



# ThinkUp!<sup>TM</sup>

## MATH

Correlation of  
ThinkUp! Math (NCSCOS-aligned) to the  
NC Collaborative Instructional Framework  
**Grade 1**

# Correlation of ThinkUp! Math (NCSCOS-aligned) to the NC Collaborative Instructional Framework

## I Grade 1 Mathematics

The purpose of this document is to connect the resources in ThinkUp! Math (Aligned to North Carolina Standard Course of Study) to the First Grade Instructional Framework developed by the North Carolina Collaborative for Mathematics Learning (NC<sup>2</sup>ML). This correlation assists educators in planning effective instruction for the standards identified in the NCSCoS for Grade 1 Mathematics using the clusters and sequencing suggested in the framework. When using the correlation, note the following points.

- ✓ The ThinkUp! Math Teacher Edition (TE) and Student Edition (SE) are meant to be used together to provide engaging instructional activities coupled with reinforcement of the concepts and skills. The TE provides instructional activities, formative assessment ideas, interventions, and extensions to assist in the instruction of the identified standard(s). The SE provides focused practice in a variety of formats while also addressing critical thinking through the application of the 9 Traits of Critical Thinking™.
- ✓ Instruction of the Standards for Mathematical Practice is integrated into the instruction of the content standards. The Getting Started page of each unit in the TE outlines the mathematical practices that are addressed in that unit. Note that this does not imply that the identified practices are the only mathematical practices that students may use while engaging in the rich mathematical tasks and activities offered by ThinkUp! Math.
- ✓ The use of activities and practice pages in ThinkUp! Math is designed to be flexible. Teachers do not have to use all activities or assign all unit pages to deliver effective instruction. Teachers may choose to use some activities multiple times, increasing the content rigor as appropriate.
- ✓ Though suggested student groupings and categories of activities are recommended in the ThinkUp! Math Teacher Edition, flexible use and delivery of the content allows an educator to scaffold instruction for greater student success. For example, an activity recommended for small-group instruction may be adapted for individual or large-group instruction as needed. A TE activity listed under “Interventions” might be used in the instruction of the large group if additional explorations with models are needed. The materials in ThinkUp! Math were written by seasoned educators and were purposefully designed for flexible use in the classroom.
- ✓ The NC Collaborative Instructional Framework occasionally includes boundaries for standards, while the units in ThinkUp! Math are built to comprehensively cover each standard in its entirety. Asterisks have been placed next to the impacted unit titles to inform educators of content that may need modification to fit within the scope of the framework.

**Cluster 1: Using Numbers to Explore Our Mathematical Community** (Duration: 3–4 weeks)

**NCSCoS**

**ThinkUp! Math (NCSCoS-aligned)**

**NC.1.NBT.1**

Count to 150, starting at any number less than 150.

**Unit 9 – Count, Read, and Write Numbers to 150**

**Teacher Edition (pp. 91–99)**

**Student Edition (pp. 81–90)**

**NC.1.NBT.2**

Understand that the two digits of a two-digit number represent amounts of tens and ones.

- Unitize by making a ten from a collection of ten ones.
- Model the numbers from 11 to 19 as composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones.

**Unit 11 – Understand Place Value: Tens and Ones\***

**Teacher Edition**

- Getting Started (pp. 111–112) \*
- Instruction: Math Action (p. 113)
- Instruction: Concept Exploration and Formative Assessment (p. 113) \*
- Instruction: Vocabulary Mastery term list, Activity, and Formative Assessment (p. 114)
- Instruction: Literature Connection (p. 114) \*
- Instruction: Concept Development Activities and Formative Assessment (p. 115) \*
- Instruction: Concept Application/Concept Practice (p. 116) \*
- Assessment: Concept Check and Test-taking Tips (p. 117)
- Intervention Activities and Formative Assessment (pp. 117–118) \*
- Extension: Reflect on My Learning (p. 118) \*
- Extension: Extending Student Thinking Activity (p. 119) \*
- Extension: Home Connection (p. 119) \*
- Extension: Teacher Reflection (p. 119)
- Answer Keys and Codings (pp. 120–121)

**Student Edition**

- Getting Started (p. 81) \*
- Instruction: Concept Exploration p. 102) \*
- Instruction: Vocabulary Mastery (p. 103) \*
- Instruction: Concept Development (p. 104) \*
- Instruction: Concept Application (p. 105) \*
- Instruction: Concept Practice (p. 106) \*
- Instruction: Motivation Station (p. 107) \*
- Extension: Math Challenge (p. 108) \*
- Extension: Reflection on My Learning (p. 108) \*
- Extension: Reflection on Critical Thinking (p. 108) \*
- Assessment: Concept Check (pp. 109–110) \*

*\*Limit activities to the target range of 11–19.*

**Cluster 1: Using Numbers to Explore Our Mathematical Community** (Duration: 3–4 weeks)

**NCSCoS**

**NC.1.NBT.7**

Read and write numerals and represent a number of objects with a written numeral, to 20.

**ThinkUp! Math (NCSCoS-aligned)**

**Unit 10 – Read, Write, and Represent Objects with Written Numerals to 100 \***

**Teacher Edition**

- Getting Started (pp. 100–101) \*
- Instruction: Math Action (p. 102) \*
- Instruction: Concept Exploration and Formative Assessment (p. 102)  
\* (Substitute a book like Ten Black Dots by Donald Crews, extending the book activities to 20 for the number range from 0 to 20.)
- Instruction: Vocabulary Mastery term list, Activity, and Formative Assessment (p. 103)\*
- Instruction: Literature Connection (p. 103) \*
- Instruction: Concept Development Activities and Formative Assessment (p. 104) \*
- Instruction: Concept Application/Concept Practice (p. 105) \*
- Assessment: Concept Check and Test-taking Tips (p. 106)
- Intervention Activities and Formative Assessment (p. 106) \*
- Extension: Reflect on My Learning (p. 107) \*
- (Substitute a book like Teeth, Tails, & Tentacles by Christopher Wormell to compare to Ten Black Dots.)
- Extension: Extending Student Thinking Activity (p. 107)
- Extension: Home Connection (p. 108)
- Extension: Teacher Reflection (p. 108)
- Answer Keys and Codings (pp. 109–110)

**Student Edition**

- Getting Started (p. 91) \*
- Instruction: Concept Exploration p. 92) \*
- Instruction: Vocabulary Mastery (p. 93) \*
- Instruction: Concept Development (p. 94) \*
- Instruction: Concept Application (p. 95) \*
- Instruction: Concept Practice (p. 96) \*
- Instruction: Motivation Station (p. 97) \*  
(Modify activity by making cards with the numerals 1–20. Students take turns drawing cards and rolling the number cube to determine the task.)
- Extension: Math Challenge (p. 98) \*
- Extension: Reflection on My Learning (p. 98)
- Extension: Reflection on Critical Thinking (p. 98)
- Assessment: Concept Check (pp. 99–100) \*

*\*Limit activities to the target range of 0–20.*

**Cluster 1: Using Numbers to Explore Our Mathematical Community** (Duration: 3–4 weeks)

**NCSCoS**

**ThinkUp! Math (NCSCoS-aligned)**

**NC.1.MD.4**

Organize, represent, and interpret data with up to three categories.

- Ask and answer questions about the total number of data points.
- Ask and answer questions about how many in each category.
- Ask and answer questions about how many more or less are in one category than in another.

*The Standards for Mathematical Practice are integrated into the instruction of the content standards.*

**Unit 20 – Organize, Represent, and Interpret Data**

**Teacher Edition (pp. 123–223)**

**Student Edition (pp. 191–200)**

**Cluster 2: Building a Conceptual Understanding of Addition and Subtraction** (Duration: 3–4 Weeks)

**NCSCoS**

**NC.1.OA.1**

Represent and solve addition and subtraction word problems, within 20, with unknowns, by using objects and drawings, when solving:

- Add to/Take from-Change Unknown
- Put together/Take Apart-Addend Unknown

**ThinkUp! Math (NCSCoS-aligned)**

**Unit 1 – Solve Word Problems: Addition and Subtraction \***

**Teacher Edition**

- Getting Started (pp. 1–2) \*
- Instruction: Math Action (p. 3)
- Instruction: Concept Exploration and Formative Assessment (pp. 3–4)\*
- Instruction: Vocabulary Mastery term list, Activity, and Formative Assessment (p. 4)\*
- Instruction: Literature Connection (p. 5)
- Instruction: Concept Development Activities and Formative Assessment (p. 5) \*
- Instruction: Concept Application/Concept Practice (p. 6) \*
- Assessment: Concept Check and Test-taking Tips (p. 7)
- Intervention Activities and Formative Assessment (p. 7) \*
- Extension: Reflect on My Learning (p. 8) \*
- Extension: Extending Student Thinking Activity (p. 8)
- Extension: Home Connection (p. 9) \*
- Extension: Teacher Reflection (p. 9)
- Answer Keys and Codings (pp. 10–11)

**Student Edition**

- Getting Started (p. 1) \*
- Instruction: Concept Exploration (p. 2) \*
- Instruction: Vocabulary Mastery (p. 3) \*
- Instruction: Concept Development (p. 4) \*
- Instruction: Concept Application (p. 5) \*
- Instruction: Concept Practice (p. 6) \*
- Instruction: Motivation Station (p. 7)
- Extension: Math Challenge (p. 8)
- Extension: Reflection on My Learning (p. 8)
- Extension: Reflection on Critical Thinking (p. 8)
- Assessment: Concept Check (pp. 9–10) \*
- \*Compare Difference Unknown problems are introduced in Cluster 3.
- Students do not write equations in this cluster.

*\*Compare Difference Unknown problems are introduced in Cluster 3. Students do not write equations in this cluster.*

**Cluster 2: Building a Conceptual Understanding of Addition and Subtraction** (Duration: 3–4 Weeks)

<b>NCSCoS</b>	<b>ThinkUp! Math (NCSCoS-aligned)</b>
<p><b>NC.1.OA.3</b></p> <p>Apply the commutative and associative properties as strategies for solving addition problems.</p>	<p><b>Unit 3 – Apply Properties of Operations: Addition and Subtraction</b> <b>Teacher Edition (pp. 23–33)</b> <b>Student Edition (pp. 21–30)</b></p>
<p><b>NC.1.OA.6</b></p> <p>Add and subtract, within 20, using strategies such as:</p> <ul style="list-style-type: none"><li>• Counting on</li><li>• Making ten</li><li>• Decomposing a number leading to a ten</li><li>• Using the relationship between addition and subtraction</li><li>• Using a number line</li><li>• Creating equivalent but simpler or known sums</li></ul>	<p><b>Unit 6 – Add and Subtract Within 20</b> <b>Teacher Edition (pp. 56–66)</b> <b>Student Edition (pp. 51–60)</b></p>
<p><b>NC.1.OA.7</b></p> <p>Apply understanding of the equal sign to determine if equations involving addition and subtraction are true.</p>	<p><b>Unit 7 – Understand the Equal Sign</b> <b>Teacher Edition (pp. 67–77)</b> <b>Student Edition (pp. 61–70)</b></p> <p><i>Encourage students to use counters or draw pictures to determine equality.</i></p>
<p><b>NC.1.OA.9</b></p> <p>Demonstrate fluency with addition and subtraction within 10.</p> <p>The Standards for Mathematical Practice are integrated into the instruction of the content standards.</p>	<p><b>Unit 5 – Show Fluency with Addition and Subtraction Within 10</b> <b>Teacher Edition (pp. 45–55)</b> <b>Student Edition (pp. 41–50)</b></p> <p><i>In this cluster, allow students to use counters or draw pictures to determine sums and differences.</i></p>

**Cluster 3: Understanding Equality and Place Value to Compare Numbers** (Duration: 4–6 Weeks)

NCSCoS	ThinkUp! Math (NCSCoS-aligned)
<p><b>NC.1.NBT.1</b></p> <p>Count to 150, starting at any number less than 150.</p> <p><i>This standard (number sequence) is a continued area of focus. It should be woven into and reinforced in instruction throughout the year.</i></p>	<p><b>Unit 9 – Count, Read, and Write Numbers to 150</b> <b>Teacher Edition (pp. 91–99)</b> <b>Student Edition (pp. 81–90)</b></p> <p><i>Note that the content found in the Teacher Edition and the Student Edition can be used to support instruction and spiral review by:</i></p> <ul style="list-style-type: none"><li>• utilizing activities not presented during prior lessons and repeating activities with added rigor</li><li>• reintroducing and reteaching using original content</li><li>• creating student problems with similar wording and content for further practice</li><li>• placing activities in workstations for continued reinforcement and practice</li></ul>
<p><b>NC.1.NBT.2</b></p> <p>Understand that the two digits of a two-digit number represent amounts of tens and ones.</p> <ul style="list-style-type: none"><li>• Unitize by making a ten from a collection of ten ones.</li><li>• Model the numbers from 11 to 19 as composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones.</li><li>• Demonstrate that the numbers 10, 20, 30, 40, 50, 60, 70, 80, 90 refer to one, two, three, four, five, six, seven, eight, or nine tens, with 0 ones.</li></ul>	<p><b>Unit 11 – Understand Place Value: Tens and Ones</b> <b>Teacher Edition (pp. 111–121)</b> <b>Student Edition (pp. 101–110)</b></p> <p><b>Students apply their understanding of groups of ten to decade numbers.</b> <i>Note that the content found in the Teacher Edition and the Student Edition can be used to support instruction and spiral review by:</i></p> <ul style="list-style-type: none"><li>• utilizing activities not presented during prior lessons and repeating activities, extending the numbers used to 90</li><li>• reintroducing and reteaching using original content</li><li>• creating student problems with similar wording and content for further practice placing activities in workstations for continued reinforcement and practice</li></ul>
<p><b>NC.1.NBT.7</b></p> <p>Read and write numerals and represent a number of objects with a written numeral to 100.</p> <p><i>This standard (written numbers) is a continued area of focus. It should be woven into and reinforced in instruction throughout the year.</i></p>	<p><b>Unit 10 – Read, Write, and Represent Objects with Written Numerals to 100</b> <b>Teacher Edition (pp. 100–110)</b> <b>Student Edition (pp. 91–100)</b></p> <p><i>Note that the content found in the Teacher Edition and the Student Edition can be used to support instruction and spiral review by:</i></p> <ul style="list-style-type: none"><li>• utilizing activities not presented during prior lessons and repeating activities, extending the numbers used to 100</li><li>• reintroducing and reteaching using original content</li><li>• creating student problems with similar wording and content for further practice</li><li>• placing activities in workstations for continued reinforcement and practice</li></ul>



**Cluster 3: Understanding Equality and Place Value to Compare Numbers** (Duration: 4–6 Weeks)

**NCSCoS**

**NC.1.NBT.3**

Compare two two-digit numbers based on the value of the tens and ones digits, recording the results of comparisons.

**ThinkUp! Math (NCSCoS-aligned)**

**Unit 12 – Compare Two-Digit Numbers \***

**Teacher Edition**

- Getting Started (pp. 122–123) \*
- Instruction: Math Action (p. 124)
- Instruction: Concept Exploration and Formative Assessment (p. 124) \*
- Instruction: Vocabulary Mastery term list, Activity, and Formative Assessment (p. 125) \*
- Instruction: Literature Connection (p. 126)
- Instruction: Concept Development Activities and Formative Assessment (pp. 126–127) \*
- Instruction: Concept Application/Concept Practice (p. 128) \*
- Assessment: Concept Check and Test-taking Tips (p. 129)
- Intervention Activities and Formative Assessment (pp. 129–130) \*
- Extension: Reflect on My Learning (p. 130) \*
- Extension: Extending Student Thinking Activity (p. 131)
- Extension: Home Connection (p. 131) \*
- Extension: Teacher Reflection (p. 131)
- Answer Keys and Codings (pp. 132–133)

**Student Edition**

- Getting Started (p. 111) \*
- Instruction: Concept Exploration p. 112) \*
- Instruction: Vocabulary Mastery (p. 113) \*
- Instruction: Concept Development (p. 114) \*
- Instruction: Concept Application (p. 115) \*
- Instruction: Concept Practice (p. 116) \*
- Instruction: Motivation Station (p. 117)
- Extension: Math Challenge (p. 118)
- Extension: Reflection on My Learning (p. 118)
- Extension: Reflection on Critical Thinking (p. 118)
- Assessment: Concept Check (pp. 119–120) \*

*\*Note that the symbols  $<$  and  $>$  are not used in this cluster. Activities can be amended to using verbal responses (e.g., “more than,” “less than,” “greater than”) or physical responses (e.g., thumbs up for greater than, thumbs down for less than) instead of symbols.*

**Cluster 3: Understanding Equality and Place Value to Compare Numbers** (Duration: 4–6 Weeks)

**NCSCoS**

**ThinkUp! Math (NCSCoS-aligned)**

**NC.1.MD.4**

Organize, represent, and interpret data with up to three categories.

- Ask and answer questions about the total number of data points.
- Ask and answer questions about how many in each category.
- Ask and answer questions about how many more or less are in one category than in another

**Unit 20 – Organize, Represent, and Interpret Data**

**Teacher Edition (pp. 123–223)**

**Student Edition (pp. 191–200)**

*Note that the content found in the Teacher Edition and the Student Edition can be used to support instruction and spiral review by:*

- *utilizing activities not presented during prior lessons and repeating activities, adding rigor to the questions*
- *reintroducing and reteaching using original content*
- *creating student problems with similar wording and content for further practice*
- *placing activities in workstations for continued reinforcement and practice*

**NC.1.OA.1**

Represent and solve addition and subtraction word problems, within 20, with unknowns, by using objects, drawings when solving:

- Add to/Take from-Change Unknown
- Put together/Take Apart-Addend Unknown
- Compare-Difference Unknown

*The Standards for Mathematical Practice are integrated into the instruction of the content standards.*

**Unit 1 – Solve Word Problems: Addition and Subtraction**

**Teacher Edition (pp. 1–11)**

**Student Edition (pp. 1–10)**

Students build on their knowledge of representing and solving addition and subtraction problems by learning to solve Compare-Difference Unknown problems. Students do not write equations in this cluster.

*Note that the content found in the Teacher Edition and the Student Edition can be used to support instruction and spiral review by:*

- *utilizing activities not presented during prior lessons and by repeating activities to include comparison problems*
- *reintroducing and reteaching using original content*
- *creating student problems with similar wording and content for further practice*
- *placing activities in workstations for continued reinforcement and practice*

**Cluster 4: Understanding Measurement and Data as a Context to Compare Numbers** (Duration: 3–4 Weeks)

NCSCoS	ThinkUp! Math (NCSCoS-aligned)
<p><b>NC.1.MD.1</b></p> <p>Order three objects by length; compare the lengths of two objects indirectly by using a third object.</p>	<p><b>Unit 16 – Compare and Order Objects by Length</b> <b>Teacher Edition (pp. 168–178)</b> <b>Student Edition (pp. 151–160)</b></p>
<p><b>NC.1.MD.2</b></p> <p>Measure lengths with non-standard units.</p> <ul style="list-style-type: none"><li>• Express the length of an object as a whole number of non-standard length units.</li><li>• Measure by laying multiple copies of a shorter object (the length unit) end to end (iterating) with no gaps or overlaps.</li></ul>	<p><b>Unit 17 – Measure Lengths with Non-Standard Units</b> <b>Teacher Edition (pp. 179–189)</b> <b>Student Edition (pp. 161–170)</b></p>
<p><b>NC.1.NBT.3</b></p> <p>Compare two-digit numbers based on the value of the tens and ones digits, recording the results of comparison with the symbols, <math>&lt;</math>, <math>&gt;</math> and <math>=</math>.</p>	<p><b>Unit 12 – Compare Two-Digit Numbers</b> <b>Teacher Edition (pp. 122–133)</b> <b>Student Edition (pp. 111–120)</b></p> <p><i>Note that the content found in the Teacher Edition and the Student Edition can be used to support instruction and spiral review by:</i></p> <ul style="list-style-type: none"><li>• <i>utilizing activities not presented during prior lessons and by repeating activities to include recording the results with <math>&lt;</math>, <math>=</math>, and <math>&gt;</math>.</i></li><li>• <i>reintroducing and reteaching using original content</i></li><li>• <i>creating student problems with similar wording and content for further practice</i></li><li>• <i>placing activities in workstations for continued reinforcement and practice</i></li></ul>

**Cluster 4: Understanding Measurement and Data as a Context to Compare Numbers** (Duration: 3–4 Weeks)

**NCSCoS**

**ThinkUp! Math (NCSCoS-aligned)**

**NC.1.OA.2**

Represent and solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20, by using objects and drawings.

**Unit 2 – Solve Word Problems: Three Addends**

**Teacher Edition (pp. 12–22)**

- Getting Started (pp. 12–13) \*
- Instruction: Math Action (p. 14) \*
- Instruction: Concept Exploration and Formative Assessment (p. 14) \*
- Instruction: Vocabulary Mastery term list, Activity, and Formative Assessment (p. 15) \*
- Instruction: Literature Connection (p. 15) \*
- Instruction: Concept Development Activities and Formative Assessment (p. 16) \*
- Instruction: Concept Application/Concept Practice (p. 17) \*
- Assessment: Concept Check and Test-taking Tips (p. 18)
- Intervention Activities and Formative Assessment (p. 18) \*
- Extension: Reflect on My Learning (p. 19)
- Extension: Extending Student Thinking Activity (p. 19)
- Extension: Home Connection (p. 20)
- Extension: Teacher Reflection (p. 20)
- Answer Keys and Codings (pp. 21–22)

**Student Edition (p. 11–20)**

- Getting Started (p. 11) \*
- Instruction: Concept Exploration p. 12)
- Instruction: Vocabulary Mastery (p. 13) \*
- Instruction: Concept Development (p. 14) \*
- Instruction: Concept Application (p. 15) \*
- Instruction: Concept Practice (p. 16) \*
- Instruction: Motivation Station (p. 17)
- Extension: Math Challenge (p. 18)
- Extension: Reflection on My Learning (p. 18)
- Extension: Reflection on Critical Thinking (p. 18)
- Assessment: Concept Check (pp. 19–20) \*

*\*Students do not write equations with a symbol for an unknown number in this cluster.*

**NC.1.OA.7**

Apply understanding of the equal sign

*The use of the equal sign should be emphasized in the other standards in this cluster to reinforce the meaning of the symbol.*

**NC.1.OA.8**

Determine the unknown whole number in an addition or subtraction equation involving three whole numbers.

*The Standards for Mathematical Practice are integrated into the instruction of the content standards.*

**Unit 8 – Find the Unknown in Addition or Subtraction Equations**

**Teacher Edition (pp. 78–88)**

**Student Edition (pp. 71–80)**

**Cluster 5: Operating with Place Value** (Duration: 4–6 Weeks)

NCSCoS	ThinkUp! Math (NCSCoS-aligned)
<p><b>NC.1.NBT.1</b></p> <p>Count to 150, starting at any number less than 150.</p>	<p><b>Unit 9 – Count, Read, and Write Numbers to 150</b> <b>Teacher Edition (pp. 91–99)</b> <b>Student Edition (pp. 81–90)</b></p> <p><i>Note that this standard appears in several clusters. Content found in the Teacher Edition and the Student Edition can be used to support instruction and spiral review by:</i></p> <ul style="list-style-type: none"><li>• utilizing activities not presented during prior lessons and by repeating activities to reinforce the concept.</li><li>• reintroducing and reteaching using original content</li><li>• creating student problems with similar wording and content for further practice</li><li>• placing activities in workstations for continued reinforcement and practice</li></ul>
<p><b>NC.1.NBT.2</b></p> <p>Understand that the two digits of a two-digit number represent amounts of tens and ones.</p> <ul style="list-style-type: none"><li>• Unitize by making a ten from a collection of ten ones.</li><li>• Model the numbers from 11 to 19 as composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones.</li><li>• Demonstrate that the numbers 10, 20, 30, 40, 50, 60, 70, 80, 90 refer to one, two, three, four, five, six, seven, eight, or nine tens, with 0 ones.</li></ul>	<p><b>Unit 11 – Understand Place Value: Tens and Ones</b> <b>Teacher Edition (pp. 111–121)</b> <b>Student Edition (pp. 101–110)</b></p> <p><i>Note that this standard appears in several clusters. Content found in the Teacher Edition and the Student Edition can be used to support instruction and spiral review by:</i></p> <ul style="list-style-type: none"><li>• activities to reinforce the concept.</li><li>• reintroducing and reteaching using original content</li><li>• creating student problems with similar wording and content for further practice</li><li>• placing activities in workstations for continued reinforcement and practice</li></ul>
<p><b>NC.1.NBT.4</b></p> <p>Using concrete models or drawings, strategies based on place value, properties of operations, and explaining the reasoning used, add, within 100, in the following situations:</p> <ul style="list-style-type: none"><li>• A two-digit number and a one-digit number</li><li>• A two-digit number and a multiple of 10</li></ul>	<p><b>Unit 13 – Add Within 100</b> <b>Teacher Edition (pp. 134–145)</b> <b>Student Edition (pp. 121–130)</b></p>
<p><b>NC.1.NBT.5</b></p> <p>Given a two-digit number, mentally find 10 more or 10 less than the number, without having to count; explain the reasoning used.</p>	<p><b>Unit 14 – Add and Subtract 10 Without Counting</b> <b>Teacher Edition (pp. 146–156)</b> <b>Student Edition (pp. 131–140)</b></p>

**Cluster 5: Operating with Place Value** (Duration: 4–6 Weeks)

NCSCoS	ThinkUp! Math (NCSCoS-aligned)
<p><b>NC.1.NBT.6</b></p> <p>Subtract multiples of 10 in the range 10-90 from multiples of 10 in the range 10-90, explaining the reasoning, using:</p> <ul style="list-style-type: none"><li>• Concrete models and drawings</li><li>• Number lines</li><li>• Strategies based on place value</li><li>• Properties of operations</li><li>• The relationship between addition and subtraction</li></ul>	<p><b>Unit 15 – Subtract Multiples of 10</b> <b>Teacher Edition (pp. 157–167)</b> <b>Student Edition (pp. 141–150)</b></p>
<p><b>NC.1.OA.1</b></p> <p>Represent and solve addition and subtraction word problems, within 20, with unknowns, by using objects, drawings, and equations with a symbol for the unknown number to represent the problem, when solving:</p> <ul style="list-style-type: none"><li>• Add to/Take from-Change Unknown</li><li>• Put together/Take Apart-Addend Unknown</li><li>• Compare-Difference Unknown</li></ul>	<p><b>Unit 1 – Solve Word Problems: Addition and Subtraction</b> <b>Teacher Edition (pp. 1–11)</b> <b>Student Edition (pp. 1–10)</b></p> <p>Students build on their knowledge of representing and solving addition and subtraction problems by writing equations to represent the problem.</p> <p><i>Note that this standard appears in several clusters. Content found in the Teacher Edition and the Student Edition can be used to support instruction and spiral review by:</i></p> <ul style="list-style-type: none"><li>• <i>utilizing activities not presented during prior lessons and by repeating activities to reinforce the concepts.</i></li><li>• <i>placing activities in workstations for continued reinforcement and practice</i></li></ul> <p><i>projecting student edition problems and using them in a non-traditional way such as a game of “Four Corners”</i></p> <ul style="list-style-type: none"><li>• <i>posting problems from SE pages and having students conduct a Gallery Walk to solve problems in small groups</i></li></ul> <p><i>displaying student edition problems solved both correctly and incorrectly to have students determine if the outcome is correct and explain their reasoning</i></p>
<p><b>NC.1.OA.3</b></p> <p>Apply the commutative and associative properties as strategies for solving addition problems.</p>	<p><b>Unit 3 – Apply Properties of Operations: Addition and Subtraction</b> <b>Teacher Edition (pp. 23–33)</b> <b>Student Edition (pp. 21–30)</b></p> <p><i>Note that content found in the Teacher Edition and the Student Edition can be used to support instruction and spiral review by:</i></p> <ul style="list-style-type: none"><li>• <i>utilizing activities not presented during prior lessons and by repeating activities to reinforce the concepts.</i></li><li>• <i>reintroducing and reteaching using original content</i></li><li>• <i>creating student problems with similar wording and content for further practice</i></li><li>• <i>placing activities in workstations for continued reinforcement and practice</i></li></ul>

**Cluster 5: Operating with Place Value** (Duration: 4–6 Weeks)

**NCSCoS**

**NC.1.OA.7**

Apply understanding of the equal sign to determine if equations involving addition and subtraction are true.

*The Standards for Mathematical Practice are integrated into the instruction of the content standards.*

**ThinkUp! Math (NCSCoS-aligned)**

**Unit 7 – Understand the Equal Sign**

**Teacher Edition (pp. 67–77)**

**Student Edition (pp. 61–70)**

*Note that content found in the Teacher Edition and the Student Edition can be used to support instruction and spiral review by:*

- *utilizing activities not presented during prior lessons and by repeating activities to reinforce the concepts.*
- *reintroducing and reteaching using original content*
- *creating student problems with similar wording and content for further practice*
- *placing activities in workstations for continued reinforcement and practice*
- *using the Literature Connections list to extend the lesson and make further connections to the content*

**Cluster 6: Distinguishing and Composing Shapes** (Duration: 3 Weeks)

**NCSCoS**

**ThinkUp! Math (NCSCoS-aligned)**

**NC.1.G.1**

Distinguish between defining and non-defining attributes and create shapes with defining attributes by:

- Building and drawing triangles, rectangles, squares, trapezoids, hexagons, circles.
- Building cubes, rectangular prisms, cones, spheres, and cylinders.

**Unit 21 – Distinguish Attributes of Two- and Three-Dimensional Shapes**

**Teacher Edition (pp. 225–235)**

**Student Edition (pp. 201–210)**

**NC.1.G.2**

Create composite shapes by

- Making a two-dimensional composite shape using rectangles, squares, trapezoids, triangles, and half-circles naming the components of the new shape.
- Making a three-dimensional composite shape using, naming the components of the new shape.

**Unit 22 – Create Two- and Three-Dimensional Shapes**

**Teacher Edition (pp. 236–246)**

**Student Edition (pp. 211–220)**

*The Standards for Mathematical Practice are integrated into the instruction of the content standards.*



**Cluster 7: Partitioning and Telling Time to the Hour and Half-Hour** (Duration: 3 Weeks)

NCSCoS	ThinkUp! Math (NCSCoS-aligned)
<p><b>NC.1.MD.3</b></p> <p>Tell and write time in hours and half-hours using analog and digital clocks.</p>	<p><b>Unit 18 – Tell Time to the Hour and Half-Hour</b></p> <p><b>Teacher Edition (pp. 190–200)</b></p> <p><b>Student Edition (pp. 171–180)</b></p>
<p><b>NC.1.G.3</b></p> <p>Partition circles and rectangles into two and four equal shares.</p> <ul style="list-style-type: none"><li>• Describe the shares as halves and fourths, as half of and fourth of.</li><li>• Describe the whole as two of, or four of the shares.</li><li>• Explain that decomposing into more equal shares creates smaller shares.</li></ul> <p><i>The Standards for Mathematical Practice are integrated into the instruction of the content standards.</i></p>	<p><b>Unit 23 – Partition Shapes into Equal Shares</b></p> <p><b>Teacher Edition (pp. 247–258)</b></p> <p><b>Student Edition (pp. 221–230)</b></p>

**Cluster 8: Developing Flexibility with Numbers** (Duration: 3 Weeks)

NCSCoS	ThinkUp! Math (NCSCoS-aligned)
<p><b>NC.1.OA.1</b></p> <p>Represent and solve addition and subtraction word problems, within 20, with unknowns, by using objects, drawings, and equations with a symbol for the unknown number to represent the problem, when solving:</p> <ul style="list-style-type: none"><li>• Add to/Take from-Change Unknown</li><li>• Put together/Take Apart-Addend Unknown</li><li>• Compare-Difference Unknown</li></ul>	<p><b>Unit 1 – Solve Word Problems: Addition and Subtraction</b> <b>Teacher Edition (pp. 1–11)</b> <b>Student Edition (pp. 1–10)</b></p> <p><i>Note that this standard appears in several clusters. Content found in the Teacher Edition and the Student Edition can be used to support instruction and spiral review by:</i></p> <ul style="list-style-type: none"><li>• <i>utilizing activities not presented during prior lessons and by repeating/revisiting activities to reinforce the concepts.</i></li><li>• <i>placing activities in workstations for continued reinforcement and practice</i></li><li>• <i>having students write and solve original problems</i></li><li>• <i>displaying problems solved both correctly and incorrectly to have students determine if the outcome is correct and explain their reasoning</i></li></ul>
<p><b>NC.1.OA.2</b></p> <p>Represent and solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20, by using objects, drawings, and equations with a symbol for the unknown number.</p>	<p><b>Unit 2 – Solve Word Problems: Three Addends</b> <b>Teacher Edition (pp. 12–22)</b> <b>Student Edition (pp. 11–20)</b></p> <p><i>Note that this standard also appears in a previous cluster. Content found in the Teacher Edition and the Student Edition can be used to support instruction and spiral review by:</i></p> <ul style="list-style-type: none"><li>• <i>utilizing activities not presented during prior lessons and by repeating activities to reinforce the concepts.</i></li><li>• <i>placing activities in workstations for continued reinforcement and practice</i></li><li>• <i>having students write and solve original problems</i></li></ul> <p><i>projecting student edition problems and using them in a non-traditional way such as a game of “Four Corners”</i></p> <ul style="list-style-type: none"><li>• <i>posting problems from SE pages and having students conduct a Gallery Walk to solve problems in small groups</i></li></ul> <p><i>displaying student edition problems solved both correctly and incorrectly to have students determine if the outcome is correct and explain their reasoning</i></p>

**Cluster 8: Developing Flexibility with Numbers** (Duration: 3 Weeks)

NCSCoS	ThinkUp! Math (NCSCoS-aligned)
<p><b>NC.1.OA.3</b></p> <p>Apply the commutative and associative properties as strategies for solving addition problems.</p>	<p><b>Unit 3 – Apply Properties of Operations: Addition and Subtraction</b> <b>Teacher Edition (pp. 23–33)</b> <b>Student Edition (pp. 21–30)</b></p> <p><i>Note that this standard appears in several clusters. Content found in the Teacher Edition and the Student Edition can be used to support instruction and spiral review by:</i></p> <ul style="list-style-type: none"><li>• utilizing activities not presented during prior lessons and by repeating/revisiting activities to reinforce the concepts.</li><li>• placing activities in workstations for continued reinforcement and practice</li><li>• having students write and solve original problems</li><li>• displaying problems solved both correctly and incorrectly to have students determine if the outcome is correct and explain their reasoning</li><li>• using the Literature Connections list to extend the concept and make connections</li></ul>
<p><b>NC.1.OA.4</b></p> <p>Solve an unknown-addend problem, within 20, by using addition strategies and/or changing it to a subtraction problem.</p>	<p><b>Unit 4 – Understand Subtraction as an Unknown-Addend Problem</b> <b>Teacher Edition (pp. 34–44)</b> <b>Student Edition (pp. 31–40)</b></p>
<p><b>NC.1.OA.6</b></p> <p>Add and subtract, within 20, using strategies such as:</p> <ul style="list-style-type: none"><li>• Counting on</li><li>• Making ten</li><li>• Decomposing a number leading to a ten</li><li>• Using the relationship between addition and subtraction</li><li>• Using a number line</li><li>• Creating equivalent but simpler or known sums</li></ul>	<p><b>Unit 6 – Add and Subtract Within 20</b> <b>Teacher Edition (pp. 56–66)</b> <b>Student Edition (pp. 51–60)</b></p> <p><i>Note that this standard also appears in a previous cluster. Content found in the Teacher Edition and the Student Edition can be used to support instruction and spiral review by:</i></p> <ul style="list-style-type: none"><li>• utilizing activities not presented during prior lessons and by repeating activities to reinforce the concepts.</li><li>• placing activities in workstations for continued reinforcement and practice</li></ul>

**Cluster 8: Developing Flexibility with Numbers** (Duration: 3 Weeks)

**NCSCoS**

**ThinkUp! Math (NCSCoS-aligned)**

**NC.1.OA.9**

Demonstrate fluency with addition and subtraction within 10.

**Unit 5 – Show Fluency with Addition and Subtraction Within 10**

**Teacher Edition (pp. 45–55)**

**Student Edition (pp. 41–50)**

*Note that this standard also appears in a previous cluster. Content found in the Teacher Edition and the Student Edition can be used to support instruction and spiral review by:*

- *utilizing activities not presented during prior lessons and by repeating activities to reinforce the concepts.*
- *placing activities in workstations for continued reinforcement and practice*
- *Having students participate in short reviews of basic addition and subtraction facts 2 to 3 times per week. These reviews should last only 5 to 10 minutes of the instructional time allotted for math and might consist of flash card drills, math fact games, center activities, and warm-ups.*

**NC.1.MD.5**

Identify quarters, dimes, and nickels and relate their values to pennies.

*The Standards for Mathematical Practice are integrated into the instruction of the content standards.*

**Unit 19 – Identify Coins and Relate Values to Pennies**

**Teacher Edition (pp. 201–112)**

**Student Edition (pp. 181–190)**