><b>Content Vocabulary:</b></p> <p>exponent  numerical expression  distributive property  greatest common factor  least common multiple  prime factorization  prime number  quotient  subtrahend  whole number</p>	<p><b>Academic Vocabulary:</b></p> <p>equation  evaluate  factor  multiple  product  sum</p>
<p><b>Materials &amp; Web/Media Resources:</b></p> <p>Milestone Lessons:  NCTM - The Venn Factor  NCTM - Factor Game  NCTM - Distributing and Factoring Using Area  Purplemath - Simplifying Expressions with Exponents  Textbook</p> <p>Math.com - Least Common Multiple  <a href="http://www.brainpop.com/math/problem-solving/greatestcommonfactor/">www.brainpop.com/math/problem-solving/greatestcommonfactor/</a></p>	<p><b>Assessments:</b></p> <p><i>Pre/Post Assessment:</i> That Quiz - GCF and LCM  <i>Ongoing Skill Assessment:</i> Kuta - Greatest Common Factor  Kuta - Least Common Multiple  Kuta - Order of Operations  <i>Problem Solving Assessments:</i> IXL - LCM and GCF Word Problems</p> <p><b>Constructed Response:</b></p>	

### CCSS Lesson Planning Overview

Math Lesson

Grade:

Lesson Duration \_\_\_\_\_



<b>Essential Question:</b>	<b>Content:</b>	
<b>Common Core Standards:</b>	<b>Mathematical Practices/ Mathematical Thinking Questions:</b>	
<b>Learning Objectives/Purpose:</b>	<b>Content Vocabulary:</b>	<b>Academic Vocabulary:</b>
<b>Materials &amp; Web/Media Resources:</b>	<b>Assessments:</b>  <b>Constructed Response:</b>	