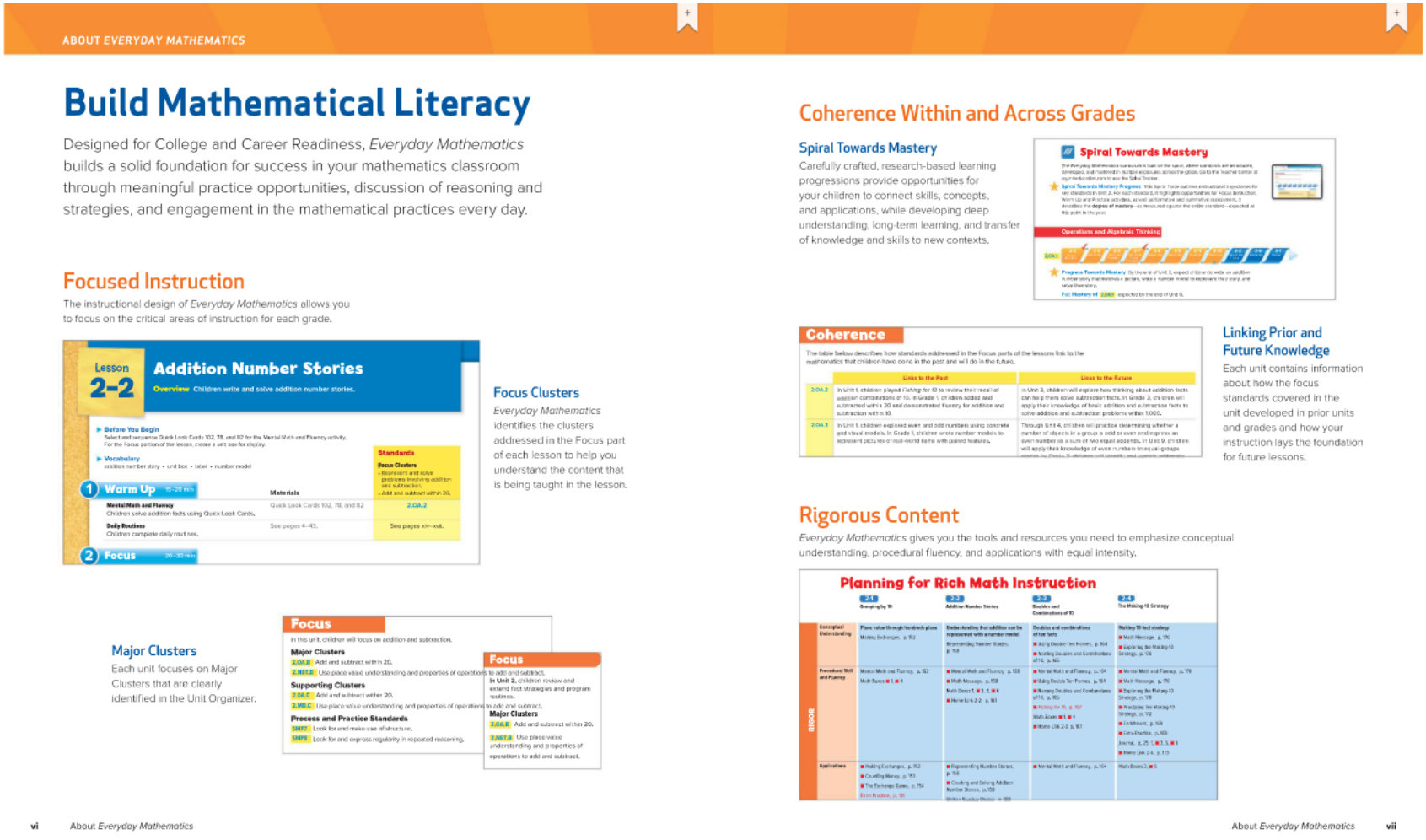
Grade 1
Mathematics Curriculum Resource
for the Maryland College and Career Ready Standards

Everyday Mathematics 4

- EM4 strategically distributes instruction and practice in a spiral design format. Therefore, it is vital to follow the sequence of lessons and units.
- The goal is to complete four lessons per week utilizing the fifth day for reviewing concepts through EM4 activities, differentiation, additional resources, and enrichment.
- Since the program spirals, it is **not** necessary to master concepts before moving on.
- Some lessons may take more than one day. However, you should adhere to the suggested timeline for each unit in this document so that your students will be adequately prepared for local assessments.
- It is required that you complete the Open Response and Reengagement lessons in each unit. These provide you with formative information which focus on the eight Standards for Mathematical Practice. Utilize PLCs for scoring and range finding.
- It is expected that information be distributed to families regarding the Clever login procedure to access math apps and programs.
- "Math Boxes" are a daily math student journal page or activity that reviews material on a regular basis and can be completed at any point during the day. It can provide useful ongoing assessment information.
- Games are a vital part of the program. They provide the repetition of the concepts needed for reinforcement and practice; therefore, they should be played regularly.
- It is expected to continue the routines of Math Meetings and Number Talks in addition to the EM4 lesson components. (See the Suggested 75-minute planning template).
- The county expectation for **DreamBox** is 5 lessons per week.
- Continue to utilize the tasks from ES9 Tasks, Tackle the Task booklets, and reasoning and modeling item bank which can be found on the Shared drive and/or eDoctrina.

Components for Focus, Coherence and Rigor

These components can be found at the beginning of each unit to focus instruction on rigorous content, as well as coherence of vertical alignment across grade levels.



ABOUT *EVERYDAY MATHEMATICS*

Build Mathematical Literacy

Designed for College and Career Readiness, *Everyday Mathematics* builds a solid foundation for success in your mathematics classroom through meaningful practice opportunities, discussion of reasoning and strategies, and engagement in the mathematical practices every day.

Focused Instruction

The instructional design of *Everyday Mathematics* allows you to focus on the critical areas of instruction for each grade.

Lesson 2-2 **Addition Number Stories**

Overview Children write and solve addition number stories.

Before You Begin

Vocabulary

1 Warm Up 15–20 min — Materials

Mental Math and Fluency — Children solve addition facts using Quick Look Cards. — Quick Look Cards 102, 78, and 82

Daily Routines — Children complete daily routines. — See pages 4–43.

Standards — Focus Clusters — 2.OA.2 — See pages xiv–xvi.

2 Focus 20–30 min

Focus Clusters

Everyday Mathematics identifies the clusters addressed in the Focus part of each lesson to help you understand the content that is being taught in the lesson.

Major Clusters

Each unit focuses on Major Clusters that are clearly identified in the Unit Organizer.

Focus

In this unit, children will focus on addition and subtraction.

Major Clusters

2.OA.B Add and subtract within 20.

2.NBT.B Use place value understanding and properties of operations to add and subtract.

Supporting Clusters

2.OA.C Add and subtract within 20.

2.MD.C Use place value understanding and properties of operations to add and subtract.

Process and Practice Standards

SMP.7 Look for and make use of structure.

SMP.8 Look for and express regularity in repeated reasoning.

Focus

In Unit 2, children review and extend fact strategies and program routines.

Major Clusters

2.OA.B Add and subtract within 20.

2.NBT.B Use place value understanding and properties of operations to add and subtract.

Coherence Within and Across Grades

Spiral Towards Mastery

Carefully crafted, research-based learning progressions provide opportunities for your children to connect skills, concepts, and applications, while developing deep understanding, long-term learning, and transfer of knowledge and skills to new contexts.

Spiral Towards Mastery

Operations and Algebraic Thinking

Coherence

	Links to the Past	Links to the Future
2.OA.2	In Unit 1, children played Fishing for 10 to review their recall of addition combinations of 10. In Grade 1, children added and subtracted within 20 and demonstrated fluency for addition and subtraction within 10.	In Unit 3, children will explore how thinking about addition facts can help them solve subtraction facts. In Grade 3, children will apply their knowledge of basic addition and subtraction facts to solve addition and subtraction problems within 1000s.
2.OA.3	In Unit 1, children explored even and odd numbers using concrete and visual models. In Grade 1, children wrote number models to represent pictures of real-world items with paired features.	Through Unit 4, children will practice determining whether a number of objects in a group is odd or even and express an even number as a sum of two equal addends. In Unit 9, children will apply their knowledge of even numbers to equal-groups

Linking Prior and Future Knowledge

Each unit contains information about how the focus standards covered in the unit developed in prior units and grades and how your instruction lays the foundation for future lessons.

Rigorous Content

Everyday Mathematics gives you the tools and resources you need to emphasize conceptual understanding, procedural fluency, and applications with equal intensity.

Planning for Rich Math Instruction

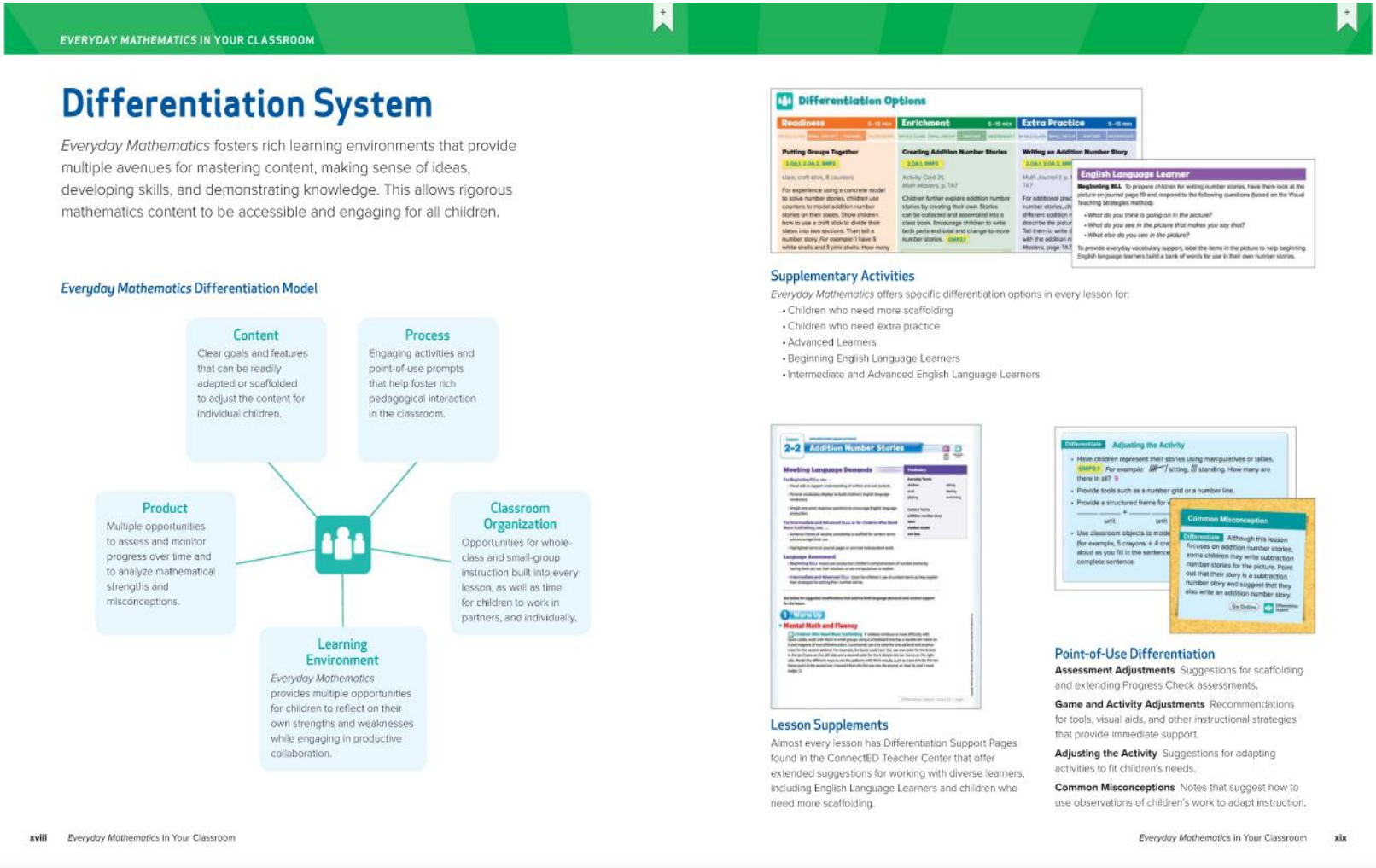
	2.1 Grouping by 10	2.2 Addition Number Stories	2.3 Doubles and Combinations of 10	2.4 The Making-10 Strategy
Conceptual Understanding	Place value through hundreds place Making Exchanges, p. 152	Understanding that addition can be represented with a number model Representing Number Stories, p. 158	Doubles and combinations of ten facts Doubles and Combinations of 10, p. 164	Making 10 fact strategy Math Message, p. 170
Procedural Skill and Fluency	Mental Math and Fluency, p. 152 Math Boxes 1.4	Mental Math and Fluency, p. 158 Math Message, p. 158 Math Boxes 1.5, 1.6 Home Link 2.2, p. 161	Mental Math and Fluency, p. 164 Doubles Ten Frames, p. 164 Partners Doubles and Combinations of 10, p. 165 Making 10, p. 167 Math Boxes 2.3 Home Link 2.3, p. 167	Mental Math and Fluency, p. 170 Math Message, p. 170 Exploring the Making-10 Strategy, p. 171 Practicing the Making-10 Strategy, p. 172 Enrichment, p. 169 Extra Practice, p. 169 Journal, p. 25 Math Boxes 2.4 Home Link 2.4, p. 173
Applications	Making Exchanges, p. 152 Counting Money, p. 153 The Exchange Game, p. 154 Extra Practice, p. 151	Representing Number Stories, p. 158 Creating and Solving Addition Number Stories, p. 159 Number Stories Practice, p. 160	Mental Math and Fluency, p. 164	Math Boxes 2.4

vi About *Everyday Mathematics*

About *Everyday Mathematics* vii

Components for Differentiation

These components provide instructional support within the lessons to address the needs of special populations.



EVERYDAY MATHEMATICS IN YOUR CLASSROOM

Differentiation System

Everyday Mathematics fosters rich learning environments that provide multiple avenues for mastering content, making sense of ideas, developing skills, and demonstrating knowledge. This allows rigorous mathematics content to be accessible and engaging for all children.

Everyday Mathematics Differentiation Model

Content
Clear goals and features that can be readily adapted or scaffolded to adjust the content for individual children.

Process
Engaging activities and point-of-use prompts that help foster rich pedagogical interaction in the classroom.

Product
Multiple opportunities to assess and monitor progress over time and to analyze mathematical strengths and misconceptions.

Classroom Organization
Opportunities for whole-class and small-group instruction built into every lesson, as well as time for children to work in partners, and individually.

Learning Environment
Everyday Mathematics provides multiple opportunities for children to reflect on their own strengths and weaknesses while engaging in productive collaboration.

Differentiation Options

Readiness | Enrichment | Extra Practice

Putting Groups Together | Creating Addition Number Stories | Writing an Addition Number Story

English Language Learner

Supplementary Activities

Everyday Mathematics offers specific differentiation options in every lesson for:

- Children who need more scaffolding
- Children who need extra practice
- Advanced Learners
- Beginning English Language Learners
- Intermediate and Advanced English Language Learners

2-2 Addition Number Stories

Lesson Supplements

Almost every lesson has Differentiation Support Pages found in the ConnectED Teacher Center that offer extended suggestions for working with diverse learners, including English Language Learners and children who need more scaffolding.

Adjusting the Activity

Common Misconception

Point-of-Use Differentiation

Assessment Adjustments Suggestions for scaffolding and extending Progress Check assessments.

Game and Activity Adjustments Recommendations for tools, visual aids, and other instructional strategies that provide immediate support.

Adjusting the Activity Suggestions for adapting activities to fit children's needs.

Common Misconceptions Notes that suggest how to use observations of children's work to adapt instruction.

xviii *Everyday Mathematics* in Your Classroom

Everyday Mathematics in Your Classroom xix

WIN Time and Flex Day Clarification

WIN (What I Need) Time 25 Minutes Daily	Flex Days 1-2 Per Week
Use eDoctrina Unit Report, MAP reports, exit tickets, clipboard cruising, etc. to determine what you will focus on in both WIN time and flex days. **DreamBox can be utilized either day, but **usage should not exceed 60 minutes per week.	
• Meet with small groups based on data. • Different groups can focus on different skills. (Based on data) • *Do the Math* small groups meet. • Provide enrichment as well as intervention.	• This is a teaching day, whether it be whole group or small group, it is not a game day. • These days can be used to "catch up" if you are beyond the suggested dates of the At-a-Glance document. • Reteach or extend a lesson. • Build background for an upcoming unit. (Example: Reviewing place value before a unit on partial sums addition and expand-and-trade subtraction.) • Use additional resources from Google shared drive unit folders. • Use additional EM4 materials you may not have been able to use on the day of the lesson. • Complete writing tasks, Tackle the Task or ES9 Tasks. • Give students activities to promote independence. Written or task type activities should be completed without support/clarification and with time limits. • Use technology resources aligning with current unit including Braining Camp or Tang Math.

GR K-5 Suggested Math Lesson Plan Template (75 Minute Block)

EM4 Lesson and Overview –

Standards/Objectives –

Standards for Mathematical Practice (Circle those applicable.)							
1. Students make sense of problems and persevere in solving them	2. Students reason abstractly and quantitatively	3. Students construct viable arguments and critique the reasoning of others	4. Students model with mathematics	5. Students use appropriate tools strategically	6. Students attend to precision	7. Students look for and make use of structure	8. Students look for and express regularity in repeated reasoning

**Times are approximate and may vary for each component based on lesson/skill.

Lesson Component	Time	Activities	Materials
Lesson Openers	10/15 min 10 min	• Math Meeting and/or Number Talk • Daily Structured Word Problem • Strategy focused basic fact discussion	Number Talk Book Quick Look Cards (K-3) Math Meeting Materials Brainingcamp Tang Math Word Problems
	Time	EM4 Focus	Materials
Lesson Focus (Step 2) (2-4 activities) Practice (Step 3)	30 min	• Math Message • Share objective, essential questions, and success criteria • Focus Activities • Journal Pages/Tackle the Tasks • Math Boxes – Math Boxes must be completed daily to give students sufficient opportunities to review skills and concepts. • Assessment Check-In	EM4 Tackle the Task and ES9 Tasks 3 Act Tasks Student Math Journals Tang Math Nearpod Brainingcamp
Lesson Component	Time	Activities	Materials
Supplemental Support	15-20 min	• Small Group Support/DreamBox	EM4 Tang Math
Lesson Component	Time	Activities	
Closure	5-10 min	• Review objective(s), essential question, and success criteria. • Students reflect on their learning and the success criteria	Formative assessment in eDoctrina Exit ticket

GR K-5 Suggested Math Lesson Plan Template (75 Minute Block)

EM4 Lesson and Overview –

Standards/Objectives –

Standards for Mathematical Practice (Circle those applicable.)							
1. Students make sense of problems and persevere in solving them	2. Students reason abstractly and quantitatively	3. Students construct viable arguments and critique the reasoning of others	4. Students model with mathematics	5. Students use appropriate tools strategically	6. Students attend to precision	7. Students look for and make use of structure	8. Students look for and express regularity in repeated reasoning

**Times are approximate and may vary for each component based on lesson/skill.

Lesson Component	Time	Activities	Materials
Lesson Openers	10/15 min	• Math Meeting and/or Number Talk • Daily Structured Word Problem	
	10 min	• Strategy focused basic fact discussion	
	Time	EM4 Focus	Materials
Lesson Focus (Step 2) (2-4 activities) Practice (Step 3)	30 min	• Math Message • Focus Activities • Journal Pages/Math Boxes/ ACIs	
Lesson Component	Time	Activities	Materials
Supplemental Support	15-20 min		
Lesson Component	Time	Activities	Materials
Closure	5-10 min		

Math Meetings

Math Meetings **must** be done 2-5 times a week. A Math Meeting gets your students thinking and ready for math class. It helps create a routine for part of the 75-minute math block.

Value of Routines -

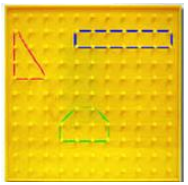
1. Bring sense of predictability and comfort to our classrooms.
2. Help with organization and classroom management and help make transitions smooth.
3. Can enhance instruction.
4. Offer access to big ideas in mathematics and allow deep understanding of math concepts.
5. Can be designed to focus on the desired math content/student needs.
6. Give students opportunities to develop expertise with the eight Standards for Mathematical Practice.

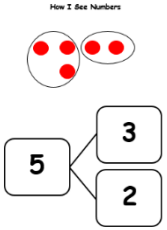
Elements of a Math Meeting:

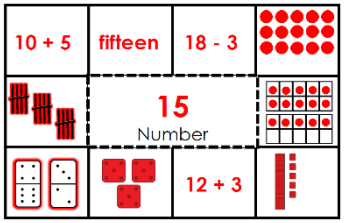
- Takes place daily unless a full Number Talk is done that day
- Is 10 - 15 minutes in duration (timer would be helpful)
- Students use whiteboards/pinch cards/templates to show responses
- Include a variety of activities based on place value, fact fluency, number sense, and problem solving
- The expectation is to complete several activities in 10-15 minutes
- Students can be brought to a common area around the teacher (or move some closer)
- Review of skills previously taught this year and earlier years (spiral)
- Add variety as the year progresses

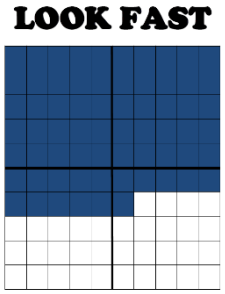
Grade 1 Suggested Math Meeting Activities:

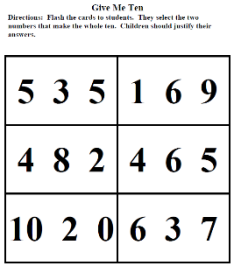
Ten frame flash
Subitizing
Rekenreks
Mystery number activities
Counting to 120
120 chart activities
Counting chart riddles
Count to 100 days in school using 10 ten frames
Number of the day activities with tens and ones
One more/one less, ten more/ten less
Fact practice with focus on strategies
Number bonds
Missing Part Cards
Give me ten
Comparing numbers
Identifying two-dimensional shapes/Shape Flash
Structure Problems

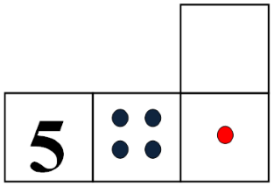


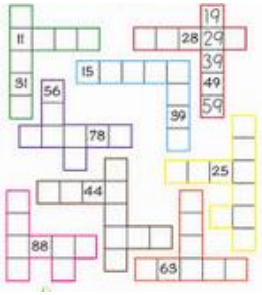


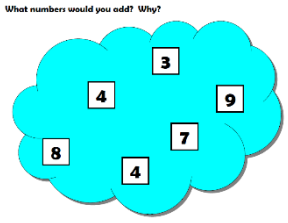


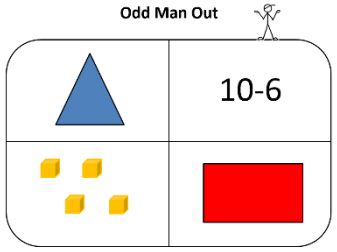




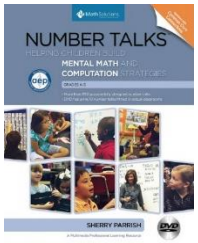








Number Talks



Number Talks **must** be done at least 2-3 times a week. The activity will take between 5 and 15 minutes. Sherry Parrish's book, *Number Talks,* provides examples that will help build students' fluency, mental math capabilities and reasoning skills. Video clips from Math Solutions can be found through digital access or on the disc located in your Number Talks book.

During the Number Talk, the teacher is not the definitive authority. The teacher is the facilitator and is listening for and building on the students' natural mathematical thinking. The teacher writes a problem horizontally on the board in whole group or a small setting. The students mentally solve the problem and share with the whole group **how** they derived the answer. They must justify and defend their reasoning. The teacher simply records the students' thinking and poses extended questions to draw out deeper understanding for all.

The effectiveness of Number Talks depends on the routines and environment that is established by the teacher. Students must be given time to think quietly without pressure from their peers. To develop this, the teacher should establish a signal, other than a raised hand, of some sort to identify that one has a strategy to share. One way to do this is to place a finger on their chest indicating that they have one strategy to share. If they have two strategies to share, they place out two fingers on their chest and so on.

Number Talks lessons often have a focus strategy such as counting on, doubles/near doubles, making tens, and landmark or friendly numbers. Providing students with a string of related problems, allows students to apply a strategy from a previous problem to subsequent problems. Some units lend themselves well to certain Number Talk topics. These mental math strategies should be applied with problems throughout daily math lessons.

Wicomico County's Fact Fluency Expectations

A substantial amount of mathematics education research shows that children do not master their math facts through memorization alone. Instead, true mastery comes from being equipped with quick and effective strategies for finding the solution. By using these strategies, children will always have the mental tools needed to find the correct answer and the confidence to use them (Boaler, 2009).

Pivotal Ideas for Numerical Fluency (Steve Leinwand)

1. All quantities are comprised of **parts and wholes** so that one understands that quantities can be put together and taken apart in a variety of ways.
2. All numbers greater than 1 can be **decomposed into small numbers**. Automaticity with decomposing the numbers 3, 4, 5 and 6 are non-negotiable and completely teachable aspects of numerical fluency. THIS ONE IS A GATEKEEPER!
3. **Acquisition of the language of the four operations** must precede the learning of facts because number sentences and equations make no sense unless grounded in situations. Accordingly, storytelling and acting out are essential strategies for developing operation sense and numerical fluency.
4. There are several **powerful properties of operations** that reduce memory load and contribute to numerical fluency.
5. **Numerical fluency requires that students talk** about how numbers relate to one another and participate in discussions of alternative approaches that students use.
6. **5 and 10 are cornerstones of numerical fluency** and play a critical role in our number system, hence the power of five frames and ten frames. Mastery of 5 + numbers, that is, 5 + 1, 5 + 2, 5 + 3, etc., is critical for developing fluency.
7. **A deep understanding that 9 and (10 – 1)** are the same number, supports numerical fluency with a range of so-called "hard" addition, subtraction, multiplication, and division facts.
8. **Deep knowledge of groups of 2, 3, 5 and 10 are cornerstones to multiplication fluency.**
9. **Addition facts are a foundation for all of the rest of the operations.**
10. **Place value understanding dominates fluency with larger numbers.**

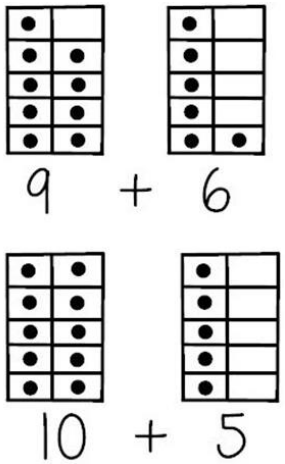
Students develop basic fact fluency through stages:

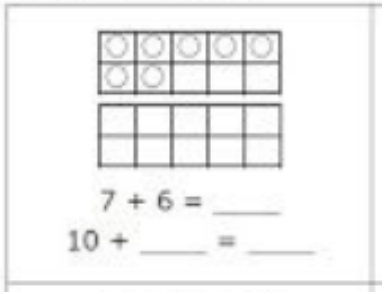
1. Introduce a strategy with concrete materials and pictorial representations.
2. Reinforcing the strategy through pictorial models and connecting it to the symbolic models.
3. Practice the strategy through a range of activities that are written and oral. This stage develops accuracy and speed of recall.
4. Extend the strategy by applying the strategy to other numbers.

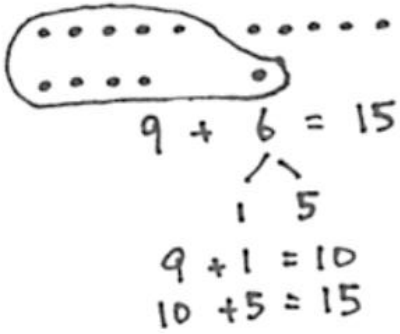
In grades K-2 stages 1 and 2 utilize subitizing cards, ten frames, and rekenreks. Then students should connect these pictorial models to a written strategy first by orally explaining and then by writing.

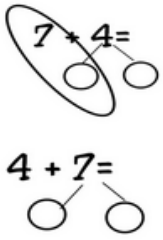
By mid-year, the focus should be on connecting to written strategies. Representations alone are not enough to demonstrate fluency.

For example: Make a Ten Strategy









If you know the sum, just write it down. If not, then find the sum by making ten.

5 + 9	7 + 4	6 + 8	8 + 4	7 + 6	9 + 4
7 + 7	3 + 8	9 + 6	8 + 3	4 + 7	6 + 9

Resources for Fluency Practice
See Chapter 4: Helping Children Master the Basic Facts in Van de Walle (K-3)
Using flashcards for purposeful practice. See Van de Walle (sorting facts, supporting a strategy)
Drill and practice which focus on strategies – See Van de Walle pg. 117
Number Talks (students discuss strategies and flexibility of numbers)
Quick Look Cards, Subitizing Cards, Ten frames, Triangle Flashcards
Games which reinforce strategies – EM4 Games
Assessment – student interviews, observation, and writing prompts. Avoid timed tests and drills since they offer little insight about how flexible students are in their use of strategies or even which strategies a student selects.

FIGURE 2

Various responses to a journal prompt illustrate the strategies that first graders used and reveal which children were able to appropriately select and explain an efficient strategy for the task.

If your friend did not know the answer to 4 + 5, how could he figure it out?

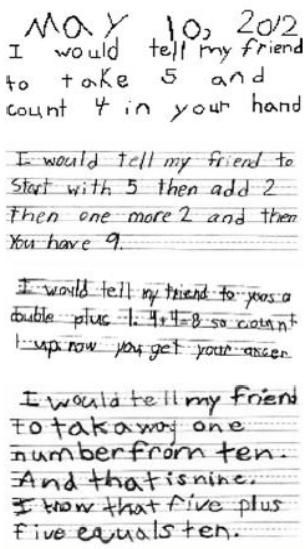


TABLE 3

This collection of prompts addresses the four components of fluency with basic facts. Writing about their strategies on a weekly basis engages students in self-reflection and monitoring, as well as emphasizes the importance of strategies in practicing basic facts.

Writing prompts for developing fluency with the basic facts

Appropriate strategy selection	Flexibility
• Explain how to use the "count on" strategy for 3 + 9. • What strategy did you use to solve 6 + 8? • A friend is having trouble with some of his times 6 facts. What strategy might you teach him? • Emily solved 6 + 8 by changing it in her mind to 4 + 10. What did she do? Is this a good strategy? Tell why or why not.	• How can you use 7 × 10 to find the answer to 7 × 9? • Solve 6 × 7 using one strategy. Now try solving it using a different strategy. • Emily solved 6 + 8 by changing it in her mind to 4 + 10. What did she do? Does this strategy always work?
Efficiency	**Accuracy**
• What strategy did you use to solve 9 + 3? • How can you use 7 × 7 to solve 7 × 8? • Which facts do you "just know"? For which facts do you use a strategy?	• Crystal explains that 6 + 7 is 12. Is she correct? Explain how you know. • What is the answer to 7 × 8? How do you know it is correct (how might you check it)?

Creative writing ideas that address several components

- Develop a "Face the facts" or "Ask Cougar" column (like Dear Abby) for the class. (Pick a fun name for the column that makes sense for the class, such as the school mascot.) Students send a letter about a tough fact. Rotate different students into the role of responder. The responder writes letters back, suggesting a strategy for the tough fact.
- Create a strategy rhyme (e.g., If times four is giving me trouble, I'll remember to double and double).
- Make a facts survival guide. Children prepare pages illustrating with visuals (e.g., ten frames or arrays) of how find "tough" facts.
- Write a yearbook entry to some facts (e.g., Dear 8 × 7, I …)

(See McIntosh 1997 for many more ideas).

First Grade Overview

Operations and Algebraic Thinking (OA)

- Represent and solve problems involving addition and subtraction.
- Understand and apply properties of operations and the relationship between addition and subtraction.
- Add and subtract within 20.
- Work with addition and subtraction equations.

Number and Operations in Base Ten (NBT)

- Extend the counting sequence.
- Understand place value.
- Use place value understanding and properties of operations to add and subtract.

Measurement and Data (MD)

- Measure lengths indirectly and by iterating length units.
- Tell and write time.
- Represent and interpret data.

Geometry (G)

- Reason with shapes and their attributes.

Major Cluster **Supporting Cluster** **Additional Cluster**

Standards for Mathematical Practice	
Standards	**Explanations and Examples**
1. Make sense of problems and persevere in solving them.	In first grade, students realize that doing mathematics involves solving problems and discussing how they solved them. Students explain to themselves the meaning of a problem and look for ways to solve it. Younger students may use concrete objects or pictures to help them conceptualize and solve problems. They may check their thinking by asking themselves, "Does this make sense?" They are willing to try other approaches.
2. Reason abstractly and quantitatively.	Younger students begin to recognize that a number represents a specific quantity. Then, they connect the quantity to written symbols. Quantitative reasoning entails creating a representation of a problem while attending to the meanings of the quantities.
3. Construct viable arguments and critique the reasoning of others.	First graders construct arguments using concrete referents, such as objects, pictures, drawings, and actions. They also practice their mathematical communication skills as they participate in mathematical discussions involving questions like "How did you get that?" "Explain your thinking," and "Why is that true?" They not only explain their own thinking but listen to others' explanations. They decide if the explanations make sense and ask questions.
4. Model with mathematics.	In early grades, students experiment with representing problem situations in multiple ways including numbers, words (mathematical language), drawing pictures, using objects, acting out, making a chart or list, creating equations, etc. Students need opportunities to connect the different representations and explain the connections. They should be able to use all of these representations as needed.
5. Use appropriate tools strategically.	In first grade, students begin to consider the available tools (including estimation) when solving a mathematical problem and decide when certain tools might be helpful. For instance, first graders decide it might be best to use colored chips to model an addition problem.
6. Attend to precision.	As young children begin to develop their mathematical communication skills, they try to use clear and precise language in their discussions with others and when they explain their own reasoning.
7. Look for and make use of structure.	First graders begin to discern a pattern or structure. For instance, if students recognize *12 + 3 = 15,* then they also know *3 + 12 = 15. (Commutative property of addition.)* To add *4 + 6 + 4, the first two numbers can be added to make a ten, so 4 + 6 + 4 = 10 + 4 = 14.*
8. Look for and express regularity in repeated reasoning.	In the early grades, students notice repetitive actions in counting and computation, etc. When children have multiple opportunities to add and subtract ten and multiples of ten they notice the pattern and gain a better understanding of place value. Students continually check their work by asking themselves, "Does this make sense?"

Grade 1 Common Core Introduction

In Grade 1, instructional time should focus on four critical areas: (1) developing understanding of addition, subtraction, and strategies for addition and subtraction within 20; (2) developing understanding of whole number relationships and place value, including grouping in tens and ones; (3) developing understanding of linear measurement and measuring lengths as iterating length units; and (4) reasoning about attributes of, and composing and decomposing geometric shapes.

Video on First Grade Common Core Strategies for OA Domain:

https://www.engageny.org/resource/math-studio-talk-common-core-instruction-1oa

The Table below is an important resource for understanding addition and subtraction structures. Problems in this format should be used on a regular basis.

Table 1 Common addition and subtraction situations[1]

	Result Unknown	Change Unknown	Start Unknown
Add to	Two bunnies sat on the grass. Three more bunnies hopped there. How many bunnies are on the grass now? 2 + 3 = ?	Two bunnies were sitting on the grass. Some more bunnies hopped there. Then there were five bunnies. How many bunnies hopped over to the first two? 2 + ? = 5	Some bunnies were sitting on the grass. Three more bunnies hopped there. Then there were five bunnies. How many bunnies were on the grass before? ? + 3 = 5
Take from	Five apples were on the table. I ate two apples. How many apples are on the table now? 5 – 2 = ?	Five apples were on the table. I ate some apples. Then there were three apples. How many apples did I eat? 5 – ? = 3	Some apples were on the table. I ate two apples. Then there were three apples. How many apples were on the table before? ? – 2 = 3
	Total Unknown	**Addend Unknown**	**Both Addends Unknown[2]**
Put Together/ Take Apart[3]	Three red apples and two green apples are on the table. How many apples are on the table? 3 + 2 = ?	Five apples are on the table. Three are red and the rest are green. How many apples are green? 3 + ? = 5, 5 – 3 = ?	Grandma has five flowers. How many can she put in her red vase and how many in her blue vase? 5 = 0 + 5, 5 = 5 + 0 5 = 1 + 4, 5 = 4 + 1 5 = 2 + 3, 5 = 3 + 2
	Difference Unknown	**Bigger Unknown**	**Smaller Unknown**
Compare[4]	("How many more?" version): Lucy has two apples. Julie has five apples. How many more apples does Julie have than Lucy? ("How many fewer?" version): Lucy has two apples. Julie has five apples. How many fewer apples does Lucy have than Julie? 2 + ? = 5, 5 – 2 = ?	(Version with "more"): Julie has three more apples than Lucy. Lucy has two apples. How many apples does Julie have? (Version with "fewer"): Lucy has 3 fewer apples than Julie. Lucy has two apples. How many apples does Julie have? 2 + 3 = ?, 3 + 2 = ?	(Version with "more"): Julie has three more apples than Lucy. Julie has five apples. How many apples does Lucy have? (Version with "fewer"): Lucy has 3 fewer apples than Julie. Julie has five apples. How many apples does Lucy have? 5 – 3 = ?, ? + 3 = 5

[2]These take apart situations can be used to show all the decompositions of a given number. The associated equations, which have the total on the left of the equal sign, help children understand that the = sign does not always mean makes or results in but always does mean is the same number as.
[3]Either addend can be unknown, so there are three variations of these problem situations. Both Addends Unknown is a productive extension of this basic situation, especially for small numbers less than or equal to 10.
[4]For the Bigger Unknown or Smaller Unknown situations, one version directs the correct operation (the version using more for the bigger unknown and using less for the smaller unknown). The other versions are more difficult.

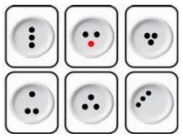
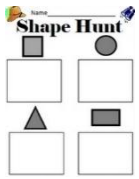
Grade 1 Math At-A-Glance 2022 – 2023		
Units	**Suggested Dates**	**Important Dates**
Unit 1: Counting In this unit, students work in an active collaborative environment to learn both mathematical content and mathematical practices.	September 19 – October 12 18 days (5 flex days)	September 5 – Labor Day September 6 – 16 Building Math Routines & Community MAP Testing
Unit 2: Introducing Addition In this unit, students work with addition and subtraction and use it to model and solve number stories.	October 13 – November 15 22 days (9 flex days)	October 20 – Early Dismissal – PD in PM October 21 – MSEA Convention November 7 – Early Dismissal November 8 – General election
Unit 3: Number Stories In this unit, students continue to use addition and subtraction to model and solve number stories. They also connect counting to addition and subtraction.	November 16 – December 16 20 days (7 flex days)	November 23 – 25 Thanksgiving December 19 -January 1 Winter Holiday
Unit 4: Length and Addition Facts In this unit, students measure lengths using nonstandard units and begin working on addition-fact fluency.	January 2 – January 27 19 days (6 flex days)	January 16 MLK Day January 30 PD Day – no students MAP Testing
Unit 5: Place Value and Comparisons In this unit, students investigate place-value concepts for tens and ones. They use place value to compare and add 2-digit numbers. They also explore path measurement.	January 31 – March 1 21 days (7 flex days)	February 17 – Early Dismissal – PD in PM February 20 – President's Day
Unit 6: Addition Fact Strategies In this unit, students work toward fluency with addition facts. They also explore telling time and solving number stories.	March 2 – March 29 20 days (7 flex days)	March 17 – Early Dismissal – PD in PM
Unit 7: Subtraction Fact Strategies and Attributes of Shapes In this unit, students explore the relationship between addition and subtraction, compare different subtraction strategies, and continue to work on fact fluency. They also explore the defining and nondefining attributes of 2-dimensional shapes and continue their work telling time to the nearest hour, using analog and digital clocks.	March 30 – May 2 21 days (8 flex days)	April 5 – Early Dismissal for students April 6-10 – Spring break
Unit 8: Geometry In this unit, students learn about attributes of shapes, compose and decompose composite shapes, and divide shapes into halves and fourths. They also continue to practice telling and writing time, work with graphs, and use their understanding pf place value and properties of operations to add and subtract larger numbers.	May 3 – May 23 15 days (2 flex days)	MAP Testing
Unit 9: Two-Digit Addition and Subtraction and Review In this unit, students focus on adding and subtracting with 2-digit numbers. They also review other topics.	May 24 – June 14 15 days (2 flex days)	May 29 – Memorial Day June 12-14 -1/2 day for students

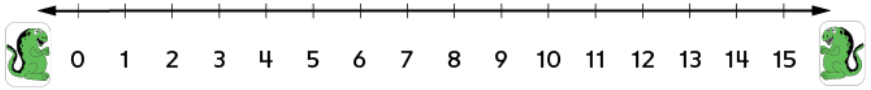
Grade 1 Math Standards	Units								
The following standards will appear in the Curriculum Document in the Units as marked.	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
1.OA.A.1 Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.	X	X	X	X	X	X	X		X
1.OA.A.2 Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20.				X		X			X
1.OA.B.3 Apply properties of operations as strategies to add and subtract.	X	X	X	X	X	X	X		X
1.OA.B.4 Understand subtraction as an unknown-addend problem. *For example, subtract 10 – 8 by finding the number that makes 10 when added to 8*		X			X		X		
1.OA.C.5 Relate counting to addition and subtraction. (e.g., by counting on 2 to add 2).	X	X	X	X	X		X		
1.OA.C.6 Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g., 8 + 6 = 8 + 2 + 4 = 10 + 4 = 14); using the relationship between addition and subtraction (e.g., knowing that 8 + 4 = 12, one knows 12 – 8 = 4); and creating equivalent but easier or known sums (e.g., adding 6 + 7 by creating the known equivalent 6 + 6 + 1 = 12 + 1 = 13	X	X	X	X	X	X	X	X	X
1.OA.D.7 Understand the meaning of the equal sign and determine if equations involving addition and subtraction are true or false. *For example, which of the following equations are true and which are false? 6 = 6, 7 = 8 – 1, 5 + 2 = 2 + 5, 4 + 1 = 5 + 2.*		X			X	X	X		X
1.OA.D.8 Determine the unknown whole number in an addition or subtraction equation relating three whole numbers. *For example, determine the unknown number that makes the equation true in each of the equations: 8 + ? = 11, 5 = □ – 3, 6 + 6 = □.*		X	X		X		X		
1.NBT.A.1 Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral.	X	X	X	X	X				

Grade 1 Math Standards	Units								
The following standards will appear in the Curriculum Document in the Units as marked.	1	2	3	4	5	6	7	8	9
Grade 1 Math Standards	**Units**								
The following standards will appear in the Curriculum Document in the Units as marked.	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
1.NBT.B.2 Understand that the two digits of a two-digit number represent amounts of tens and ones. Understand the following as special cases: **a. 10 can be thought of as a bundle of ten ones — called a "ten."** **b. The numbers from 11 to 19 are composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones.** **The numbers 10, 20, 30, 40, 50, 60, 70, 80, 90 refer to one, two, three, four, five, six, seven, eight, or nine tens (and 0 ones)**				X	X	X		X	X
1.NBT.B.3 Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols >, =, and <.	X	X	X		X	X			X
1.NBT.C.4 Add within 100, including adding a two-digit number and a one-digit number, and adding a two-digit number and a multiple of 10, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used. Understand that in adding two-digit numbers, one adds tens and tens, ones and ones; and sometimes it is necessary to compose a ten					X	X		X	X
1.NBT.C.5 Given a two-digit number, mentally find 10 more or 10 less than the number, without having to count; explain the reasoning used				X			X	X	X
1.NBT.C.6 Subtract multiples of 10 in the range 10–90 from multiples of 10 in the range 10–90 (positive or zero differences), using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.						X		X	X
1.MD.A.1 Order three objects by length; compare the lengths of two objects indirectly by using a third object			X	X	X				X
1.MD.A.2 Express the length of an object as a whole number of length units, by laying multiple copies of a shorter object (the length unit) end to end; understand that the length measurement of an object is the number of same-size length units that span it with no gaps or overlaps. *Limit to contexts where the object being measured is spanned by a whole number of length units with no gaps or overlaps.*				X	X				X

Grade 1 Math Standards	Units								
The following standards will appear in the Curriculum Document in the Units as marked.	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
1.MD.B.3 Tell and write time in hours and half-hours using analog and digital clocks.						X	X	X	

Grade 1 Math Standards	Units								
The following standards will appear in the Curriculum Document in the Units as marked.	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
1.MD.C.4 Organize, represent, and interpret data with up to three categories; ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in another.	X	X		X				X	
1.G.A.1 Distinguish between defining attributes (e.g., triangles are closed and three-sided) versus non-defining attributes (e.g., color, orientation, overall size); build and draw shapes to possess defining attributes	X			X		X	X	X	X
1.G.A.2 Compose two-dimensional shapes (rectangles, squares, trapezoids, triangles, half-circles, and quarter-circles) or three-dimensional shapes (cubes, right rectangular prisms, right circular cones, and right circular cylinders) to create a composite shape and compose new shapes from the composite shape. (Students do not need to learn formal names such as "right rectangular prism.")	X			X				X	X
1.G.A.3 Partition circles and rectangles into two and four equal shares, describe the shares using the words *halves*, *fourths*, and *quarters*, and use the phrases *half of*, *fourth of*, and *quarter of*. Describe the whole as two of, or four of the shares. Understand for these examples that decomposing into more equal shares creates smaller shares.							X	X	X

Grade 1 Unit One Counting	
Connections/Notes	**Additional Resources**
Lesson 1-1 Introducing First Grade Everyday Mathematics **1.OA.C.6 Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g., 8 + 6 = 8 + 2 + 4 = 10 + 4 = 14); using the relationship between addition and subtraction (e.g., knowing that 8 + 4 = 12, one knows 12 – 8 = 4); and creating equivalent but easier or known sums (e.g., adding 6 + 7 by creating the known equivalent 6 + 6 + 1 = 12 + 1 = 13** **1.NBT.A.1 Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral.** **1.G.A.1 Distinguish between defining attributes (e.g., triangles are closed and three-sided) versus non-defining attributes (e.g., color, orientation, overall size); build and draw shapes to possess defining attributes. (Two-dimensional shapes)**	
Although the ten frame is not introduced until Unit 2, students are familiar with this tool. **Students count collections of objects. They do Quick Looks in which they decompose numbers to prepare for adding and subtracting within 20.** **1.OA.C.6** Students identify the total number of dots on dot displays.  **1.NBT.A.1** Students use numbers, shapes, patterns, and counters. **1.G.A.1** Students locate and name the number of shapes in the room. They have worked with shape names in Kindergarten.   	**Activities and Tasks:** How I See Numbers Subitizing Cards/Plates Rekenrek Prompt Cards Fiddle Sticks Hide the Cubes How many are there? Dot Cards to 9 Dot Cards to 10 **Templates and Visuals:** Quick Look Cards Large Domino
Lesson 1-2 Investigating the Number Line **1.NBT.A.1 Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral.** **1.NBT.B.3 Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols >, =, and <. (Up to 50 with comparative language)** **Students will not use the symbols (only the words) for greater than/less than/equal to**	
Students use the number line to count and compare numbers. **1.NBT.A.1** Review counting by 1s and 10s. Introduce counting by 5s.	**Activities and Tasks:** Number Dominoes

Grade 1 Unit One Counting	
Connections/Notes	**Additional Resources**
1.NBT.B.3 Children compare numbers using the Online game Monster Squeeze  **Common Misconception:** After learning to skip count, some students may mistakenly use 5's and 10's when they count individual objects.	Counting Chart 120 Chart Hundred Chart Puzzle **Videos:** Representing Numbers to 10 Representing Numbers Using Words to 10 Hundred Chart Number Paths/Tracks Number Line Basics
Lesson 1-3 Investigating the Number Line **1.NBT.A.1 Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral.** **1.G.A.1 Distinguish between defining attributes (e.g., triangles are closed and three-sided) versus non-defining attributes (e.g., color, orientation, overall size); build and draw shapes to possess defining attributes.**	
Students explore tools for counting and reasoning about the attributes of shapes. They learn a counting game. **1.NBT.A.** Students use the number line, Pattern-Block Template, and pennies to count to 10. Students will skip count by 5s to 50.  Provide students with experiences for counting a number of objects. Explore number relationships. **1.G.A.1** Students will use the Pattern-Block template to draw shapes.	**Lessons:** Classifying Shapes Based on Attributes The Trapezoid, Rhombus, and Square are Special Rectangles **Activities and Tasks:** Frayer's Model Patch Tool **Templates and Visuals:** Die cuts from Instructional Resource Center **Teaching Student-Centered Mathematics:** Pages 189-192 (Analysis of Shapes)
Lesson 1-4 Counting Strategies (Open Response and Reengagement) (2-day lesson) **1.NBT.A.1 Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral.**	

<table>
<tr><th colspan="2">Grade 1 Unit One
Counting</th></tr>
<tr><th>Connections/Notes</th><th>Additional Resources</th></tr>
<tr><td>Day 1: Students solve an open response problem by estimating and counting collections of counters.
Day 2: Students discuss and learn from other children's strategies and then use a new strategy with a different set of counters.
1.NBT.A.1 Count by 1s to 30. Count by 5s to 50. Count by 5s as high as students are able to count. Students should be able to discuss various counting strategies</td><td><u>Activities and Tasks:</u>
Number Chart Activity
Counting from various numbers
Before and After Numbers
Guessing Jar

<u>Videos:</u>
Count to 120 Song
Count by 5s Song
Skip Count by 5s - Matholia

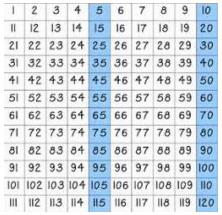
<u>Templates and Visuals:</u>
120 Chart</td></tr>
<tr><td colspan="2">Lesson 1-5 1 More, 1 Less
1.NBT.A.1 Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral.
1.OA.A.1 Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem. (Result and Change Unknown up to 10)
1.OA.C.5 Relate counting to addition and subtraction (e.g., by counting on 2 to add 2).
1.OA.C.6 Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g., 8 + 6 = 8 + 2 + 4 = 10 + 4 = 14); using the relationship between addition and subtraction (e.g., knowing that 8 + 4 = 12, one knows 12 – 8 = 4); and creating equivalent but easier or known sums (e.g., adding 6 + 7 by creating the known equivalent 6 + 6 + 1 = 12 + 1 = 13</td></tr>
<tr><td>Students use the number line to tell and solve number stories and to play a game that prepares them for adding and subtracting within 20.
1.NBT.A.1 Students count up to 20 and back to 0.
1.OA.A.1 Students us a number line to solve 1 more and 1 less

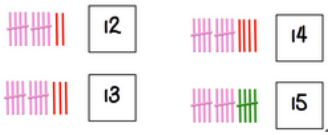
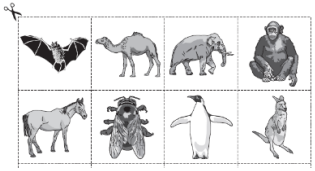
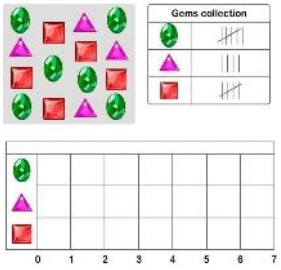
 

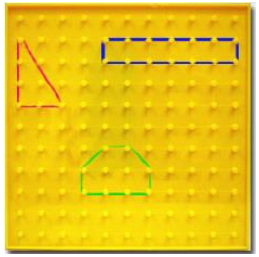
1.OA.C.5 Students count forward and backward

Common Misconception: When demonstrating the number stories in this lesson, be sure to ask: Why did we start at 0 and not 1?</td><td><u>Activities and Tasks:</u>
Models with the Hundred Chart
Counting Chart
Greater Than-Equal-Less Than

<u>Videos:</u>
Representing Numbers to 10
Representing Numbers Using Words to 10
One More Song
One Less Song</td></tr>
</table>

Grade 1 Unit One Counting	
Connections/Notes	**Additional Resources**
	Templates and Visuals: Hundred Chart Number Paths/Tracks
Lesson 1-6 Comparing Numbers **1.NBT.A.1 Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral.** **1.NBT.B.3 Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols >, =, and <. (0-15)**	
Students learn more about comparing and ordering numbers. 1.NBT.A.1 Students will use number cards to compare numbers and to order sets of numbers. (Remember that the students compare numbers 0-15.) 1.NBT.B.3 Students compare numbers. (0-15)   **Reminder: Students will only be using the words, not the symbols, for greater than/less than/equal to**	**Lessons:** Compare Two Quantities Compare Quantities and Numerals from Left to Right **Activities and Tasks:** Greater Than-Equal-Less Than Digit Card Prompts **Videos:** Greater Than or Less Than Picture Flash Comparing and Arranging Numbers to 20 Numbers from 11 to 20 **Templates and Visuals:** Number cards 1 to 120 **Teaching Student-Centered Mathematics:** Pages 75 (Comparing Numbers)
Lesson 1-7 Organizing Data in a Tally Chart **1.NBT.A.1 Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral.** **1.MD.C.4 Organize, represent, and interpret data with up to three categories; ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in another.**	

Grade 1 Unit One Counting	
Connections/Notes	**Additional Resources**
Students use tally marks to represent data and to practice counting by 5s and 1s. **1.NBT.A.1** Students read tally marks and make tally marks representing numbers.  **Common Misconception:** Watch for children who write five tally marks and then cross another one over the group of five. **1.MD.C.4** Students sort animals into categories and create tally charts to record their sorts. 	**Activities and Tasks:** Number Chart Activity Counting from various numbers After and Before Numbers **Videos:** Count to 120 Song How to Keep Track with Tally Marks **Templates and Visuals:** 120 Chart
Lesson 1-8 More Organizing Data **1.NBT.A.1 Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral.** **1.MD.C.4 Organize, represent, and interpret data with up to three categories; ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in another.**	
Students practice counting and representing daily tally charts. They answer questions about data, including addition and subtraction questions. **1.MD.C.4** Students select a data collection topic, create a tally chart, and answer questions about data in the tally chart. Counting objects should be reinforced when collecting, representing, and interpreting data. Students describe the tally charts they create.  Use various objects to collect, represent and interpret data.	**Lessons:** Collect, Sort and Organize Data then Answer Questions Ask and Answer Word Problems about a Data Set **Activities and Tasks:** Daily Graphing Prompts Graph Questions for Prompts **Templates and Visuals:** Die Cuts from Instructional Resource Center **Teaching Student-Centered Mathematics:** Pages 310-321 (Graphing Activities)

<table>
<tr><th colspan="2">Grade 1 Unit One
Counting</th></tr>
<tr><th>Connections/Notes</th><th>Additional Resources</th></tr>
<tr><td colspan="2">Lesson 1-9 Exploring Math Materials (Explorations)
1.G.A.1 Distinguish between defining attributes (e.g., triangles are closed and three-sided) versus non-defining attributes (e.g., color, orientation, overall size); build and draw shapes to possess defining attributes.
1.G.A.2 Compose two-dimensional shapes (rectangles, squares, trapezoids, triangles, half-circles, and quarter-circles) or three-dimensional shapes (cubes, right rectangular prisms, right circular cones, and right circular cylinders) to create a composite shape, and compose new shapes from the composite shape.</td></tr>
<tr><td>*Students learn about the Explorations routine. They familiarize themselves with pattern blocks, base ten blocks, and geoboards.
1.G.A.1 Students match color and shape words to pattern blocks. Provide practice drawing and naming shapes.
1.G.A.2 Provide students ways to explore composite shapes and copy designs using pattern blocks and geoboards.
  </td><td><u>Lessons:</u>
Name Three-Dimensional Shapes based on Defining Attributes

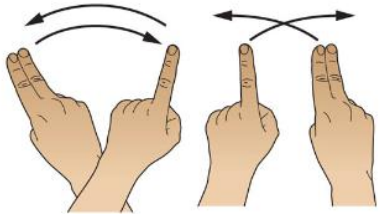
<u>Activities and Tasks:</u>
Use real life objects to do sorting
3-D Shape Sorting Activity
3-D Shape Hunt Activity

<u>Videos:</u>
3-D Shapes I Know Video
Stack, Slide or Roll Video

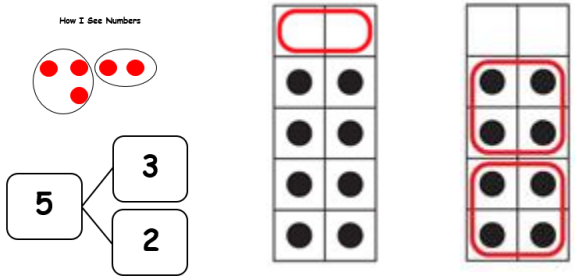
<u>Templates and Visuals:</u>
3 D Shape Poem</td></tr>
<tr><td colspan="2">Lesson 1-10 Number Stories
1.OA.A.1 Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem. (Result and Change Unknown up to 10)
1.OA.B.3 Apply properties of operations as strategies to add and subtract.
1.OA.C.6 Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g., 8 + 6 = 8 + 2 + 4 = 10 + 4 = 14); using the relationship between addition and subtraction (e.g., knowing that 8 + 4 = 12, one knows 12 – 8 = 4); and creating equivalent but easier or known sums (e.g., adding 6 + 7 by creating the known equivalent 6 + 6 + 1 = 12 + 1 = 13</td></tr>
<tr><td>Students tell stories and solve number stories to practice adding and subtracting within 20.
1.OA.A.1 Students tell and solve word problems to practice adding and subtracting within 20. Although this lesson encourages using word problems with dollars, money is not a focus in our standards.</td><td><u>Lessons:</u>
Solve “Put Together,” and “Take Apart” Word Problems
Solve “Add To - With Change Unknown” Problems</td></tr>
</table>

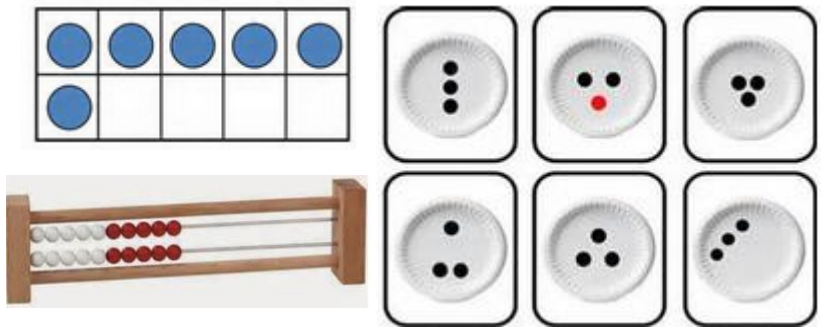
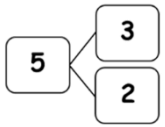
Grade 1 Unit One Counting	
Connections/Notes	**Additional Resources**
Contextual problems that are closely connected to students' lives should be used to develop fluency with addition and subtraction. Students use drawings or objects/manipulatives (e.g., counters, unifix cubes, number lines) to represent the different situations. It is important to attend to the difficulty level of the problem situations in relation to the position of the unknown. • Result Unknown, Total Unknown, and Both Addends Unknown problems are the least complex for students. • The next level of difficulty includes Change Unknown, Addend Unknown, and Difference Unknown  3+1=4 2+3=5 4+2=6 **10 - 3 = ☐** **6 + 4 = ☐** Use story mats and various manipulatives to solve Result Unknown and Total Unknown word problems with sums to 10 and differences from 10.	Critiques Peer Solution Strategies for Total Unknown **Activities and Tasks:** Story Structure Sample Problems TangMath Word Problems Giant Word Problems **Videos:** Solving Word Problems Addition to 20 with Bar Models Subtraction to 20 with Bar Models **Templates and Visuals:** Story Mats **Teaching Student-Centered Mathematics:** Pages 294-296 (Diagrams and drawing for story problems) Pages 70-72 (Using contextual problems) Pages 99-111 (Strategies for addition facts) Pages 86-89 (More thoughts about children solving story problems)
Lesson 1-11 Counting Larger Numbers **1.OA.C.5 Relate counting to addition and subtraction (e.g., by counting on 2 to add 2).** **1.NBT.A.1 Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral.**	
Students navigate the number grid to prepare for adding and subtracting. **1.OA.C.5** Students use the 120 chart to count up and back. **1.NBT.A.1** Students should also refer back to the number line from earlier lessons as well as using the 120 chart.	**Lessons:** Count On Up to 3 More **Videos:** Addition by Counting On Subtraction by Counting Back

Grade 1 Unit One Counting	
Connections/Notes	**Additional Resources**
Common Misconception: If some children count "1" as they touch the starting number as opposed to touching the starting number and then counting "1" as they hop, **then** prompt them to think about where they should land if they were to move up 1.	Counting to 100 **Templates and Visuals:** Ten frame Number Bonds Template
Lesson 1-12 Assessment (Option of 2 days) ***Because this is the beginning of the school year, all the content included in Unit 1 will be revisited in subsequent units.**	
1.OA.C.1 Solve word problems by adding and subtracting. **1.OA.C.5** Relate counting to addition and subtraction. **1.OA.C.6** Add and subtract within 10 fluently. **1.NBT.A.1** Count on from any number. Read and write numbers. Count and represent collections of objects with numerals. **1.NBT.A.3** Compare and order numbers. **1.MD.C.4** Answer questions about data.	Math GR 1 Units 1 and 2 Summative Assessment in eDoctrina (**use after Unit 2**) *Note: Throughout Unit 1, data can be gathered through the use of formative assessments built on the eDoctrina platform and/or by using the ACI checklists to determine student progress with each standard taught. You may want to continue spiral reviewing concepts taught in Unit 1 prior to giving the summative assessment upon the completion of Unit 2.

Grade 1 Unit Two Introducing Addition	
Connections/Notes	**Additional Resources**
Lesson 2-1 Introducing the Strategy Wall **1.OA.A.1 Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem. (Result and Change Unknown up to 10)** **1.OA.B.3 Apply properties of operations as strategies to add and subtract.** **1.OA.C.5 Relate counting to addition and subtraction** **1.OA.C.6 Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g., 8 + 6 = 8 + 2 + 4 = 10 + 4 = 14); using the relationship between addition and subtraction (e.g., knowing that 8 + 4 = 12, one knows 12 – 8 = 4); and creating equivalent but easier or known sums (e.g., adding 6 + 7 by creating the known equivalent 6 + 6 + 1 = 12 + 1 = 13** **1.NBT.A.1 Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral. (Numbers 0-50)**	
Students are introduced to the Strategy Wall and learn the counting on strategy and the turn-around rule for addition. **1.OA.C.5** Students will count by 5's. **1.OA.C.6** Introduce the term "turn-around rule".  Teach students a simple gesture that conveys the idea of the numbers switching order. **1.NBT.A.1** Display a number and students count on from that number.	**Lessons:** Apply the Commutative Property to Count On **Activities and Tasks:** Linking Cube Partners Number Bag Two Out of Three **Videos:** Solving Word Problems **Templates and Visuals:** Story Mats **Teaching Student-Centered Mathematics:** Pages 40-41, 45 (Early Number Sense) Pages 99-111 (Strategies for addition facts)
Lesson 2-2 Decomposing Numbers within 10 **1.OA.C.6 Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g., 8 + 6 = 8 + 2 + 4 = 10 + 4 = 14); using the relationship between addition and subtraction (e.g., knowing that 8 + 4 = 12, one**	

Grade 1 Unit Two Introducing Addition	
Connections/Notes	**Additional Resources**
knows 12 – 8 = 4); and creating equivalent but easier or known sums (e.g., adding 6 + 7 by creating the known equivalent 6 + 6 + 1 = 12 + 1 = 13 **1.NBT.B.3 Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols >, =, and <. (Up to 50 with comparative language)**	
Students decompose numbers and identify pairs that add to 10 to prepare for adding and subtracting within 10. **1.OA.C.6 Children represent numbers using ten frames.** This standard is strongly connected to all the standards in this domain. It focuses on students being able to fluently add and subtract numbers to 10 and having experiences adding and subtracting within 20. By studying patterns and relationships in addition facts and relating addition and subtraction, students build a foundation for fluency with addition and subtraction facts. Fluency: Procedural fluency is defined as skill in carrying out procedures flexibly, accurately, efficiently, and appropriately. Fluent problem solving does not necessarily mean solving problems within a certain time limit, though there are reasonable limits on how long computation should take. Fluency is based on a deep understanding of quantity and number. Memorization is often confused with fluency. Fluency implies a much richer kind of mathematical knowledge and experience. Strategy focus for this term within 10: • Counting on (0,1,2,3) • Counting back (3,2,1,0) • Make a ten (3 + 7 = 10) • Subtracting from 10 (10 - 4 = 6) For more about fluency, see: http://www.youcubed.org/wp-content/uploads/2015/03/FluencyWithoutFear-2015.pdf	**Lessons:** Solve Put Together and Take Apart Word Problems Critique Peer Solution Strategies for Total Unknown Spinning More Less **Activities and Tasks:** Story Structure Sample Problems Giant Word Problems **Videos:** Solving Word Problems **Templates and Visuals:** Story Mats



Grade 1 Unit Two Introducing Addition	
Connections/Notes	**Additional Resources**
1.NBT.B.3 Children compare numbers represented on ten frames. 	
Lesson 2-3 More Decomposing Numbers within 10 **1.OA.C.6 Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g., 8 + 6 = 8 + 2 + 4 = 10 + 4 = 14); using the relationship between addition and subtraction (e.g., knowing that 8 + 4 = 12, one knows 12 – 8 = 4); and creating equivalent but easier or known sums (e.g., adding 6 + 7 by creating the known equivalent 6 + 6 + 1 = 12 + 1 = 13** **1.NBT.A.1 Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral. (Numbers 0-50)**	
Students continue to work with pairs of numbers that add to 10. **1.OA.C.6** Students find pairs of numbers that add to add.   	**Lessons:** Represent all Numbers Pairs of 10 as Number Bonds Count On to Find the Unknown Part Using the Rekenrek Resource Guide **Activities and Tasks:** Subitizing Cards/Plates How I See Numbers Hide the Cubes Facts of Ten with Ten Frames Two Out of Three Compatible Pairs to Ten

<table>
<tr><th colspan="2">Grade 1 Unit Two
Introducing Addition</th></tr>
<tr><th>Connections/Notes</th><th>Additional Resources</th></tr>
<tr><td></td><td>Dominoes Activity
Rekenrek Prompt Cards
Fiddle Sticks
Ten Bonds
Save the Whale
Ten Frames

<u>Videos:</u>
Friends of 10 Song
What Makes 10 Song

<u>Templates and Visuals:</u>
Dot Cards/Plates
Ten Frames
Ten Strips

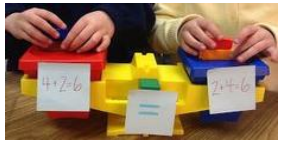
<u>Teaching Student-Centered Mathematics:</u>
Pages 99-111 (Strategies for Addition Facts)</td></tr>
<tr><td colspan="2">Lesson 2-4 Exploring Subtraction, Pairs of Numbers that Add to 10, and Data (Explorations)
1.OA.A.1 Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem. (Result and Change Unknown up to 10)

1.OA.C.6 Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g., 8 + 6 = 8 + 2 + 4 = 10 + 4 = 14); using the relationship between addition and subtraction (e.g., knowing that 8 + 4 = 12, one knows 12 – 8 = 4); and creating equivalent but easier or known sums (e.g., adding 6 + 7 by creating the known equivalent 6 + 6 + 1 = 12 + 1 = 13
1.MD.C.4 Organize, represent, and interpret data with up to three categories; ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in another.</td></tr>
<tr><td>*Explorations are designed to be small group activities. You may want to create a poster of Rules for Exploration similar to the one shown on page 103.
1.OA.A.1 Students use subtraction to solve a number story.
Exploration A: Subtraction Bingo</td><td><u>Lessons:</u>
Represent all Numbers Pairs of 10 as Number Bonds
Count On to Find the Unknown Part</td></tr>
</table>

Grade 1 Unit Two Introducing Addition	
Connections/Notes	**Additional Resources**
1.OA.C.6 Students practice subtraction. They should find all combinations of 10. **Exploration B: Picking 10 Apples** **1.OA.C.6** Students practice subtraction. They should find all combinations of 10. **Exploration C: Counting Our Classroom** **1.OA.C.6** Students practice subtraction. They should find all combinations of 10. **1.NBT.A.1** Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral. (Numbers 0-50) **1.MD.C.4** Students record data on a tally chart and use the tally chart to answer questions. Students create tally charts. Graphs may be constructed by groups of students as well as by individual students. Counting objects should be reinforced when collecting, representing, and interpreting data. Students describe the tally charts they create. They should also ask, and answer questions based on these charts that reinforce other mathematics concepts such as sorting and comparing. The data chosen or questions asked give students opportunities to reinforce their understanding of place value, identifying ten more and ten less, relating counting to addition and subtraction and using comparative language and symbols.  	Using the Rekenrek Resource Guide **Activities and Tasks:** Subitizing Cards/Plates How I See Numbers Hide the Cubes Facts of Ten with Ten Frames Two Out of Three Compatible Pairs to Ten Dominoes Activity Rekenrek Prompt Cards Fiddle Sticks **Videos:** Friends of 10 Song What Makes 10 Song **Templates and Visuals:** Dot Cards/Plates Ten Frames Ten Strips
Lesson 2-5 10 Apples (Open Response and Reengagement) (2-day lesson) **1.OA.B.3 Apply properties of operations as strategies to add and subtract.** **1.OA.C.6 Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g., 8 + 6 = 8 + 2 + 4 = 10 + 4 = 14); using the relationship between addition and subtraction (e.g., knowing that 8 + 4 = 12, one knows 12 – 8 = 4); and creating equivalent but easier or known sums (e.g., adding 6 + 7 by creating the known equivalent 6 + 6 + 1 = 12 + 1 = 13**	
Day 1: Students solve an open-response problem that involves finding all the ways to make a sum of 10. **Day 2: Students discuss and learn from other children's solutions and then revise their work.**	**Lessons:** Apply the Commutative Property to Count On Use the Commutative Property to Make 10

Grade 1 Unit Two Introducing Addition	
Connections/Notes	**Additional Resources**

1.OA.B.3 Use pan balances or various manipulatives to illustrate the commutative property.

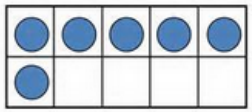


1.OA.B.6 Students use patterns to help find all the ways to have a total of 10.

Red Apples	Green Apples
1	9
2	8
3	7
6	4
7	3
8	2
9	1
10	0

Day 2 – Students will examine various tables from Day 1 and discuss how they can tell if all the combinations are there.

Continue working on these strategies within 10:



- Counting on (0,1,2,3)
- Counting back (3,2,1,0)
- Make a ten (3 + 7 = 10)
- Subtracting from 10 (10 - 4 = 6)

Activities and Tasks:
Linking Cube Partners
Number Bag
Roll it Baby! Switch!

Templates and Visuals:
Number Balance

Teaching Student-Centered Mathematics:
Pages 40-41, 45 (Early Number Sense)

Grade 1 Unit Two Introducing Addition	
Connections/Notes	**Additional Resources**

Lesson 2-6 More Counting On to Add

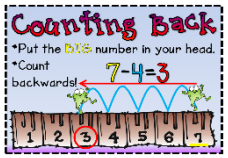
1.OA.C.5 Relate counting to addition and subtraction

1.OA.C.6 Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g., 8 + 6 = 8 + 2 + 4 = 10 + 4 = 14); using the relationship between addition and subtraction (e.g., knowing that 8 + 4 = 12, one knows 12 – 8 = 4); and creating equivalent but easier or known sums (e.g., adding 6 + 7 by creating the known equivalent 6 + 6 + 1 = 12 + 1 = 13

1.NBT.B.3 Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols >, =, and <. (Up to 50 with comparative language)

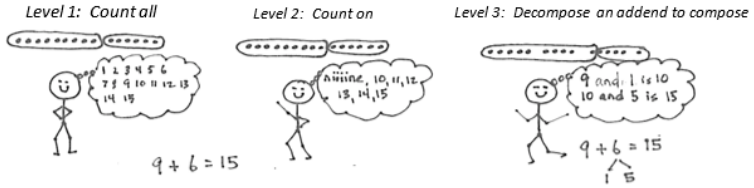
Students are introduced to Quick Looks with ten frames and the game High Roller to practice an addition strategy, counting on.

1.OA.C.5 Students identify the total number of dots shown.



Use visuals and modeling to convey addition counting strategies.

Students need to progress from the lower-level counting all to counting on and eventually decomposing an addend to compose.



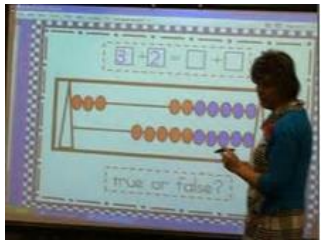
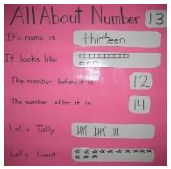
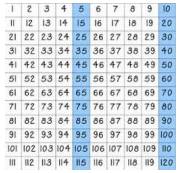
1.OA.C.6 Students practice finding sums.

This standard is strongly connected to all the standards in this domain. It focuses on students being able to fluently add and subtract numbers to 10 and having experiences adding and subtracting within 20. By studying patterns and relationships in addition facts and relating addition and subtraction, students build a foundation for fluency with addition and subtraction facts.

Lessons:
Count On Up to 3 More

Videos:
Addition by Counting On
Subtraction by Counting Back

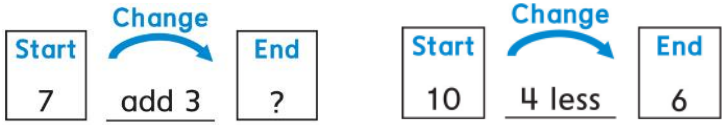
Templates and Visuals:
Ten frame
Number Bonds Template

Grade 1 Unit Two Introducing Addition	
Connections/Notes	**Additional Resources**
Fluency: Procedural fluency is defined as skill in carrying out procedures flexibly, accurately, efficiently, and appropriately. Fluent problem solving does not necessarily mean solving problems within a certain time limit, though there are reasonable limits on how long computation should take. Fluency is based on a deep understanding of quantity and number. Memorization is often confused with fluency. Fluency implies a much richer kind of mathematical knowledge and experience. Strategy focus for this unit within 10: • Counting on (0,1,2,3) • Counting back (3,2,1,0) • Make a ten (3 + 7 = 10) **1.NBT.B.3** Students should explain strategies they use to find sums. 	
Lesson 2-7 Labeling Counts **1.NBT.A.1 Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral. (Numbers 0-50)**	
Students use unit boxes to label objects as they count. **1.NBT.A.1** Students discuss using units to name things that they count. Students practice counting and using unit boxes to identify the object being counted. **Calculators are introduced in this lesson, but we do not encourage using them.**   Allow students to count, read and write numbers by exploring various visual representations for any number less than 50.	**Activities and Tasks:** Models with the Hundred Chart Counting Chart Race to 50 Activity Hundred Chart Puzzle **Videos:** Count by Ones to 50 Song Representing Numbers to 10

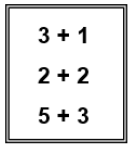
Grade 1 Unit Two Introducing Addition	
Connections/Notes	**Additional Resources**
Lesson 2-8 Change-to-More Number Stories **1.OA.A.1 Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem. (Result and Change Unknown up to 10)** **1.OA.C.5 Relate counting to addition and subtraction** **1.OA.C.6 Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g., 8 + 6 = 8 + 2 + 4 = 10 + 4 = 14); using the relationship between addition and subtraction (e.g., knowing that 8 + 4 = 12, one knows 12 – 8 = 4); and creating equivalent but easier or known sums (e.g., adding 6 + 7 by creating the known equivalent 6 + 6 + 1 = 12 + 1 = 13**	
Students are introduced to change-to-more diagrams to help them solve number stories. **1.OA.A.1** Students use a Change-To-More diagram to solve their word problems.  **1.OA.C.5** Students work with word problems with the use of manipulatives including pennies. Knowledge of and ability to use addition counting strategies (e.g., Counting All, Counting On, Counting On from the Larger Number) to solve problems. Knowledge of and ability to use subtraction counting strategies (Counting Up To, Counting Back From) to solve problems. **1.OA.C.6** Use multiple strategies to solve their facts.	**Lessons:** Write Word Problems for Given Equations **Activities and Tasks:** Use ten frames and various manipulatives **Videos:** Addition by Counting On **Templates and Visuals:** Ten frames Story Mats
Lesson 2-9 Change-to-Less Number Stories **1.OA.A.1 Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem. (Result and Change Unknown up to 10)** **1.OA.B.4 Understand subtraction as an unknown-addend problem. *For example, subtract 10 – 8 by finding the number that makes 10 when added to 8*** **1.OA.C.5 Relate counting to addition and subtraction** **1.OA.C.6 Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g., 8 + 6 = 8 + 2 + 4 = 10 + 4 = 14); using the relationship between addition and subtraction (e.g., knowing that 8 + 4 = 12, one**	

<table>
<tr><th colspan="2">Grade 1 Unit Two
Introducing Addition</th></tr>
<tr><th>Connections/Notes</th><th>Additional Resources</th></tr>
<tr><td colspan="2">knows 12 – 8 = 4); and creating equivalent but easier or known sums (e.g., adding 6 + 7 by creating the known equivalent 6 + 6 + 1 = 12 + 1 = 13
1.OA.D.8 Determine the unknown whole number in an addition or subtraction equation relating three whole numbers. For example, determine the unknown number that makes the equation true in each of the equations: 8 + ? = 11, 5 = □ – 3, 6 + 6 = □.</td></tr>
<tr><td>Students are introduced to change-to-less diagrams to help them solve number stories.
1.OA.A.1 Students uses a Change-To-Less diagram to solve their word problems.
 
1.OA.C.6 Students use various strategies to solve their facts.</td><td><u>Lessons:</u>
Write Word Problems for Given Equations

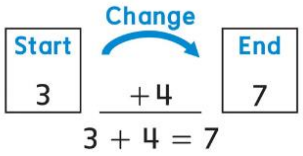
<u>Videos:</u>
Addition by Counting On

<u>Templates and Visuals:</u>
Ten frames
Story Mats</td></tr>
<tr><td colspan="2">Lesson 2-10 Number Models
1.OA.A.1 Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem. (Result and Change Unknown up to 10)
1.OA.C.6 Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g., 8 + 6 = 8 + 2 + 4 = 10 + 4 = 14); using the relationship between addition and subtraction (e.g., knowing that 8 + 4 = 12, one knows 12 – 8 = 4); and creating equivalent but easier or known sums (e.g., adding 6 + 7 by creating the known equivalent 6 + 6 + 1 = 12 + 1 = 13
1.OA.D.7 Understand the meaning of the equal sign and determine if equations involving addition and subtraction are true or false. For example, which of the following equations are true and which are false? 6 = 6, 7 = 8 – 1, 5 + 2 = 2 + 5, 4 + 1 = 5 + 2.
1.OA.D.8 Determine the unknown whole number in an addition or subtraction equation relating three whole numbers. For example, determine the unknown number that makes the equation true in each of the equations: 8 + ? = 11, 5 = □ – 3, 6 + 6 = □.</td></tr>
<tr><td>Students are introduced to number models to support their work with addition and subtraction.
1.OA.A.1 Students will use the plus, minus , and equal signs to write number models. Review the change diagrams from the past two lessons. Explain to the students that they will now use symbols to explain what is happening to the numbers in the change diagram.
  </td><td><u>Lessons:</u>
Write Word Problems for Given Equations

<u>Activities and Tasks:</u>
Use ten frames and various manipulatives</td></tr>
</table>

<table>
<tr><th colspan="2">Grade 1 Unit Two
Introducing Addition</th></tr>
<tr><th>Connections/Notes</th><th>Additional Resources</th></tr>
<tr><td>1.OA.C.6 Explore writing expressions with symbols
 
3 + 1
2 + 2
5 + 3
.</td><td><u>Videos:</u>
Addition by Counting On

<u>Templates and Visuals:</u>
Ten frames
Story Mats</td></tr>
<tr><td colspan="2">Lesson 2-11 Finding Unknowns
1.OA.A.1 Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem. (Result and Change Unknown up to 10)
1.OA.C.6 Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g., 8 + 6 = 8 + 2 + 4 = 10 + 4 = 14); using the relationship between addition and subtraction (e.g., knowing that 8 + 4 = 12, one knows 12 – 8 = 4); and creating equivalent but easier or known sums (e.g., adding 6 + 7 by creating the known equivalent 6 + 6 + 1 = 12 + 1 = 13
1.OA.D.8 Determine the unknown whole number in an addition or subtraction equation relating three whole numbers. For example, determine the unknown number that makes the equation true in each of the equations: 8 + ? = 11, 5 = □ – 3, 6 + 6 = □.</td></tr>
<tr><td>Students find unknown numbers in addition and subtraction number models.
1.OA.A.1 Students use number cards and symbol cards to make number models.
 
2 + 5 = 7

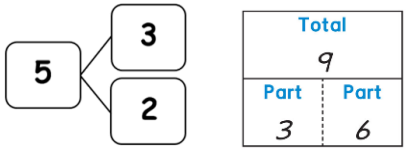
1.OA.D.8 Students explore finding the unknown. Students can write or draw pictures to show how they solved an expression.
 
Start 3 Change +4 End 7
3 + 4 = 7</td><td><u>Lessons:</u>
Write Word Problems for Given Equations

<u>Activities and Tasks:</u>
Use ten frames and various manipulatives

<u>Videos:</u>
Addition by Counting On

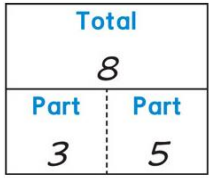
<u>Templates and Visuals:</u>
Ten frames
Story Mats</td></tr>
</table>

Grade 1 Unit Two Introducing Addition	
Connections/Notes	**Additional Resources**
Lesson 2-12 Assessment (Option of 2 days)	
1.OA.C.1 Solve word problems by adding and subtracting. Model parts-and-total, change, and comparison situations. **1.OA.C.3** Apply properties of operations to add and subtract. **1.OA.C.5** Relate counting to addition and subtraction. **1.OA.C.6** Recognize and decompose quantities up to 20 using visual patterns. Add and subtract within 10 fluently. Add combinations of 10 automatically. Add and subtract within 20 using strategies. **1.NBT.A.1** Read and write numbers. Count and represent collections of objects with numerals.	**Math GR 1 Units 1 and 2 Summative Assessment in eDoctrina**

Grade 1 Unit Three Number Stories	
Connections/Notes	**Additional Resources**
Lesson 3-1 Parts-and-Total Number Stories **1.OA.A.1 Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem. (Result and Change Unknown up to 10)** **1.OA.C.6 Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g., 8 + 6 = 8 + 2 + 4 = 10 + 4 = 14); using the relationship between addition and subtraction (e.g., knowing that 8 + 4 = 12, one knows 12 – 8 = 4); and creating equivalent but easier or known sums (e.g., adding 6 + 7 by creating the known equivalent 6 + 6 + 1 = 12 + 1 = 13** **1.OA.D.8 Determine the unknown whole number in an addition or subtraction equation relating three whole numbers. *For example, determine the unknown number that makes the equation true in each of the equations: 8 + ? = 11, 5 = □ – 3, 6 + 6 = □.*** **1.NBT.B.3 Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols >, =, and <. (Up to 50 with comparative language)**	
Students use diagrams and number models to represent and solve parts-and-total situations.  Students apply part-and-total diagrams to solve problems with the unknown in various positions.	**Lessons:** Solve Put Together and Take Apart Word Problems Solve Add To With Change Unknown Problems **Activities and Tasks:** Story Structure Sample Problems Giant Word Problems **Videos:** Solving Word Problems **Templates and Visuals:** Story Mats **Teaching Student-Centered Mathematics:** Pages 294-296 (Diagrams and drawing for story problems) Pages 70-72 (Using contextual problems) Pages 99-111 (Strategies for addition facts)

<table>
<tr><th colspan="2">Grade 1 Unit Three
Number Stories</th></tr>
<tr><th>Connections/Notes</th><th>Additional Resources</th></tr>
<tr><td></td><td>Pages 86-89 (More thoughts about children solving story problems)</td></tr>
<tr><td colspan="2">Lesson 3-2 Number Story Strategies
1.OA.A.1 Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem. (Result and Change Unknown up to 10)
1.OA.C.5 Relate counting to addition and subtraction
1.OA.C.6 Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g., 8 + 6 = 8 + 2 + 4 = 10 + 4 = 14); using the relationship between addition and subtraction (e.g., knowing that 8 + 4 = 12, one knows 12 – 8 = 4); and creating equivalent but easier or known sums (e.g., adding 6 + 7 by creating the known equivalent 6 + 6 + 1 = 12 + 1 = 13
1.OA.D.8 Determine the unknown whole number in an addition or subtraction equation relating three whole numbers. For example, determine the unknown number that makes the equation true in each of the equations: 8 + ? = 11, 5 = □ – 3, 6 + 6 = □.</td></tr>
<tr><td>Students represent number stories with number models and solve them.
1.OA.A.1 Students represent and solve parts-and-total number stories.

1.OA.C.6 Introduce Domino Addition

 
 
</td><td><u>Lessons:</u>
Solve Add to With Change Unknown Problems
Space Probe (AIMS)
Write Word Problems for Given Equations

<u>Activities and Tasks:</u>
Use ten frames and various manipulatives
Bar Model Lesson Seed Dominoes
Fact Family Activity
Dominoes Activities

<u>Videos:</u>
Solving Word Problems

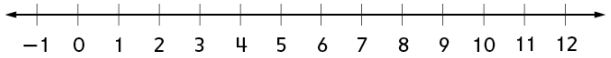
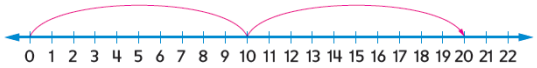
<u>Templates and Visuals:</u>
Ten frames
Story Mats

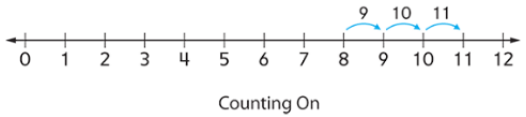
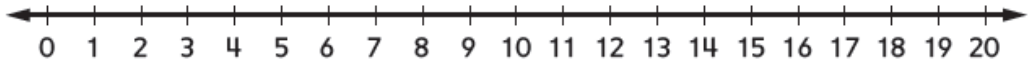
<u>Teaching Student-Centered Mathematics:</u></td></tr>
</table>

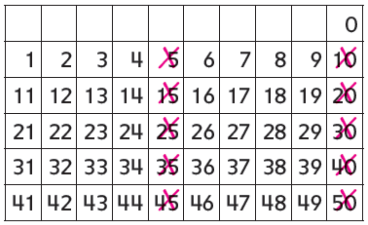
<table>
<tr><th colspan="2">Grade 1 Unit Three
Number Stories</th></tr>
<tr><th>Connections/Notes</th><th>Additional Resources</th></tr>
<tr><td></td><td>Pages 294-296 (Diagrams and drawing for story problems)
Pages 70-72 (Using contextual problems)
Pages 99-111 (Strategies for addition facts)
Pages 86-89 (More thoughts about children solving story problems)</td></tr>
<tr><td colspan="2">Lesson 3-3 Exploring Counting, Matching Pairs, and Ordering by Lengths (Explorations)
1.OA.A.1 Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem. (Result and Change Unknown up to 10)
1.OA.C.6 Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g., 8 + 6 = 8 + 2 + 4 = 10 + 4 = 14); using the relationship between addition and subtraction (e.g., knowing that 8 + 4 = 12, one knows 12 – 8 = 4); and creating equivalent but easier or known sums (e.g., adding 6 + 7 by creating the known equivalent 6 + 6 + 1 = 12 + 1 = 13
1.NBT.A.1 Count to 120, starting at any 120 number less than. In this range, read and write numerals and represent a number of objects with a written numeral. (Numbers 0-50)
1.MD.A.1 Order three objects by length; compare the lengths of two objects indirectly by using a third object.</td></tr>
<tr><td>*Students will be counting large numbers of pennies, matching pairs, and ordering objects by length. They informally explore doubles facts and direct length comparison.
1.NBT.A.1 Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral. (Numbers 0-50)
Exploration A: Counting Large Numbers of Pennies
Students estimate and count a large number of coins.
1.NBT.A.1 Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral. (Numbers 0-50)
Exploration B: Matching Pairs
Students write number models to represent pictures with paired features.
1.OA.C.6 Students practice addition and subtraction. They practice addition of doubles.
Exploration C: Counting Our Classroom
Students order objects by length.
1.MD.C.4 Students record data on a tally chart and use the tally chart to answer questions.</td><td><u>Lessons:</u>
Comparing Lengths Considering the Importance of Endpoints
Understand the Need to Use the Same Units When Comparing Measurements
Beach Ball Numbers Activity

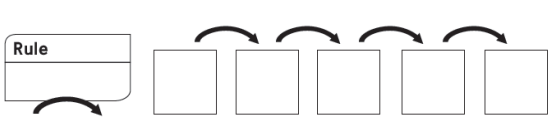
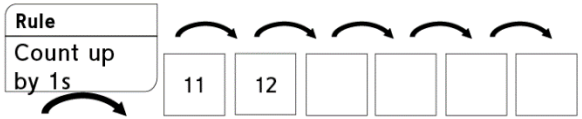
<u>Activities and Tasks:</u>
Use various objects to compare length</td></tr>
</table>

Grade 1 Unit Three Number Stories	
Connections/Notes	**Additional Resources**
Students create tally charts. Graphs may be constructed by groups of students as well as by individual students. Counting objects should be reinforced when collecting, representing, and interpreting data. Students describe the tally charts they create. They should also ask, and answer questions based on these charts that reinforce other mathematics concepts such as sorting and comparing. The data chosen or questions asked give students opportunities to reinforce their understanding of place value, identifying ten more and ten less, relating counting to addition and subtraction and using comparative language and symbols.	
Lesson 3-4 Birds in a Tree (Open Response and Reengagement) (2-day lesson) **1.OA.A.1 Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem. (Result and Change Unknown up to 10)** **1.OA.C.6 Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g., 8 + 6 = 8 + 2 + 4 = 10 + 4 = 14); using the relationship between addition and subtraction (e.g., knowing that 8 + 4 = 12, one knows 12 – 8 = 4); and creating equivalent but easier or known sums (e.g., adding 6 + 7 by creating the known equivalent 6 + 6 + 1 = 12 + 1 = 13** **1.OA.D.8 Determine the unknown whole number in an addition or subtraction equation relating three whole numbers. *For example, determine the unknown number that makes the equation true in each of the equations: 8 + ? = 11, 5 = □ – 3, 6 + 6 = □.***	
Day 1: Students solve an open response problem about representing a number story. **Day 2: the class discusses selected pictures and number models from Day 1, and children revise their work.** **1.OA.A.1** Students use a picture and a number model to represent a situation. Students solve a number story and create two representations of the story. There were 9 birds sitting in a tree. Some birds flew away. 5 birds stayed. How many birds flew away? 	**Lessons:** Represent all Numbers Pairs of 10 as Number Bonds Count On to Find the Unknown Part Using the Rekenrek Resource Guide **Activities and Tasks:** Facts of Ten with Ten Frames Two Out of Three Compatible Pairs to Ten How many are there? **Templates and Visuals:** Dot Cards/Plates Ten Frames Ten Strips **Teaching Student-Centered Mathematics:**

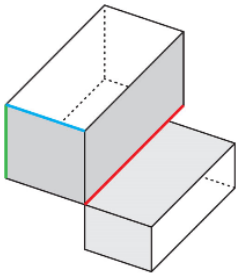
<table>
<tr><th colspan="2">Grade 1 Unit Three
Number Stories</th></tr>
<tr><th>Connections/Notes</th><th>Additional Resources</th></tr>
<tr><td></td><td>Pages 99-111 (Strategies for Addition Facts)</td></tr>
<tr><td colspan="2">Lesson 3-5 Counting on the Number Line
1.OA.B.3 Apply properties of operations as strategies to add and subtract.
1.OA.C.5 Relate counting to addition and subtraction
1.OA.C.6 Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g., 8 + 6 = 8 + 2 + 4 = 10 + 4 = 14); using the relationship between addition and subtraction (e.g., knowing that 8 + 4 = 12, one knows 12 – 8 = 4); and creating equivalent but easier or known sums (e.g., adding 6 + 7 by creating the known equivalent 6 + 6 + 1 = 12 + 1 = 13
1.NBT.A.1 Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral. (Numbers 0-50)</td></tr>
<tr><td>Students count up and back on the number line to prepare for using it as a tool for adding and subtracting.
1.OA.C.5 Provide students with concrete experience navigating along a number line.
 
1.NBT.A.1 Students count by 1s and skip count by 10s, 5s, and 2s.
Students count hops ups and back on a number line.
Show counting by 1s.
 
Show counting by 10s.
  </td><td><u>Activities and Tasks:</u>
Number Chart Activity
Counting from various numbers
Counting Chart (Prompts)
After and Before Numbers
Linking Cube Partners</td></tr>
<tr><td colspan="2">Lesson 3-6 Counting to Add and Subtract
1.OA.A.1 Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem. (Result and Change Unknown up to 10)
1.OA.B.3 Apply properties of operations as strategies to add and subtract.
1.OA.C.5 Relate counting to addition and subtraction
1.OA.C.6 Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g., 8 + 6 = 8 + 2 + 4 = 10 + 4 = 14); using the relationship between addition and subtraction (e.g., knowing that 8 + 4 = 12, one knows 12 – 8 = 4); and creating equivalent but easier or known sums (e.g., adding 6 + 7 by creating the known equivalent 6 + 6 + 1 = 12 + 1 = 13
1.NBT.A.1 Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral. (Numbers 0-50)</td></tr>
</table>

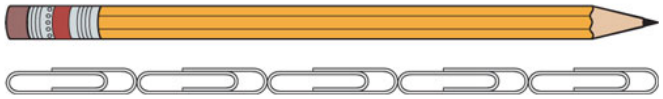
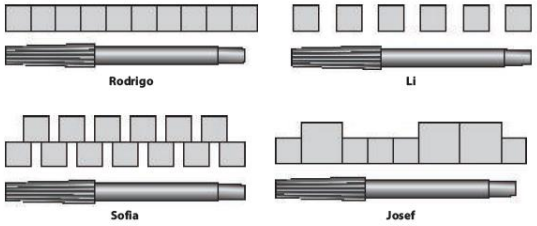
Grade 1 Unit Three Number Stories	
Connections/Notes	**Additional Resources**
Students count up and back on the number line to add and subtract. **1.OA.B.3** Student use the number line to solve addition and subtraction problems and share their solutions.  Counting On	**Activities and Tasks:** Number Chart Activity Counting from various numbers Counting Chart (Prompts) After and Before Numbers
Lesson 3-7 More Counting to Add and Subtract **1.OA.C.5 Relate counting to addition and subtraction** **1.OA.C.6 Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g., 8 + 6 = 8 + 2 + 4 = 10 + 4 = 14); using the relationship between addition and subtraction (e.g., knowing that 8 + 4 = 12, one knows 12 – 8 = 4); and creating equivalent but easier or known sums (e.g., adding 6 + 7 by creating the known equivalent 6 + 6 + 1 = 12 + 1 = 13** **1.OA.D.8 Determine the unknown whole number in an addition or subtraction equation relating three whole numbers. *For example, determine the unknown number that makes the equation true in each of the equations: 8 + ? = 11, 5 = □ – 3, 6 + 6 = □.*** **1.NBT.A.1 Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral. (Numbers 0-50)**	
Students count up and back on the number line and use the number line to solve equations with the unknown number in various positions. **1.OA.D.8** Students use the number line to solve addition and subtraction problems with the unknowns in various positions.  □ + 8 = 13 □ – 9 = 6	**Lessons:** I See You See (AIMS) **Activities and Tasks:** Party Hat Balance Activity Unknown Number Flip Cards **Videos:** Equal Sign Song Video **Teaching Student-Centered Mathematics:** Pages 47-51 (Part-part-whole) Pages 110-111 (Missing Number Activities

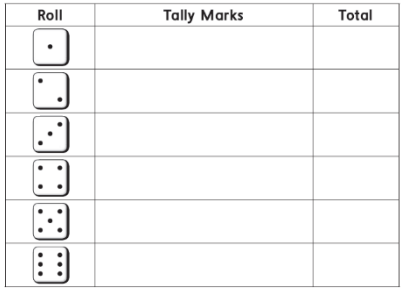
Grade 1 Unit Three Number Stories	
Connections/Notes	**Additional Resources**
Lesson 3-8 Skip Counting to Add and Subtract **1.OA.A.1 Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem. (Result and Change Unknown up to 10)** **1.OA.B.3 Apply properties of operations as strategies to add and subtract.** **1.OA.C.5 Relate counting to addition and subtraction** **1.OA.C.6 Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g., 8 + 6 = 8 + 2 + 4 = 10 + 4 = 14); using the relationship between addition and subtraction (e.g., knowing that 8 + 4 = 12, one knows 12 – 8 = 4); and creating equivalent but easier or known sums (e.g., adding 6 + 7 by creating the known equivalent 6 + 6 + 1 = 12 + 1 = 13** **1.NBT.A.1 Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral. (Numbers 0-50)**	
Students use the number grid to count and discuss patterns in the counts.  0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50	**Lessons:** Represent all Numbers Pairs of 10 as Number Bonds Count On to Find the Unknown Part Model 0 Less and 1 Less Pictorially More or Less Tic Tac Toe
Lesson 3-9 Counting Application: Frames and Arrows **1.OA.C.5 Relate counting to addition and subtraction** **1.OA.C.6 Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g., 8 + 6 = 8 + 2 + 4 = 10 + 4 = 14); using the relationship between addition and subtraction (e.g., knowing that 8 + 4 = 12, one knows 12 – 8 = 4); and creating equivalent but easier or known sums (e.g., adding 6 + 7 by creating the known equivalent 6 + 6 + 1 = 12 + 1 = 13** **1.OA.D.8 Determine the unknown whole number in an addition or subtraction equation relating three whole numbers. *For example, determine the unknown number that makes the equation true in each of the equations: 8 + ? = 11, 5 = □ – 3, 6 + 6 = □.*** **1.NBT.A.1 Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral. (Numbers 0-50)**	

Grade 1 Unit Three Number Stories	
Connections/Notes	**Additional Resources**
Students are introduced to Frames-and-Arrows diagrams and solve problems within them that involve counting, addition, and subtraction.   **Common Misconception:** Watch for children who confuse the direction of the arrow in the rule box with the direction in which they count. The arrow in the rule box does not change direction. Remind students to pay close attention to the words and symbols inside the rule box to help them decide which way to count.	**Activities and Tasks:** Number Chart Activity Counting from various numbers Counting Chart (Prompts) After and Before Numbers
Lesson 3-10 Addition and Subtraction Application: Frames and Arrows **1.OA.C.5 Relate counting to addition and subtraction** **1.OA.C.6 Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g., 8 + 6 = 8 + 2 + 4 = 10 + 4 = 14); using the relationship between addition and subtraction (e.g., knowing that 8 + 4 = 12, one knows 12 – 8 = 4); and creating equivalent but easier or known sums (e.g., adding 6 + 7 by creating the known equivalent 6 + 6 + 1 = 12 + 1 = 13** **1.OA.D.8 Determine the unknown whole number in an addition or subtraction equation relating three whole numbers. *For example, determine the unknown number that makes the equation true in each of the equations: 8 + ? = 11, 5 = □ – 3, 6 + 6 = □.*** **1.NBT.A.1 Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral. (Numbers 0-50)**	
Students find the arrow rule in Frames-and-Arrows problems to practice finding unknown numbers in addition and subtraction equations.	**Activities and Tasks:** Number Chart Activity Counting from various numbers Counting Chart (Prompts) After and Before Numbers
Lesson 3-11 Counting with Calculators (We are not using calculators with our students.) **1.OA.C.5 Relate counting to addition and subtraction** **1.NBT.A.1 Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral. (Numbers 0-50)**	

Grade 1 Unit Three Number Stories	
Connections/Notes	**Additional Resources**
You may use number lines to do the skip counting in this lesson.	**Activities and Tasks:** Crayon Box Fact Family **Videos:** Addition by Counting On
Lesson 3-12 Assessment (Option of 2 days) **Day 1 – Administer the Unit Assessments.** **Day 2 – Administer the Open Response Assessment.**	
1.OA.C.1 Solve word problems by adding and subtracting. Model parts-and-total, change, and comparison situations. **1.OA.C.2** Model and solve number stories involving the addition of 3 addends. **1.OA.C.3** Apply properties of operations to add and subtract. **1.OA.C.5** Relate counting to addition and subtraction. **1.OA.C.6** Add and subtract within 10 fluently. Add combinations of 10 automatically. Add and subtract within 20 using strategies. **1.OA.D.8** Find the unknown in addition and subtraction equations. **1.NBT.A.1** Count on from any number. Read and write numbers. **1.NBT.B.3** Compare and order numbers.	**Math GR 1 Unit 3 Summative Assessment in eDoctrina**

Grade 1 Unit Four Length and Addition Facts	
Connections/Notes	**Additional Resources**
Lesson 4-1 Introducing Length Measurement **1.MD.A.1 Order three objects by length; compare the lengths of two objects indirectly by using a third object.**	
Students discuss length as a measurable attribute and compare the length of objects directly and indirectly.  Which edge is longer?  Compare lengths of objects	**Lessons:** Comparing Lengths Considering the Importance of Endpoints Understand the Need to Use the Same Units When Comparing Measurements **Activities and Tasks:** Use various objects to compare length Read Inch By Inch by Leo Lionni and compare objects from the book Comparing objects for shorter/longer **Videos:** Ordering Objects by Length **Teaching Student-Centered Mathematics:** Pages 223-226, 228-229 (Measuring Concepts and Skills) Pages 249-250 (Crooked Paths Activity)
Lesson 4-2 Measuring Length/ Lesson 4-3 More Length Measurement **1.MD.A.1 Order three objects by length; compare the lengths of two objects indirectly by using a third object.** **1.MD.A.2 Express the length of an object as a whole number of length units, by laying multiple copies of a shorter object (the length unit) end to end; understand that the length measurement of an object is the number of same-size length units that span it with no gaps or overlaps.** ***Limit to contexts where the object being measured is spanned by a whole number of length units with no gaps or overlaps.***	

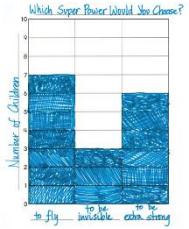
Grade 1 Unit Four Length and Addition Facts	
Connections/Notes	**Additional Resources**
Students iterate length units to measure the length of objects.  This pencil is correctly measured as being 5 medium paper clips long.	**Lessons:** Express the Length of an Object Using Centimeter Cubes The Biggest Fish
Lesson 4-4 Measuring a Marker (Open Response and Reengagement) (2-day lesson) **1.MD.A.1 Order three objects by length; compare the lengths of two objects indirectly by using a third object.** **1.MD.A.2 Express the length of an object as a whole number of length units, by laying multiple copies of a shorter object (the length unit) end to end; understand that the length measurement of an object is the number of same-size length units that span it with no gaps or overlaps.** ***Limit to contexts where the object being measured is spanned by a whole number of length units with no gaps or overlaps.*** **1.NBT.A.1 Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral. (Numbers 0-50)**	
Day 1: Children make an argument about which child made the best measurement. **Day 2: the class discusses some initial arguments, and children revise their work.**  Rodrigo Li Sofia Josef	
Lesson 4-5 Exploring Data, Shapes, and Base 10 Blocks (Explorations) **1.OA.C.6 Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g., 8 + 6 = 8 + 2 + 4 = 10 + 4 = 14); using the relationship between addition and subtraction (e.g., knowing that 8 + 4 = 12, one knows 12 – 8 = 4); and creating equivalent but easier or known sums (e.g., adding 6 + 7 by creating the known equivalent 6 + 6 + 1 = 12 + 1 = 13** **1.NBT.A.1 Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral. (Numbers 0-50)** **1.NBT.B.2 Understand that the two digits of a two-digit number represent amounts of tens and ones. Understand the following as special cases (Numbers 0-50):**	

Grade 1 Unit Four Length and Addition Facts	
Connections/Notes	**Additional Resources**
a. 10 can be thought of as a bundle of ten ones — called a "ten." **b. The numbers from 11 to 19 are composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones.** **The numbers 10, 20, 30, 40, 50, 60, 70, 80, 90 refer to one, two, three, four, five, six, seven, eight, or nine tens (and 0 ones)** **1.MD.C.4 Organize, represent, and interpret data with up to three categories; ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in another.** **1.G.A.1 Distinguish between defining attributes (e.g., triangles are closed and three-sided) versus non-defining attributes (e.g., color, orientation, overall size); build and draw shapes to possess defining attributes.** **1.G.A.2 Compose two-dimensional shapes (rectangles, squares, trapezoids, triangles, half-circles, and quarter-circles) or three-dimensional shapes (cubes, right rectangular prisms, right circular cones, and right circular cylinders) to create a composite shape and compose new shapes from the composite shape. (Students do not need to learn formal names such as "right rectangular prism.")**	
Students collect data and display it on a tally chart. They create shapes with specified attributes using rubber bands on geoboards. They build with and count base 10 blocks.  	**Lessons:** Collect, Sort and Organize Data then Answer Questions Ask and Answer Word Problems about a Data Set **Activities and Tasks:** Daily Graphing Prompts Meaty Math (AIMS) **Teaching Student-Centered Mathematics:** Pages 310-321 (Graphing Activities)
Lesson 4-6 Representing Data with a Bar Graph **1.OA.C.6 Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g., 8 + 6 = 8 + 2 + 4 = 10 + 4 = 14); using the relationship between addition and subtraction (e.g., knowing that 8 + 4 = 12, one knows 12 – 8 = 4); and creating equivalent but easier or known sums (e.g., adding 6 + 7 by creating the known equivalent 6 + 6 + 1 = 12 + 1 = 13** **1.MD.C.4 Organize, represent, and interpret data with up to three categories; ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in another.**	
Students create a tally chart and a bar graph, compare the representations, and answer questions about the data shown on each.	**Lessons:** Collect, Sort and Organize Data then Answer Questions Ask and Answer Word Problems about a Data Set

Grade 1 Unit Four
Length and Addition Facts

Connections/Notes	Additional Resources

Which Super Power Would You Choose?	
to fly	//// //
to be invisible	///
to be extra strong	//// /



Activities and Tasks:
Daily Graphing Prompts

Templates and Visuals:
Die Cuts from Instructional Resource Center

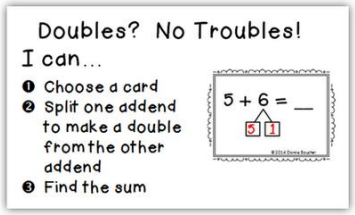
Teaching Student-Centered Mathematics:
Pages 310-321 (Graphing Activities)

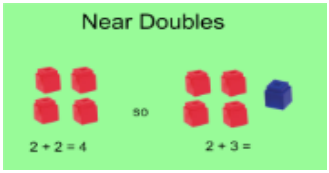
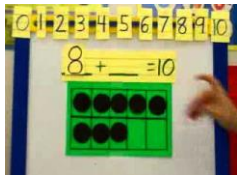
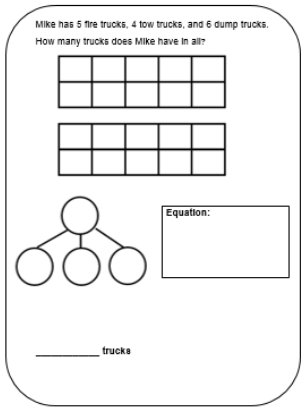
Lesson 4-7 Introducing Doubles
1.OA.C.6 Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g., 8 + 6 = 8 + 2 + 4 = 10 + 4 = 14); using the relationship between addition and subtraction (e.g., knowing that 8 + 4 = 12, one knows 12 – 8 = 4); and creating equivalent but easier or known sums (e.g., adding 6 + 7 by creating the known equivalent 6 + 6 + 1 = 12 + 1 = 13

Students learn about doubles as a strategy for adding and subtracting within 20.

Activities and Tasks:
Subitizing
See Fact Fluency Resources Folder for Activities
Flip Ten with Uno cards
I Have Who Has for Double Facts Game
Utah Education Network for resources

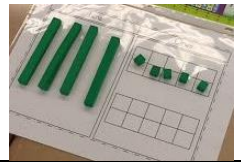
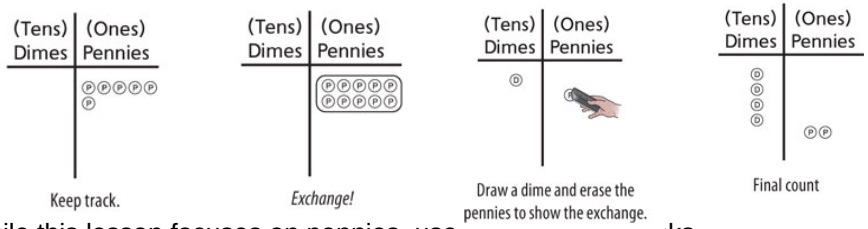
Templates and Visuals:
Visual Posters for Doubles Strategies Pinch Card
Dot Cards/Plates
Ten Frames
Ten Strips

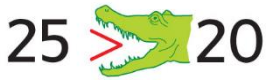
Grade 1 Unit Four Length and Addition Facts	
Connections/Notes	**Additional Resources**
	Teaching Student-Centered Mathematics: Pages 99-111 (Strategies for Addition Facts) Page 111 (Missing Part Blanks)
Lesson 4-8 Combinations of 10/ Lesson 4-9 More Combinations of 10 **1.OA.A.1 Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem. (Result and Change Unknown up to 10)** **1.OA.B.3 Apply properties of operations as strategies to add and subtract. 1.OA.C.5 Relate counting to addition and subtraction (e.g., by counting on 2 to add 2).** **1.OA.C.6 Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g., 8 + 6 = 8 + 2 + 4 = 10 + 4 = 14); using the relationship between addition and subtraction (e.g., knowing that 8 + 4 = 12, one knows 12 – 8 = 4); and creating equivalent but easier or known sums (e.g., adding 6 + 7 by creating the known equivalent 6 + 6 + 1 = 12 + 1 = 13**	
Students record addition facts they know and use combinations of 10 as a strategy for adding and subtracting within 20. **Students develop strategies for finding combinations of 10 to help them add and subtract within 20.** Continue working on these strategies within 10: • Counting on (0,1,2,3) • Counting back (3,2,1,0) • Make a ten (3 + 7 = 10) • Subtracting from 10 (10 - 4 = 6) • Doubles addition (4 + 4 = 8) • Doubles subtraction (6 – 3 = 3)   **Common Misconception: If** you see students asking for matching pairs instead of combinations of 10, **Then** remind them that the object of Fishing for 10 is to find combinations of 10.	**Lessons:** Apply the Commutative Property to Count On Use the Commutative Property to Make 10 **Activities and Tasks:** Egg Carton Addition Doubles? No Troubles! March Roll and Remove Game April Roll and Remove Game Fact Family Dominoes Fact Family Activity Fact Families Related Addition and Subtraction Dominoes Activities

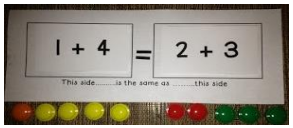
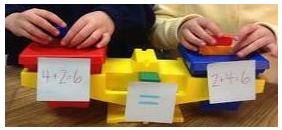
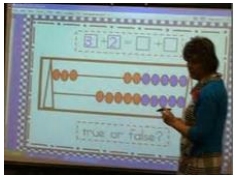
Grade 1 Unit Four Length and Addition Facts	
Connections/Notes	**Additional Resources**
  	**Templates and Visuals:** Number Balance **Teaching Student-Centered Mathematics:** Pages 40-41, 45 (Early Number Sense)
Lesson 4-10 Adding Three Numbers **1.OA.A.2 Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20.** **1.OA.B.3 Apply properties of operations as strategies to add and subtract.** **1.OA.C.5 Relate counting to addition and subtraction (e.g., by counting on 2 to add 2).** **1.OA.C.6 Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g., 8 + 6 = 8 + 2 + 4 = 10 + 4 = 14); using the relationship between addition and subtraction (e.g., knowing that 8 + 4 = 12, one knows 12 – 8 = 4); and creating equivalent but easier or known sums (e.g., adding 6 + 7 by creating the known equivalent 6 + 6 + 1 = 12 + 1 = 13**	
Students apply properties of operations and other strategies to add three numbers.  See “Unit 4 Resources” folder in the shared drive for a set of three addend story problems.	**Activities and Tasks:** Three Addend Problems Earth Day Capture Game Three Addend Mat **Templates and Visuals:** Number Bonds Tens Frames Three Addends Template

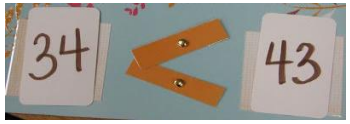
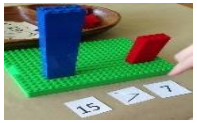
Grade 1 Unit Four Length and Addition Facts	
Connections/Notes	**Additional Resources**
Lesson 4-11 10 More, 10 Less **1.NBT.C.5 Given a two-digit number, mentally find 10 more or 10 less than the number, without having to count; explain the reasoning used**	
Students find numbers that are 10 more and 10 less than a given number to support their work toward using place value understanding to add and subtract. This standard requires students to understand and apply the concept of 10 which leads to future place value concepts. It is critical for students to do this without counting. Prior use of models such as base ten blocks, number lines, and 100s charts helps facilitate this understanding. It also helps students see the pattern involved when adding or subtracting 10. Examples: • 10 more than 43 is 53 because 53 is one more 10 than 43 • 10 less than 43 is 33 because 33 is one 10 less than 43	**Activities and Tasks:** More and Less on Hundred Chart Activity Ten More, Ten Less Activity More or Less Tic-Tac-Toe Activity Beach Ball Numbers Number Grid Game Activity Number Scrabble Activity Add 10 to Target Number Subtract 10 from Target Number **Videos:** Ten More Ten Less Lesson
Lesson 4-12 Assessment (Option of 2 days) **Day 1 – Administer the Unit Assessments.** **Day 2 – Administer the Open Response Assessment.**	
1.OA.A.2 Model and solve number stories involving the addition of 3 addends. **1.OA.B.3** Apply properties of operations to add and subtract. **1.OA.C.5** Relate counting to addition and subtraction. **1.OA.C.6** Add doubles automatically. Add combinations of 10 automatically. Add and subtract within 20 using strategies. **1.NBT.C.5** Mentally find 10 more or 10 less than a 2-digit number. **1.MD.A.1** Order objects by length. **1.MD.A.2** Measure length using same-size units with no gaps or overlaps. Express length as a whole number of units. **1.MD.C.4** Organize and represent data. Answer questions about data.	**Math GR 1 Unit 4 Summative Assessment in eDoctrina**

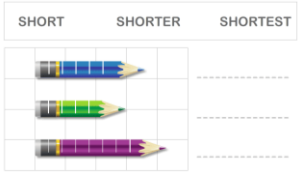
Grade 1 Unit Five Place Value and Comparisons	
Connections/Notes	**Additional Resources**
Lesson 5-1 Introducing Place Value **1.NBT.B.2 Understand that the two digits of a two-digit number represent amounts of tens and ones. Understand the following as special cases (Numbers to 120)** **a. 10 can be thought of as a bundle of ten ones — called a "ten."** **b. The numbers from 11 to 19 are composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones.** **The numbers 10, 20, 30, 40, 50, 60, 70, 80, 90 refer to one, two, three, four, five, six, seven, eight, or nine tens (and 0 ones)** **1.NBT.B.3 Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols >, =, and <. (Up to 50 with comparative language)** **1.NBT.B.3 Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols >, =, and <. (Up to 50 with comparative language)**	
Students use base ten blocks to practice place value concepts. Understanding the concept of 10 is fundamental to children's mathematical development. Students need multiple opportunities counting 10 objects and bundling them into one group of ten. They count between 10 and 20 objects and make a bundle of 10 with or without some left over (this will help students who find it difficult to write teen numbers). Finally, students count any number of objects up to 50, making bundles of 10s with or without leftovers. As students are representing the various amounts, it is important that an emphasis is placed on the language associated with the quantity. For example, 43 should be expressed in multiple ways such as 43 ones or 4 groups of ten with 3 ones leftover. When students read numbers, they read them in standard form as well as using place value concepts. For example, 43 should be read as forty-three as well as four tens, 3 ones. Reading 10, 20, 30, 40, as one ten, 2 tens, 3 tens, etc. helps students see the patterns in the number system.	**Lessons:** Interpret Two-Digit Numbers as Either Tens and Some Ones or All Ones Tens to Ones (AIMS) **Activities and Tasks:** Bundles of Tens and Ones Missing Number Activity 2 Match It Place Value Representation Match Counting Chart for hidden numbers Find the Target Number **Videos:** Counting to 100
Lesson 5-2 Digits and Place Value **1.NBT.A.1 Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral. (Numbers 0-50)** **1.NBT.B.2 Understand that the two digits of a two-digit number represent amounts of tens and ones. Understand the following as special cases (Numbers to 120)** **a. 10 can be thought of as a bundle of ten ones — called a "ten."** **b. The numbers from 11 to 19 are composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones.** **The numbers 10, 20, 30, 40, 50, 60, 70, 80, 90 refer to one, two, three, four, five, six, seven, eight, or nine tens (and 0 ones)**	

Grade 1 Unit Five Place Value and Comparisons	
Connections/Notes	**Additional Resources**
1.NBT.B.3 Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols >, =, and <. (Up to 50 with comparative language)	
Students use base 10 blocks to support place value understanding. Use the 120 Chart to count by tens. Provide various manipulatives for students to bundle into groups of ten to 50. Use base ten manipulatives for representing two-digit numbers to 50. 	**Activities and Tasks:** Greater Than or Less Than Use base ten with comparing tool
Lesson 5-3 Place-Value Application: Pennies and Dimes **1.NBT.A.1 Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral. (Numbers 0-50)** **1.NBT.B.2 Understand that the two digits of a two-digit number represent amounts of tens and ones. Understand the following as special cases (Numbers 0-50):** **a. 10 can be thought of as a bundle of ten ones — called a "ten."** **b. The numbers from 11 to 19 are composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones.** **The numbers 10, 20, 30, 40, 50, 60, 70, 80, 90 refer to one, two, three, four, five, six, seven, eight, or nine tens (and 0 ones)**	
Students apply their understanding of the relationship between tens and ones by exchanging pennies and dimes.  While this lesson focuses on pennies, use the base ten blocks to represent tens and ones.	**Lessons:** Represent Up to 120 Objects with a Written Numeral **Activities and Tasks:** Order up to 120 Counting from any number on the 120 chart Matching numerals to written words for numbers Counting Chart Riddles 1 and 2 **Templates and Visuals:** 120 Chart
Lesson 5-4 Greater Than, Less Than, and Equal To **1.OA.C.6 Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g., 8 + 6 = 8 + 2 + 4 = 10 + 4 = 14); using the relationship between addition and subtraction (e.g., knowing that 8 + 4 = 12, one**	

Grade 1 Unit Five Place Value and Comparisons	
Connections/Notes	**Additional Resources**
knows 12 – 8 = 4); and creating equivalent but easier or known sums (e.g., adding 6 + 7 by creating the known equivalent 6 + 6 + 1 = 12 + 1 = 13 **1.OA.D.7 Understand the meaning of the equal sign and determine if equations involving addition and subtraction are true or false. *For example, which of the following equations are true and which are false? 6 = 6, 7 = 8 – 1, 5 + 2 = 2 + 5, 4 + 1 = 5 + 2.*** **1.NBT.B.3 Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols >, =, and <. (Up to 50 with comparative language)**	
Students review the meaning of the = symbol and are introduced to the > and < relation symbols. **Strategy 1:** Think of an animal's mouth as swallowing the larger number.  **Strategy 2:** Put two dots next to the larger number and one dot next to the smaller number. Then connect the dots to make the symbol.  **Although we do not encourage this strategy, it is referenced in the manual.**	**Lessons:** Compare Two Quantities Being Equal is No Monkey Business **Activities and Tasks:** Greater Than-Equal-Less Than Digit Card Prompts **Videos:** Greater Than or Less Than Picture Flash Balance Equations Number Balance **Videos:** Equal Sign Song Is This Equation Equal?
Lesson 5-5 The Equal Sign **1.OA.C.6 Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g., 8 + 6 = 8 + 2 + 4 = 10 + 4 = 14); using the relationship between addition and subtraction (e.g., knowing that 8 + 4 = 12, one knows 12 – 8 = 4); and creating equivalent but easier or known sums (e.g., adding 6 + 7 by creating the known equivalent 6 + 6 + 1 = 12 + 1 = 13** **1.OA.D.7 Understand the meaning of the equal sign and determine if equations involving addition and subtraction are true or false. *For example, which of the following equations are true and which are false? 6 = 6, 7 = 8 – 1, 5 + 2 = 2 + 5, 4 + 1 = 5 + 2.*** **1.NBT.B.3 Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols >, =, and <. (Up to 50 with comparative language)**	

Grade 1 Unit Five Place Value and Comparisons	
Connections/Notes	**Additional Resources**
Students determine whether addition and subtraction equations are true and make false equations true. Interchanging the language of equal to and the same as, as well as not equal to and not the same as will help students grasp the meaning of the equal sign. Students should understand that equality means the same quantity as. In order for students to avoid the common pitfall that the equal sign means to do something or that the equal sign means the answer is, they need to be able to: • Express their understanding of the meaning of the equal sign • Accept sentences other than a + b = c as true (a = a, c = a + b, a = a + 0) • Know that the equal sign represents a relationship between two equal quantities Experiences determining if equations are true or false help students develop these skills. Initially, students develop an understanding of the meaning of equality using models. However, the goal is for students to reason at a more abstract level. At all times students should justify their answers, make conjectures (e.g., if you add a number and then subtract that same number, you always get zero), and make estimations. Initially, students develop an understanding of the meaning of equality using models such as place value blocks, pan balances and weighted numbers. Once students have a solid foundation of the key skills listed above, they can begin to rewrite true/false statements using the symbols, < and >.   Use equations and an equal sign to represent relationships between two equal quantities. 	**Lessons:** Understand the Meaning of the Equal Sign Being Equal is No Monkey Business **Activities and Tasks:** Weighted numbers with student pan balance Use a Rekenrek to build equations Balance the Scale Balance Equations Number Balance **Videos:** Equal Sign Song Is This Equation Equal? **Templates and Visuals:** Balance Template

Grade 1 Unit Five Place Value and Comparisons	
Connections/Notes	**Additional Resources**
Lesson 5-6 Counting and Place-Value Applications: Number Scrolls **1.NBT.A.1 Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral. (Numbers 0-50)** **1.NBT.B.2 Understand that the two digits of a two-digit number represent amounts of tens and ones. Understand the following as special cases (Numbers 0-50):** **a. 10 can be thought of as a bundle of ten ones — called a "ten."** **b. The numbers from 11 to 19 are composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones.** **1.NBT.B.3 Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols >, =, and <. (Up to 50 with comparative language)**	
Students apply place-value understanding to write numbers up to and beyond 100 on number scrolls. Students use models such as base ten manipulatives that represent two sets of numbers. To compare, students first attend to the number of tens, then, if necessary, to the number of ones. Students may also use pictures, number lines, and spoken or written words to compare two numbers. Comparative language includes but is not limited to more than, less than, greater than, most, greatest, least, same as, equal to and not equal to.   Use number cards and various manipulatives to make the connection between the words "greater than" and "less than" to the symbols ">" and "<" with numbers to 99.	**Activities and Tasks:** More or Less Tic Tac Toe Greater Than or Less Than Activity **Videos:** Greater Than or Less Than Picture Flash Video **Teaching Student-Centered Mathematics:** Page 75 (Comparing Numbers)
Lesson 5-7 Measuring a Path **1.OA.B.3 Apply properties of operations as strategies to add and subtract.** **1.OA.C.6 Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g., 8 + 6 = 8 + 2 + 4 = 10 + 4 = 14); using the relationship between addition and subtraction (e.g., knowing that 8 + 4 = 12, one knows 12 – 8 = 4); and creating equivalent but easier or known sums (e.g., adding 6 + 7 by creating the known equivalent 6 + 6 + 1 = 12 + 1 = 13.** **1.MD.A.1 Order three objects by length; compare the lengths of two objects indirectly by using a third object.** **1.MD.A.2 Express the length of an object as a whole number of length units, by laying multiple copies of a shorter object (the length unit) end to end; understand that the length measurement of an object is the number of same-size length units that span it with no gaps or overlaps.** ***Limit to contexts where the object being measured is spanned by a whole number of length units with no gaps or overlaps.***	

Grade 1 Unit Five Place Value and Comparisons	
Connections/Notes	**Additional Resources**
Students find the length of a crooked path by iterating nonstandard units. In order for students to be able to compare objects, students need to understand that length is measured from one end point to another end point. They determine which of two objects is longer, by physically aligning the objects. Typical language of length includes taller, shorter, longer, and higher. Some objects may have more than one measurement of length, so students identify the length they are measuring. Both the length and the width of an object are measurements of length. Examples for ordering: Order three students by their height • Order pencils, crayons, and/or markers by length • Build three towers (with cubes) and order them from shortest to tallest • Three students each draw one line, then order the lines from longest to shortest Example for comparing indirectly: • Two students each make a dough rope. Given a tower of cubes, each student compares his/her rope to the tower. Then students make statements such as, "My rope is longer than the cube tower and your rope is shorter than the cube tower. So, my rope is longer than your rope."   	**Lessons:** Comparing Lengths Considering the Importance of Endpoints **Activities and Tasks:** Use various objects to compare length **Videos:** Ordering Objects by Length **Teaching Student-Centered Mathematics:** Pages 223-226, 228-229 (Measuring Concepts and Skills) Pages 249-250 (Crooked Paths Activity

Lesson 5-8 Exploring Base 10 Exchanges, Lengths, and Path Measurement (Explorations)
1.NBT.B.2 Understand that the two digits of a two-digit number represent amounts of tens and ones. Understand the following as special cases (Numbers to 120)

a. 10 can be thought of as a bundle of ten ones — called a "ten."
b. The numbers from 11 to 19 are composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones.

The numbers 10, 20, 30, 40, 50, 60, 70, 80, 90 refer to one, two, three, four, five, six, seven, eight, or nine tens (and 0 ones)

Grade 1 Unit Five
Place Value and Comparisons

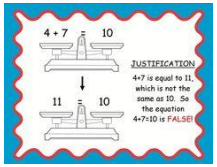
<table>
<tr><th>Connections/Notes</th><th>Additional Resources</th></tr>
<tr><td colspan="2">1.MD.A.1 Order three objects by length; compare the lengths of two objects indirectly by using a third object.
1.MD.A.2 Express the length of an object as a whole number of length units, by laying multiple copies of a shorter object (the length unit) end to end; understand that the length measurement of an object is the number of same-size length units that span it with no gaps or overlaps. Limit to contexts where the object being measured is spanned by a whole number of length units with no gaps or overlaps.</td></tr>
<tr><td>Students play a game to explore the relationship between tens and ones. They compare lengths of two objects indirectly and measure a path.
In order for students to be able to compare objects, students need to understand that length is measured from one end point to another end point. They determine which of two objects is longer, by physically aligning the objects. Typical language of length includes taller, shorter, longer, and higher. Some objects may have more than one measurement of length, so students identify the length they are measuring. Both the length and the width of an object are measurements of length.

Examples for ordering:
Order three students by their height
Order pencils, crayons, and/or markers by length
Build three towers (with cubes) and order them from shortest to tallest
Three students each draw one line, then order the lines from longest to shortest</td><td><u>Lessons:</u>
Comparing Lengths Considering the Importance of Endpoints

<u>Activities and Tasks:</u>
Use various objects to compare length
Read Inch By Inch by Leo Lionni and comparing objects from the book
Comparing objects for shorter/longer

<u>Videos:</u>
<u>Ordering Objects by Length</u>

<u>Teaching Student-Centered Mathematics:</u>
Pages 223-226, 228-229 (Measuring Concepts and Skills)
Pages 249-250 (Crooked Paths Activity)</td></tr>
<tr><td colspan="2">Lesson 5-9 More Comparison Symbols
1.OA.A.1 Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem. (Result and Change Unknown up to 10)
1.OA.C.6 Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g., 8 + 6 = 8 + 2 + 4 = 10 + 4 = 14); using the relationship between addition and subtraction (e.g., knowing that 8 + 4 = 12, one knows 12 – 8 = 4); and creating equivalent but easier or known sums (e.g., adding 6 + 7 by creating the known equivalent 6 + 6 + 1 = 12 + 1 = 13.
1.OA.D.7 Understand the meaning of the equal sign and determine if equations involving addition and subtraction are true or false. For example, which of the following equations are true and which are false? 6 = 6, 7 = 8 – 1, 5 + 2 = 2 + 5, 4 + 1 = 5 + 2.
1.OA.D.8 Determine the unknown whole number in an addition or subtraction equation relating three whole numbers. For example, determine the unknown number that makes the equation true in each of the equations: 8 + ? = 11, 5 = □ – 3, 6 + 6 = □.</td></tr>
</table>

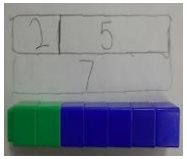
Grade 1 Unit Five Place Value and Comparisons	
Connections/Notes	**Additional Resources**
Students use number models with relation symbols to represent and solve number stories. Interchanging the language of equal to and the same as, as well as not equal to and not the same as will help students grasp the meaning of the equal sign. Students should understand that equality means the same quantity as. In order for students to avoid the common pitfall that the equal sign means to do something or that the equal sign means the answer is, they need to be able to: • Express their understanding of the meaning of the equal sign • Accept sentences other than a + b = c as true (a = a, c = a + b, a = a + 0) • Know that the equal sign represents a relationship between two equal quantities Experiences determining if equations are true or false help student develop these skills. Initially, students develop an understanding of the meaning of equality using models. However, the goal is for students to reason at a more abstract level. At all times students should justify their answers, make conjectures (e.g., if you add a number and then subtract that same number, you always get zero), and make estimations. Initially, students develop an understanding of the meaning of equality using models such as place value blocks, pan balances and weighted numbers. Once students have a solid foundation of the key skills listed above, they can begin to rewrite true/false statements using the symbols, < and >.  	**Lessons:** Make 10 When One Addend is 9 Make 10 When One Addend is 8 Solve Doubles and Doubles Plus One Compare Quantities and Numerals from Left to Right **Activities and Tasks:** Egg Carton Addition Doubles? No Troubles! March Roll and Remove Game April Roll and Remove Game Fact Family Dominoes Fact Family Activity Fact Families Related Addition and Subtraction Dominoes Activities **Templates and Visuals:** Strategies Pinch Cards Tens are Friends Ten Frames Double Ten Frames Subitizing Cards/Plates Number Bonds
Lesson 5-10 Comparison Number Stories **1.OA.A.1 Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem. (Result and Change Unknown up to 10)** **1.OA.B.4 Understand subtraction as an unknown-addend problem. *For example, subtract 10 – 8 by finding the number that makes 10 when added to 8*** **1.OA.C.5 Relate counting to addition and subtraction (e.g., by counting on 2 to add 2)** **1.OA.C.6 Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g., 8 + 6 = 8 + 2 + 4 = 10 + 4 = 14); using the relationship between addition and subtraction (e.g., knowing that 8 + 4 = 12, one**	

Grade 1 Unit Five Place Value and Comparisons	
Connections/Notes	**Additional Resources**
knows 12 – 8 = 4); and creating equivalent but easier or known sums (e.g., adding 6 + 7 by creating the known equivalent 6 + 6 + 1 = 12 + 1 = 13	
Students learn strategies for solving comparison number stories. Students' multiple experiences with counting may hinder their understanding of counting on and counting back as connected to addition and subtraction. To help them make these connections when students count on 3 from 4, they should write this as 4 + 3 = 7. When students count back (3) from 7, they should connect this to 7 – 3 = 4. Students often have difficulty knowing where to begin their count when counting backward.	**Lessons:** Count On Using a Number Path **Activities and Tasks:** Use number lines to count on or count back Ten Frame Flash Card Missing Part Cards Unknown Number Flip Cards Animal Adding Math Use dominoes to create addition or subtraction equations **Videos:** Addition by Counting On Subtraction by Counting Back **Templates and Visuals:** Subitizing Cards/Plates **Teaching Student-Centered Mathematics:** Pages 74 (Subtraction as Think-Addition)
Lesson 5-11 Adding and Subtracting 2-Digit Numbers **1.OA.A.1 Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem. (Result and Change Unknown up to 10)**	

Grade 1 Unit Five Place Value and Comparisons	
Connections/Notes	**Additional Resources**
1.NBT.B.2 Understand that the two digits of a two-digit number represent amounts of tens and ones. Understand the following as special cases (Numbers 0-50): **c. 10 can be thought of as a bundle of ten ones — called a "ten."** **d. The numbers from 11 to 19 are composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones.** **The numbers 10, 20, 30, 40, 50, 60, 70, 80, 90 refer to one, two, three, four, five, six, seven, eight, or nine tens (and 0 ones)** **1.NBT.C.4 Add within 100, including adding a two-digit number and a one-digit number, and adding a two-digit number and a multiple of 10, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used. Understand that in adding two-digit numbers, one adds tens and tens, ones and ones; and sometimes it is necessary to compose a ten** **1.NBT.C.6 Subtract multiples of 10 in the range 10–90 from multiples of 10 in the range 10–90 (positive or zero differences), using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.**	
Students use a variety of strategies to add and subtract 2-digit numbers. Contextual problems that are closely connected to students' lives should be used to develop fluency with addition and subtraction. Students use drawings or objects/manipulatives (e.g., counters, unifix cubes, number lines) to represent the different situations. It is important to attend to the difficulty level of the problem situations in relation to the position of the unknown. • Result Unknown, Total Unknown, and Both Addends Unknown problems are the least complex for students. • The next level of difficulty includes Change Unknown, Addend Unknown, and Difference Unknown • The most difficult are Start Unknown and versions of Bigger and Smaller Unknown (compare problems).	**Lessons:** Compare the Length of Objects with Centimeter Cubes, Solving Compare with Difference Unknown **Activities and Tasks:** Students write their own story problems Comparing Word Problems February Structure Problems Story Structure Word Problems **Videos:** Solving Word Problems Video **Templates and Visuals:** Story Mats (Math Folder)

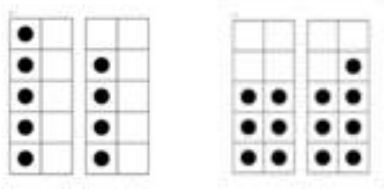
Grade 1 Unit Five Place Value and Comparisons	
Connections/Notes	**Additional Resources**
 **11 - ☐ = 2** **7 + ☐ = 9** **☐ - 6 = 7** **☐+ 4 = 13**  Use the bar model with unifix cubes to help students solve word problems.	
Lesson 5-12 Adding Animal Weights (Open Response) (2-day lesson) **1.OA.C.5 Relate counting to addition and subtraction (e.g., by counting on 2 to add 2).** **1.NBT.C.4 Add within 100, including adding a two-digit number and a one-digit number, and adding a two-digit number and a multiple of 10, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used. Understand that in adding two-digit numbers, one adds tens and tens, ones and ones; and sometimes it is necessary to compose a ten**	
Day 1: Students use tools to solve an Open Response problem about adding animal weights. **Day 2: The class discusses student's solutions from Day 1, and students revise their work.**	
Lesson 5-13 Assessment (Option of 2 days)	
	Math GR 1 Unit 5 Summative Assessment in eDoctrina

Grade 1 Unit Six Addition Fact Strategies	
Connections/Notes	**Additional Resources**
Lesson 6-1 Time and the Hour-Hand-Only Clock **1.MD.B.3 Tell and write time in hours and half-hours using analog and digital clocks.**	
Students practice reading and displaying times on an hour-hand-only clock. Ideas to support telling time: • within a day, the hour hand goes around a clock twice (the hand moves only in one direction) • when the hour hand points exactly to a number, the time is exactly on the hour • time on the hour is written in the same manner as it appears on a digital clock • there are 60 minutes in one hour; so halfway between an hour, 30 minutes have passed • half hour is written with 30 after the colon Use clocks with the hour hand only. When the hand points to the 2, it is 2 o'clock. Then move the hand between the 2 and 3. What time would be on the clock? Talk about half past 2.  **Common Misconception:** Most students become confused when the hour hand is almost, but not quite, to the next hour. It is common for students to identify the time with the number that is closest to the hour hand.	**Activities and Tasks:** Use classroom clock for students to read o'clock and half past times Clip the Time Hour and Half Hour **Videos:** Time to the Hour Video Time to Half Hour Video **Templates and Visuals:** Blank Clock Face **Teaching Student-Centered Mathematics:** Page 244 (one-handed clock)
Lesson 6-2 More 2-Digit Number Stories **1.OA.A.1 Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem. (Result and Change Unknown up to 10)** **1.OA.A.2 Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20.** **1.OA.B.3 Apply properties of operations as strategies to add and subtract.** **1.OA.C.6 Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g., 8 + 6 = 8 + 2 + 4 = 10 + 4 = 14); using the relationship between addition and subtraction (e.g., knowing that 8 + 4 = 12, one knows 12 – 8 = 4); and creating equivalent but easier or known sums (e.g., adding 6 + 7 by creating the known equivalent 6 + 6 + 1 = 12 + 1 = 13**	

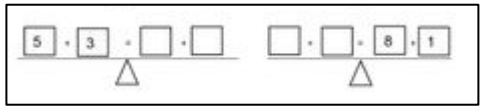
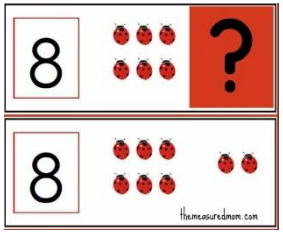
Grade 1 Unit Six Addition Fact Strategies	
Connections/Notes	**Additional Resources**
1.NBT.C.4 Add within 100, including adding a two-digit number and a one-digit number, and adding a two-digit number and a multiple of 10, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used. Understand that in adding two-digit numbers, one adds tens and tens, ones, and ones; and sometimes it is necessary to compose a ten **1.NBT.C.6 Subtract multiples of 10 in the range 10–90 from multiples of 10 in the range 10–90 (positive or zero differences), using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.**	
Students use tools, strategies, and properties of operations to solve number stories with two or three addends. Contextual problems that are closely connected to students' lives should be used to develop fluency with addition and subtraction. Students use drawings or objects/manipulatives (e.g., counters, unifix cubes, number lines) to represent the different situations. It is important to attend to the difficulty level of the problem situations in relation to the position of the unknown. • Result Unknown, Total Unknown, and Both Addends Unknown problems are the least complex for students. • The next level of difficulty includes Change Unknown, Addend Unknown, and Difference Unknown • The most difficult are Start Unknown and versions of Bigger and Smaller Unknown (compare problems).  3+1=4 2+3=5 4+2=6 **11 - □ = 2** **7 + □ = 9**  2 5 7 Use story mats and various manipulatives to solve Change Unknown, Addend Unknown, and Difference Unknown word problems with sums to 20 and differences from 20. Use the bar model with unifix cubes to help students solve word problems.	**Lessons:** Solve Change Unknown Problems Space Probe (AIMS) Write Word Problems for Given Equations Represent the Same Story Scenario with the Commutative Property **Activities and Tasks:** Use ten frames and various manipulatives **Videos:** Solving Word Problems **Templates and Visuals:** Ten frames Story Mats **Teaching Student-Centered Mathematics:** Pages 294-296 (Diagrams and drawing for story problems) Pages 70-72 (Using contextual problems) Pages 99-111 (Strategies for addition facts)

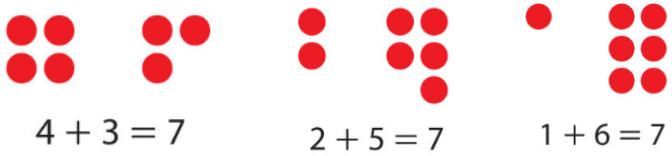
Grade 1 Unit Six Addition Fact Strategies	
Connections/Notes	**Additional Resources**
	Pages 86-89 (More thoughts about children solving story problems)
Lesson 6-3 Exploring True and False, Doubles, and Shapes (Explorations) **1.OA.C.6 Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g., 8 + 6 = 8 + 2 + 4 = 10 + 4 = 14); using the relationship between addition and subtraction (e.g., knowing that 8 + 4 = 12, one knows 12 – 8 = 4); and creating equivalent but easier or known sums (e.g., adding 6 + 7 by creating the known equivalent 6 + 6 + 1 = 12 + 1 = 13** **1.OA.D.7 Understand the meaning of the equal sign and determine if equations involving addition and subtraction are true or false. *For example, which of the following equations are true and which are false? 6 = 6, 7 = 8 – 1, 5 + 2 = 2 + 5, 4 + 1 = 5 + 2.*** **1.G.A.1 Distinguish between defining attributes (e.g., triangles are closed and three-sided) versus non-defining attributes (e.g., color, orientation, overall size); build and draw shapes to possess defining attributes.**	
Students determine whether number sentences are true or false. They practice adding doubles and creating shapes with given attributes.  	**Activities and Tasks:** Subitizing Cards See Fact Fluency Resources Folder for Activities Flip Ten with Uno cards I Have Who Has for Double Facts Game Utah Education Network for resources **Templates and Visuals:** Visual Posters for Doubles Strategies Pinch Card Dot Cards/Plates Ten Frames Ten Strips

Grade 1 Unit Six Addition Fact Strategies	
Connections/Notes	**Additional Resources**
	Teaching Student-Centered Mathematics: Pages 99-111 (Strategies for Addition Facts) Page 111 (Missing Part Blanks)
Lesson 6-4 Introducing Near Doubles **1.OA.C.6 Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g., 8 + 6 = 8 + 2 + 4 = 10 + 4 = 14); using the relationship between addition and subtraction (e.g., knowing that 8 + 4 = 12, one knows 12 – 8 = 4); and creating equivalent but easier or known sums (e.g., adding 6 + 7 by creating the known equivalent 6 + 6 + 1 = 12 + 1 = 13**	
Students use the near-doubles strategy to solve other addition facts within 20.	**Activities and Tasks:** Subitizing Cards See Fact Fluency Resources Folder for Activities Flip Ten with Uno cards I Have Who Has for Double Facts Game Utah Education Network for resources **Templates and Visuals:** Visual Posters for Doubles Strategies Pinch Card Dot Cards/Plates Ten Frames Ten Strips
Lesson 6-5 Recording Near-Doubles Strategies **1.OA.A.1 Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem. (Result and Change Unknown up to 10)** **1.OA.C.6 Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g., 8 + 6 = 8 + 2 + 4 = 10 + 4 = 14); using the relationship between addition and subtraction (e.g., knowing that 8 + 4 = 12, one**	

<table>
<tr><th colspan="2">Grade 1 Unit Six
Addition Fact Strategies</th></tr>
<tr><th>Connections/Notes</th><th>Additional Resources</th></tr>
<tr><td colspan="2">knows 12 – 8 = 4); and creating equivalent but easier or known sums (e.g., adding 6 + 7 by creating the known equivalent 6 + 6 + 1 = 12 + 1 = 13</td></tr>
<tr><td>Students solve facts within 20 and represent their solution strategies with pictures, words, and symbols.
 
Use the Quick Look cards to practice this strategy.</td><td><u>Activities and Tasks:</u>
See Fact Fluency Resources Folder for Activities
Flip Ten with Uno cards
I Have Who Has for Double Facts Game</td></tr>
<tr><td colspan="2">Lesson 6-6 Introducing Making 10
1.OA.C.6 Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g., 8 + 6 = 8 + 2 + 4 = 10 + 4 = 14); using the relationship between addition and subtraction (e.g., knowing that 8 + 4 = 12, one knows 12 – 8 = 4); and creating equivalent but easier or known sums (e.g., adding 6 + 7 by creating the known equivalent 6 + 6 + 1 = 12 + 1 = 13
1.NBT.B.2 Understand that the two digits of a two-digit number represent amounts of tens and ones. Understand the following as special cases (Numbers 0-50):
a. 10 can be thought of as a bundle of ten ones — called a “ten.”
b. The numbers from 11 to 19 are composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones.</td></tr>
<tr><td>Students learn the making 10 strategy for adding and subtracting within 20.

When determining the answer to a subtraction problem, 12 - 5, students think, “If I have 5, how many more do I need to make 12?” Encouraging students to record this symbolically, 5 + ? = 12, will develop their understanding of the relationship between addition and subtraction.</td><td><u>Activities and Tasks:</u>
Balance the Scale</td></tr>
</table>

Grade 1 Unit Six Addition Fact Strategies	
Connections/Notes	**Additional Resources**
 	
Lesson 6-7 Introducing My Reference Book **1.OA.A.1 Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem. (Result and Change Unknown up to 10)** **1.NBT.C.4 Add within 100, including adding a two-digit number and a one-digit number, and adding a two-digit number and a multiple of 10, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used. Understand that in adding two-digit numbers, one adds tens and tens, ones, and ones; and sometimes it is necessary to compose a ten** **1.NBT.C.6 Subtract multiples of 10 in the range 10–90 from multiples of 10 in the range 10–90 (positive or zero differences), using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.**	
Students learn how to use My Reference Book to find mathematical information that will be helpful for solving problems.	**Activities and Tasks:** Counting Chart to 120 Subtracting Tens Game Use base ten blocks to build numbers and then to subtract tens **Templates and Visuals:** 120 Chart

Grade 1 Unit Six Addition Fact Strategies	
Connections/Notes	**Additional Resources**
Lesson 6-8 Pencils for the Writing Club (Open Response) **1.OA.A.1 Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem. (Result and Change Unknown up to 10)** **1.OA.C.6 Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g., 8 + 6 = 8 + 2 + 4 = 10 + 4 = 14); using the relationship between addition and subtraction (e.g., knowing that 8 + 4 = 12, one knows 12 – 8 = 4); and creating equivalent but easier or known sums (e.g., adding 6 + 7 by creating the known equivalent 6 + 6 + 1 = 12 + 1 = 13** **1.NBT.B.3 Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols >, =, and <. (Up to 99)** **1.NBT.C.4 Add within 100, including adding a two-digit number and a one-digit number, and adding a two-digit number and a multiple of 10, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used. Understand that in adding two-digit numbers, one adds tens and tens, ones and ones; and sometimes it is necessary to compose a ten**	
	Activities and Tasks: Students write their own story problems Comparing Word Problems February Structure Problems Story Structure Word Problems
Lesson 6-9 Understanding Equivalence **1.OA.B.3 Apply properties of operations as strategies to add and subtract.** **1.OA.C.6 Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g., 8 + 6 = 8 + 2 + 4 = 10 + 4 = 14); using the relationship between addition and subtraction (e.g., knowing that 8 + 4 = 12, one knows 12 – 8 = 4); and creating equivalent but easier or known sums (e.g., adding 6 + 7 by creating the known equivalent 6 + 6 + 1 = 12 + 1 = 13** **1.OA.D.7 Understand the meaning of the equal sign, and determine if equations involving addition and subtraction are true or false. *For example, which of the following equations are true and which are false? 6 = 6, 7 = 8 – 1, 5 + 2 = 2 + 5, 4 + 1 = 5 + 2.*** **Students use addition and subtraction facts to complete the name-collection boxes and extend their understanding of equivalence.**  $4 + 3 = 7$ $2 + 5 = 7$ $1 + 6 = 7$ Discuss how each arrangement still has 7 counters, but they are arranged differently.	**Lessons:** Represent the Same Scenario with the Commutative Property Apply Understanding of the Equal Sign to Solve Equivalent Expressions

<table>
<tr><th colspan="2">Grade 1 Unit Six
Addition Fact Strategies</th></tr>
<tr><th>Connections/Notes</th><th>Additional Resources</th></tr>
<tr><td></td><td><u>Activities and Tasks:</u>
Fact Family Find Activity
Flip Flop Addends Activity

<u>Videos:</u>
Adding Three Numbers</td></tr>
<tr><td colspan="2">Lesson 6-10 More Place Value
1.NBT.B.2 Understand that the two digits of a two-digit number represent amounts of tens and ones. Understand the following as special cases (Numbers 0-50):
a. 10 can be thought of as a bundle of ten ones — called a “ten.”
b. The numbers from 11 to 19 are composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones.</td></tr>
<tr><td>Students use base 10 blocks to solve place value riddles.
 

What number am I?

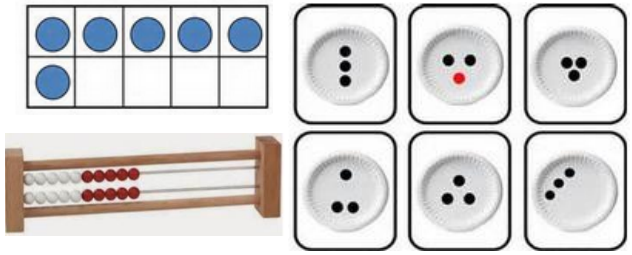
Common Misconception: If students make an exchange, such as 10 cubes for 1 long, but do not remove the 10 cubes from the total amount of blocks, then have students count the cubes and longs by 10’s and 1’s, make the exchange, and count again.</td><td><u>Activities and Tasks:</u>
More or Less Tic Tac Toe
Greater Than or Less Than Activity

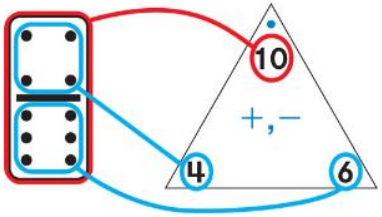
<u>Videos:</u>
Greater Than or Less Than Picture Flash Video

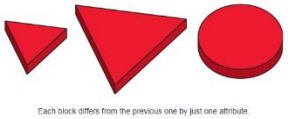
<u>Teaching Student-Centered Mathematics:</u>
Page 75 (Comparing Numbers)</td></tr>
</table>

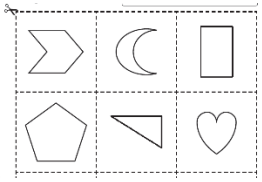
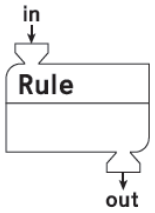
Grade 1 Unit Six Addition Fact Strategies	
Connections/Notes	**Additional Resources**
Lesson 6-11 Place-Value Application: Pennies, Dimes, and Dollars **1.NBT.B.2 Understand that the two digits of a two-digit number represent amounts of tens and ones. Understand the following as special cases (Numbers 0-50):** **a. 10 can be thought of as a bundle of ten ones — called a "ten."** **b. The numbers from 11 to 19 are composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones.** **1.NBT.B.3 Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols >, =, and <. (Up to 99)**	
Students apply their understanding of place value to make exchanges between pennies, dimes, and dollars.	**Activities and Tasks:** More or Less Tic Tac Toe Greater Than or Less Than Activity **Videos:** Greater Than or Less Than Picture Flash Video **Teaching Student-Centered Mathematics:** Page 75 (Comparing Numbers)
Lesson 6-12 Assessment (Option of 2 days)	
	Math GR 1 Unit 6 Summative Assessment in eDoctrina

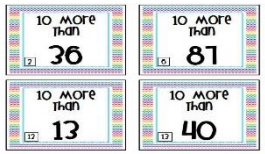
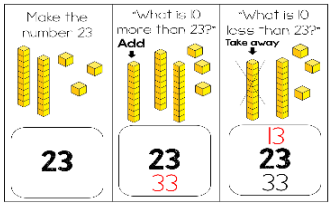
Grade 1 Unit Seven Subtraction Fact Strategies and Attributes of Shapes	
Connections/Notes	**Additional Resources**
Lesson 7-1 Fact Families **1.OA.B.3 Apply properties of operations as strategies to add and subtract.** **1.OA.B.4 Understand subtraction as an unknown-addend problem. *For example, subtract 10 – 8 by finding the number that makes 10 when added to 8*** **1.OA.C.6 Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g., 8 + 6 = 8 + 2 + 4 = 10 + 4 = 14); using the relationship between addition and subtraction (e.g., knowing that 8 + 4 = 12, one knows 12 – 8 = 4); and creating equivalent but easier or known sums (e.g., adding 6 + 7 by creating the known equivalent 6 + 6 + 1 = 12 + 1 = 13** **1.OA.D.8 Determine the unknown whole number in an addition or subtraction equation relating three whole numbers. *For example, determine the unknown number that makes the equation true in each of the equations: 8 + ? = 11, 5 = □ – 3, 6 + 6 = □.***	
Students deepen their understanding of the relationship between addition and subtraction by learning about fact families. Continue working on these strategies within 20: • Counting on (0, 1, 2, 3) • Counting back (3, 2, 1, 0) • Make a ten (3 + 7 = 10)  4, 6, 10 4 + 6 = 10 6 + 4 = 10 10 – 4 = 6 10 – 6 = 4 Students have been solving subtraction facts since Unit 4. Explain that the facts can be written with the three numbers and are called a fact family.	**Activities and Tasks:** Place value blocks and student pan balance Weighted Numbers with student pan balance Party Hat Balance Activity Pan Balance Interactive Website **Videos:** Equal Sign Song Video Is This Equation Equal? Video **Templates and Visuals:** Ten frame Number Balance **Teaching Student-Centered Mathematics:** Pages 47-51 (Part-part-whole) Pages 110-111 (Missing Number Activities)

Grade 1 Unit Seven Subtraction Fact Strategies and Attributes of Shapes	
Connections/Notes	**Additional Resources**
Lesson 7-2 More Fact Families **1.OA.B.3 Apply properties of operations as strategies to add and subtract.** **1.OA.B.4 Understand subtraction as an unknown-addend problem. *For example, subtract 10 – 8 by finding the number that makes 10 when added to 8*** **1.OA.C.6 Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g., 8 + 6 = 8 + 2 + 4 = 10 + 4 = 14); using the relationship between addition and subtraction (e.g., knowing that 8 + 4 = 12, one knows 12 – 8 = 4); and creating equivalent but easier or known sums (e.g., adding 6 + 7 by creating the known equivalent 6 + 6 + 1 = 12 + 1 = 13** **1.OA.D.8 Determine the unknown whole number in an addition or subtraction equation relating three whole numbers. *For example, determine the unknown number that makes the equation true in each of the equations: 8 + ? = 11, 5 = □ – 3, 6 + 6 = □.***	
Students use Fact Triangles to practice adding and subtracting within 20. Continue working on these strategies within 20: • Counting on (0, 1, 2, 3) • Counting back (3, 2, 1, 0) • Make a ten (3 + 7 = 10) • Subtracting from 10 (10 - 4 = 6) 	**Activities and Tasks:** Place value blocks and student pan balance Weighted Numbers with student pan balance Party Hat Balance Activity Pan Balance Interactive Website **Videos:** Equal Sign Song Video Is This Equation Equal? Video **Templates and Visuals:** Ten frame Number Balance
Lesson 7-3 Relating Special Addition and Subtraction Facts **1.OA.A.1 Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem. (Result and Change Unknown up to 10)** **1.OA.B.3 Apply properties of operations as strategies to add and subtract.** **1.OA.B.4 Understand subtraction as an unknown-addend problem. *For example, subtract 10 – 8 by finding the number that makes 10 when added to 8*** **1.OA.C.6 Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g., 8 + 6 = 8 + 2 + 4 = 10 + 4 = 14); using the relationship between addition and subtraction (e.g., knowing that 8 + 4 = 12, one**	

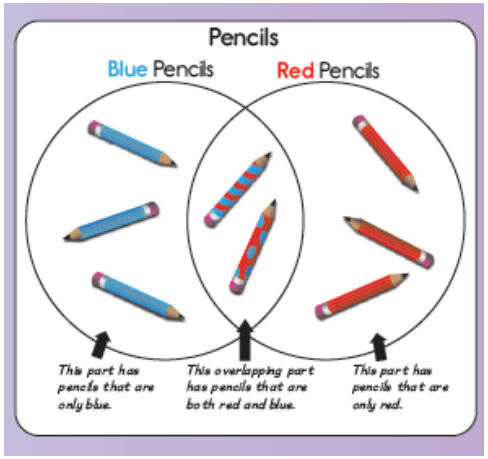
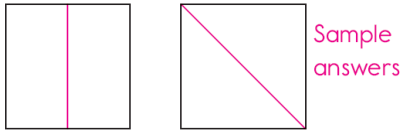
Grade 1 Unit Seven Subtraction Fact Strategies and Attributes of Shapes	
Connections/Notes	**Additional Resources**
knows 12 – 8 = 4); and creating equivalent but easier or known sums (e.g., adding 6 + 7 by creating the known equivalent 6 + 6 + 1 = 12 + 1 = 13 **1.OA.D.8 Determine the unknown whole number in an addition or subtraction equation relating three whole numbers. *For example, determine the unknown number that makes the equation true in each of the equations: 8 + ? = 11, 5 = □ – 3, 6 + 6 = □.***	
Students apply the think-addition strategy to doubles and combination of 10 facts.  **Common Misconception**: If children do not know how to interpret a zero card and that adding zero to any number will always yield it unchanged (because zero is the Additive Identity), then encourage their groups to discuss adding and subtracting 0 and how that might look when playing Salute!	**Activities and Tasks:** Place value blocks and student pan balance Weighted Numbers with student pan balance Party Hat Balance Activity Pan Balance Interactive Website **Videos:** Equal Sign Song Video Is This Equation Equal? Video **Templates and Visuals:** Ten frame Number Balance
Lesson 7-4 More Subtraction Fact Strategies **1.OA.B.4 Understand subtraction as an unknown-addend problem. *For example, subtract 10 – 8 by finding the number that makes 10 when added to 8*** **1.OA.C.5 Relate counting to addition and subtraction (e.g., by counting on 2 to add 2).** **1.OA.C.6 Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g., 8 + 6 = 8 + 2 + 4 = 10 + 4 = 14); using the relationship between addition and subtraction (e.g., knowing that 8 + 4 = 12, one knows 12 – 8 = 4); and creating equivalent but easier or known sums (e.g., adding 6 + 7 by creating the known equivalent 6 + 6 + 1 = 12 + 1 = 13** **1.OA.D.8 Determine the unknown whole number in an addition or subtraction equation relating three whole numbers. *For example, determine the unknown number that makes the equation true in each of the equations: 8 + ? = 11, 5 = □ – 3, 6 + 6 = □.***	
Students learn the counting-up and counting-back strategies for subtraction and compare the efficiency of various subtraction strategies.	

Grade 1 Unit Seven Subtraction Fact Strategies and Attributes of Shapes	
Connections/Notes	**Additional Resources**
Lesson 7-5 Attributes of Shapes **1.G.A.1 Distinguish between defining attributes (e.g., triangles are closed and three-sided) versus non-defining attributes (e.g., color, orientation, overall size); build and draw shapes to possess defining attributes.**	
Students identify the attributes of attribute blocks and sort blocks by their attributes.	
Lesson 7-6 Exploring Attributes, Fractions, and Salute! (Explorations) **1.OA.B.3 Apply properties of operations as strategies to add and subtract.** **1.OA.B.4 Understand subtraction as an unknown-addend problem. *For example, subtract 10 – 8 by finding the number that makes 10 when added to 8*** **1.OA.C.6 Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g., 8 + 6 = 8 + 2 + 4 = 10 + 4 = 14); using the relationship between addition and subtraction (e.g., knowing that 8 + 4 = 12, one knows 12 – 8 = 4); and creating equivalent but easier or known sums (e.g., adding 6 + 7 by creating the known equivalent 6 + 6 + 1 = 12 + 1 = 13** **1.G.A.1 Distinguish between defining attributes (e.g., triangles are closed and three-sided) versus non-defining attributes (e.g., color, orientation, overall size); build and draw shapes to possess defining attributes.** **1.G.A.3 Partition circles and rectangles into two and four equal shares, describe the shares using the words *halves*, *fourths*, and *quarters*, and use the phrases *half of*, *fourth of*, and *quarter of*. Describe the whole as two of, or four of the shares. Understand for these examples that decomposing into more equal shares creates smaller shares.**	
Students sort shapes by attribute rules, explore whether shapes are divided equally, and practice addition and subtraction facts.  Each block differs from the previous one by just one attribute.	**Templates and Visuals:** Die Cuts from Instructional Resource Center
Lesson 7-7 Defining and Nondefining Attributes **1.G.A.1 Distinguish between defining attributes (e.g., triangles are closed and three-sided) versus non-defining attributes (e.g., color, orientation, overall size); build and draw shapes to possess defining attributes.**	
Students differentiate between defining and nondefining attributes of 2-dimensional shapes.  How are these shapes alike? How are these shapes different?	**Lessons:** Name Three-Dimensional Shapes based on Defining Attributes Meaty Math (AIMS) **Activities and Tasks:** Use real life objects to do sorting

Grade 1 Unit Seven Subtraction Fact Strategies and Attributes of Shapes	
Connections/Notes	**Additional Resources**
Provide additional experiences with attributes of shapes. Have students use the Shape Sorting Cards from Math Masters. 	**Videos:** 3-D Shapes I Know Video Stack, Slide or Roll Video
Lesson 7-8 Finding Unknowns: "What's My Rule?" **1.OA.C.6 Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g., 8 + 6 = 8 + 2 + 4 = 10 + 4 = 14); using the relationship between addition and subtraction (e.g., knowing that 8 + 4 = 12, one knows 12 – 8 = 4); and creating equivalent but easier or known sums (e.g., adding 6 + 7 by creating the known equivalent 6 + 6 + 1 = 12 + 1 = 13** **1.OA.D.8 Determine the unknown whole number in an addition or subtraction equation relating three whole numbers. *For example, determine the unknown number that makes the equation true in each of the equations: 8 + ? = 11, 5 = □ – 3, 6 + 6 = □.*** **1.NBT.C.5 Given a two-digit number, mentally find 10 more or 10 less than the number, without having to count; explain the reasoning used.**	
Students learn the "What's My Rule?" routine and use it to practice finding unknown numbers in number sentences.  Rule: + 2 in | out 1 | 3 4 | 6 7 | 9 8 | 10 12 | 14 Rule: – 3 in | out 4 | 1 5 | 2 8 | 5 7 | 4 10 | 7	**Activities and Tasks:** Egg Carton Addition Doubles? No Troubles! March Roll and Remove Game April Roll and Remove Game Fact Family Strategies Pinch Cards
Lesson 7-9 Desk and Chairs (Open Response) **1.OA.C.6 Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g., 8 + 6 = 8 + 2 + 4 = 10 + 4 = 14); using the relationship between addition and subtraction (e.g., knowing that 8 + 4 = 12, one knows 12 – 8 = 4); and creating equivalent but easier or known sums (e.g., adding 6 + 7 by creating the known equivalent 6 + 6 + 1 = 12 + 1 = 13**	

Grade 1 Unit Seven Subtraction Fact Strategies and Attributes of Shapes	
Connections/Notes	**Additional Resources**
1.OA.D.8 Determine the unknown whole number in an addition or subtraction equation relating three whole numbers. *For example, determine the unknown number that makes the equation true in each of the equations: 8 + ? = 11, 5 = □ – 3, 6 + 6 = □.*	
Day 1: Students find a rule for a real-world situation and use it to solve a problem. **Day 2: The class discusses some student's rules and explanations for how they found the rules, and then students revise their work.**	
Lesson 7-10 Addition Facts: "What's My Rule?" **1.OA.C.6 Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g., 8 + 6 = 8 + 2 + 4 = 10 + 4 = 14); using the relationship between addition and subtraction (e.g., knowing that 8 + 4 = 12, one knows 12 – 8 = 4); and creating equivalent but easier or known sums (e.g., adding 6 + 7 by creating the known equivalent 6 + 6 + 1 = 12 + 1 = 13** **1.OA.D.7 Understand the meaning of the equal sign and determine if equations involving addition and subtraction are true or false. *For example, which of the following equations are true and which are false? 6 = 6, 7 = 8 – 1, 5 + 2 = 2 + 5, 4 + 1 = 5 + 2.*** **1.OA.D.8 Determine the unknown whole number in an addition or subtraction equation relating three whole numbers. *For example, determine the unknown number that makes the equation true in each of the equations: 8 + ? = 11, 5 = □ – 3, 6 + 6 = □.*** **1.NBT.C.5 Given a two-digit number, mentally find 10 more or 10 less than the number, without having to count; explain the reasoning used.**	
Students practice addition facts and find unknown numbers in number sentences in the "What's My Rule?" routine. This standard requires students to understand and apply the concept of 10 which leads to future place value concepts. It is critical for students to do this without counting. Prior use of models such as base ten blocks, number lines, and number charts help facilitate this understanding. It also helps students see patterns involved when adding or subtracting 10. Examples: • 10 more than 43 is 53 because 53 is one more 10 than 43 • 10 less than 43 is 33 because 33 is one 10 less than 43  	**Activities and Tasks:** Use 120 chart to find 10 more or 10 less Use base ten blocks to build numbers and then to add tens **Videos:** 1 more, 1 less, 10 more and 10 less
Lesson 7-11 Digital Clocks **1.MD.B.3 Tell and write time in hours and half-hours using analog and digital clocks.**	

Grade 1 Unit Seven Subtraction Fact Strategies and Attributes of Shapes	
Connections/Notes	**Additional Resources**
Students tell time using digital and analog clocks. Ideas to support telling time: • within a day, the hour hand goes around a clock twice (the hand moves only in one direction) • when the hour hand points exactly to a number, the time is exactly on the hour • time on the hour is written in the same manner as it appears on a digital clock • there are 60 minutes in one hour; so halfway between an hour, 30 minutes have passed • half hour is written with 30 after the colon The idea of 30 being "halfway" is difficult for students to grasp. Students can write the numbers from 0 - 60 counting by tens on a sentence strip. Fold the paper in half and determine that halfway between 0 and 60 is 30.   	**Activities and Tasks:** Use classroom clock for students to read o'clock and half-past times Clip the Time **Videos:** Time to the Hour Video Time to Half Hour Video **Templates and Visuals:** Blank Clock Face **Teaching Student-Centered Mathematics:** Page 244 (one-handed clock)
Lesson 7-12 Assessment (Option of 2 days)	
	Math GR 1 Unit 7 Summative Assessment in eDoctrina

Grade 1 Unit Eight Geometry	
Connections/Notes	**Additional Resources**
Lesson 8-1 Building Shapes with Defining Attributes **1.G.A.1 Distinguish between defining attributes (e.g., triangles are closed and three-sided) versus non-defining attributes (e.g., color, orientation, overall size); build and draw shapes to possess defining attributes.**	
Students construct 2-dimensional shapes and identify defining and nondefining attributes of those shapes.  	**Lessons:** Classifying Shapes Based on Attributes **Activities and Tasks:** Patch Tool **Videos:** 2-D Shape Song **Templates and Visuals:** Die cuts from Instructional Resource Center **Teaching Student-Centered Mathematics:** Pages 189-192 (Analysis of Shapes)
Lesson 8-2 Halves **1.G.A.3 Partition circles and rectangles into two and four equal shares, describe the shares using the words *halves*, *fourths*, and *quarters*, and use the phrases *half of*, *fourth of*, and *quarter of*. Describe the whole as two of, or four of the shares. Understand for these examples that decomposing into more equal shares creates smaller shares.**	
Students divide shapes into two equal shares and discuss how to name the shapes.  	**Templates and Visuals:** Die Cuts from Instructional Resource Center

<table>
<tr><th colspan="2">Grade 1 Unit Eight
Geometry</th></tr>
<tr><th>Connections/Notes</th><th>Additional Resources</th></tr>
<tr><td></td><td><u>Teaching Student-Centered Mathematics:</u>
Pages 251-258 (Early Fraction Concepts)</td></tr>
<tr><td colspan="2">Lesson 8-3 Fourths
1.G.A.3 Partition circles and rectangles into two and four equal shares, describe the shares using the words halves, fourths, and quarters, and use the phrases half of, fourth of, and quarter of. Describe the whole as two of, or four of the shares. Understand for these examples that decomposing into more equal shares creates smaller shares.</td></tr>
<tr><td>Students divide shapes into four equal shares and names the shares. They compare the sizes of the shares to the number of equal shares.
Students need experiences with different sized circles and rectangles to recognize that when they cut something into two equal pieces, each piece will equal one half of its original whole. Children should recognize that halves of two different wholes are not necessarily the same size. Also, they should reason that decomposing equal shares into more equal shares results in smaller equal shares

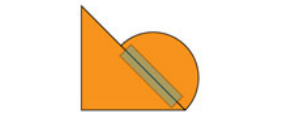
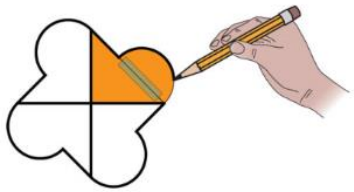
Examples:

• Student partitions a rectangular candy bar to share equally with one friend and thinks I cut the rectangle into two equal parts. When I put the two parts back together, they equal the whole candy bar. One half of the candy bar is smaller than the whole candy bar.

Folding shapes made from paper enables students to physically feel the shape and form the equal shares. Ask students to fold circles and rectangles into halves. They should observe and then discuss the change in the size of the parts.

*Connect this standard with telling time to the nearest half-hour.</td><td><u>Templates and Visuals:</u>
Die Cuts from Instructional Resource Center

<u>Teaching Student-Centered Mathematics:</u>
Pages 251-258 (Early Fraction Concepts)</td></tr>
<tr><td colspan="2">Lesson 8-4 Sharing Paper Squares (Open Response)
1.G.A.3 Partition circles and rectangles into two and four equal shares, describe the shares using the words halves, fourths, and quarters, and use the phrases half of, fourth of, and quarter of. Describe the whole as two of, or four of the shares. Understand for these examples that decomposing into more equal shares creates smaller shares.</td></tr>
<tr><td>Day 1: Students use drawings to answer a question about sharing paper squares.
Day 2: The class discusses some initial drawings and explanations, and children revise their work.</td><td></td></tr>
</table>

Grade 1 Unit Eight Geometry	
Connections/Notes	**Additional Resources**
Lesson 8-5 Combining 2-Dimensional Shapes **1.G.A.1 Distinguish between defining attributes (e.g., triangles are closed and three-sided) versus non-defining attributes (e.g., color, orientation, overall size); build and draw shapes to possess defining attributes.** **1.G.A.2 Compose two-dimensional shapes (rectangles, squares, trapezoids, triangles, half-circles, and quarter-circles) or three-dimensional shapes (cubes, right rectangular prisms, right circular cones, and right circular cylinders) to create a composite shape, and compose new shapes from the composite shape. (Students do not need to learn formal names such as "right rectangular prism.")** **1.G.A.3 Partition circles and rectangles into two and four equal shares, describe the shares using the words *halves*, *fourths*, and *quarters*, and use the phrases *half of*, *fourth of*, and *quarter of*. Describe the whole as two of, or four of the shares. Understand for these examples that decomposing into more equal shares creates smaller shares.**	
Children combine 2-dimensional shapes to create composite shapes. They compose new shapes from the composite shapes.  triangle and half-circle 	**<u>Lessons:</u>** Name and count Shapes as Parts of a Whole Partition Shapes and Identify Halves and Fourths **<u>Teaching Student-Centered Mathematics:</u>** Region or Area Models page 254
Lesson 8-6 3-Dimensional Shapes **1.G.A.1 Distinguish between defining attributes (e.g., triangles are closed and three-sided) versus non-defining attributes (e.g., color, orientation, overall size); build and draw shapes to possess defining attributes.** **1.G.A.2 Compose two-dimensional shapes (rectangles, squares, trapezoids, triangles, half-circles, and quarter-circles) or three-dimensional shapes (cubes, right rectangular prisms, right circular cones, and right circular cylinders) to create a composite shape, and compose new shapes from the composite shape. (Students do not need to learn formal names such as "right rectangular prism.")**	
Students identify defining attributes of 3-dimensional shapes. They combine 3-dimensional shapes to create composite shapes.	

Grade 1 Unit Eight
Geometry

Connections/Notes	Additional Resources

Lesson 8-7 Exploring Composition of Shapes and Addition Fact Strategies (Explorations)

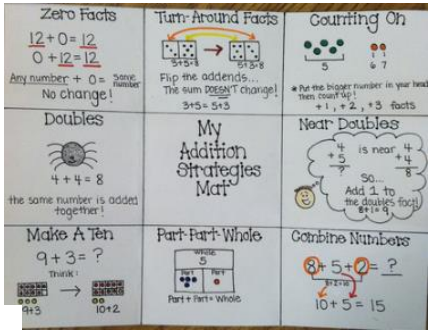
1.OA.C.6 Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g., 8 + 6 = 8 + 2 + 4 = 10 + 4 = 14); using the relationship between addition and subtraction (e.g., knowing that 8 + 4 = 12, one knows 12 – 8 = 4); and creating equivalent but easier or known sums (e.g., adding 6 + 7 by creating the known equivalent 6 + 6 + 1 = 12 + 1 = 13

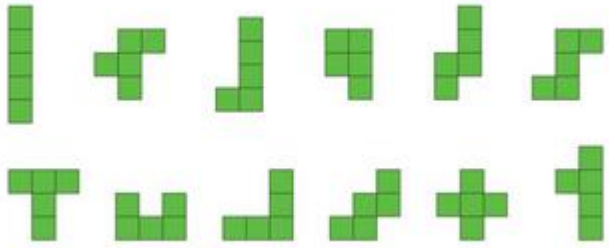
1.G.A.2 Compose two-dimensional shapes (rectangles, squares, trapezoids, triangles, half-circles, and quarter-circles) or three-dimensional shapes (cubes, right rectangular prisms, right circular cones, and right circular cylinders) to create a composite shape, and compose new shapes from the composite shape. (Students do not need to learn formal names such as "right rectangular prism.")

Students create composite shapes from 2 and 3 dimensional shapes. They identify facts that can be solved with different fact strategies.

Work on mastery of facts through 10 utilizing the strategies taught in terms 1-3.
Continue working on these strategies within 10 then to 20:

- Counting on (0,1,2,3)
- Counting back (3,2,1,0)
- Make a ten (3 + 7 = 10)
- Subtracting from 10 (10 - 4 = 6)
- Doubles addition (4 + 4 = 8)
- Doubles subtraction (6 – 3 = 3)
- Near Doubles Addition
- Near Doubles Subtraction
- Making a Ten by Decomposing





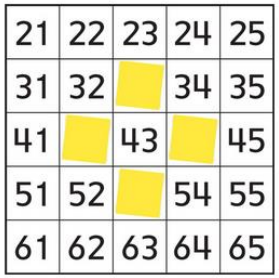
Different shapes made with 5 squares.

Lessons:
Solve Addition Problems with 7, 8, and 9
Subtract 7, 8, and 9 from Teen Numbers
Lesson Seed My Addition Strategies Mat

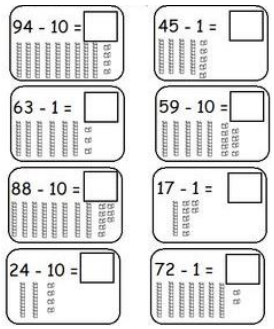
Activities and Tasks:
That Sums it Up!
Card Game Comparing Expressions
Domino Addition
Utah Education Network for resources

Templates and Visuals:
Ten Frames
Double Ten Frames
Subitizing Cards/Plates
Number Bonds

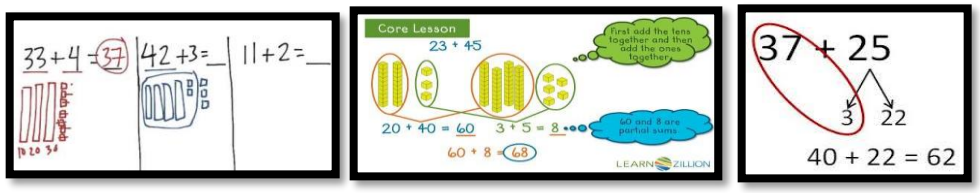
Grade 1 Unit Eight Geometry	
Connections/Notes	**Additional Resources**
Lesson 8-8 Time to the Half Hour **1.MD.B.3 Tell and write time in hours and half-hours using analog and digital clocks** **1.G.A.3 Partition circles and rectangles into two and four equal shares, describe the shares using the words *halves*, *fourths*, and *quarters*, and use the phrases *half of*, *fourth of*, and *quarter of*. Describe the whole as two of, or four of the shares. Understand for these examples that decomposing into more equal shares creates smaller shares.**	
Students are introduced to half hours. They tell and write time to the half hour. The idea of 30 being "halfway" is difficult for students to grasp. Students can write the numbers from 0 - 60 counting by tens on a sentence strip. Fold the paper in half and determine that halfway between 0 and 60 is 30.   	**Activities and Tasks:** Use classroom clocks for students to read o'clock and half-past times Clip the Time **Videos:** Time to the Hour Video Time to Half Hour Video **Templates and Visuals:** Blank Clock Face **Teaching Student-Centered Mathematics:** Page 244 (one-handed clock)
Lesson 8-9 Review: Data **1.OA.C.6 Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g., 8 + 6 = 8 + 2 + 4 = 10 + 4 = 14); using the relationship between addition and subtraction (e.g., knowing that 8 + 4 = 12, one knows 12 – 8 = 4); and creating equivalent but easier or known sums (e.g., adding 6 + 7 by creating the known equivalent 6 + 6 + 1 = 12 + 1 = 13** **1.MD.C.4 Organize, represent, and interpret data with up to three categories; ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in another**	
Students create bar graphs. They ask and answer questions about data shown in bar graphs. Counting objects should be reinforced when collecting, representing, and interpreting data. Students describe the object graphs and tally charts they create. They should also ask, and answer questions based on these charts or graphs that reinforce other mathematics concepts such as sorting and comparing. The data chosen or	**Activities and Tasks:** Daily Graphing Prompts **Templates and Visuals:**

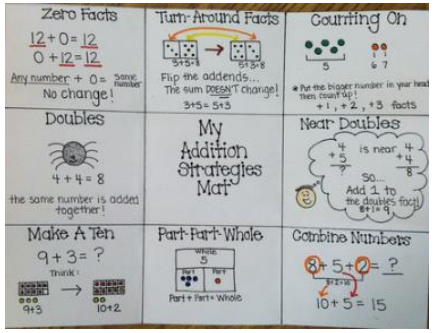
<table>
<tr><th colspan="2">Grade 1 Unit Eight
Geometry</th></tr>
<tr><th>Connections/Notes</th><th>Additional Resources</th></tr>
<tr><td>questions asked give students opportunities to reinforce their understanding of place value, identifying ten more and ten less, relating counting to addition and subtraction and using comparative language and symbols.</td><td>Blank Graphing Templates</td></tr>
<tr><td colspan="2">Lesson 8-10 Number-Grid Puzzles
1.NBT.B.2 Understand that the two digits of a two-digit number represent amounts of tens and ones. Understand the following as special cases (Numbers 0-50):
a. 10 can be thought of as a bundle of ten ones — called a “ten.”
b. The numbers from 11 to 19 are composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones.
1.NBT.C.5 Given a two-digit number, mentally find 10 more or 10 less than the number, without having to count; explain the reasoning used. (Mentally)</td></tr>
<tr><td>Children review place value patterns in the number grid and use them to solve number grid puzzles.
 
Introducing Number-Grid Puzzles</td><td><u>Lesson:</u>
Following the Rules (AIMS)</td></tr>
</table>

Grade 1 Unit Eight Geometry	
Connections/Notes	**Additional Resources**
Lesson 8-11 Mentally Finding 10 More and 10 Less **1.NBT.B.2 Understand that the two digits of a two-digit number represent amounts of tens and ones. Understand the following as special cases (Numbers 0-50):** **a. 10 can be thought of as a bundle of ten ones — called a "ten."** **b. The numbers from 11 to 19 are composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones.** **1.NBT.C.4 Add within 100, including adding a two-digit number and a one-digit number, and adding a two-digit number and a multiple of 10, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used. Understand that in adding two-digit numbers, one adds tens and tens, ones and ones; and sometimes it is necessary to compose a ten** **1.NBT.C.5 Given a two-digit number, mentally find 10 more or 10 less than the number, without having to count; explain the reasoning used. (Mentally)** **1.NBT.C.6 Subtract multiples of 10 in the range 10–90 from multiples of 10 in the range 10–90 (positive or zero differences), using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.**	
Students use place value to mentally add and subtract 10 from a given number. This standard is foundational for future work in subtraction with more complex numbers. Students should have multiple experiences representing numbers that are multiples of 10 with models or drawings. Then they subtract multiples of 10 using these representations or strategies based on place value. These opportunities develop fluency of addition and subtraction facts and reinforce counting up and back by 10s. Examples: • 70 - 30: Seven 10s take away three 10s is four 10s • 80 - 50: 80, 70 (one 10), 60 (two 10s), 50 (three 10s), 40 (four 10s), 30 (five 10s) • 60 - 40: I know that 4 + 2 is 6 so four 10s + two 10s is six 10s so 60 - 40 is 20	**Activities and Tasks:** Counting Chart to 120 Use base ten blocks to build numbers and then to subtract tens **Templates and Visuals:** 120 Chart

Grade 1 Unit Eight Geometry	
Connections/Notes	**Additional Resources**
Use concrete models or drawings and various strategies to subtract multiples of 10 in the range 10-90 from multiples of 10 in the range 10-90. 	
Lesson 8-12 Assessment (Option of 2 days)	
	Math GR 1 Unit 8 Summative Assessment in eDoctrina

Grade 1 Unit Nine Two-Digit Addition and Subtraction and Review	
Connections/Notes	**Additional Resources**
Lesson 9-1 Review: Measurement **1.NBT.C.4 Add within 100, including adding a two-digit number and a one-digit number, and adding a two-digit number and a multiple of 10, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used. Understand that in adding two-digit numbers, one adds tens and tens, ones and ones; and sometimes it is necessary to compose a ten** **1.MD.A.2 Express the length of an object as a whole number of length units, by laying multiple copies of a shorter object (the length unit) end to end; understand that the length measurement of an object is the number of same-size length units that span it with no gaps or overlaps.** ***Limit to contexts where the object being measured is spanned by a whole number of length units with no gaps or overlaps.***	
Students create rulers using paper clips as units of length. They use the rulers to measure objects.  **Ruler with numbered units**.	**Lessons:** Express the Length of an Object Using Centimeter Cubes The Biggest Fish
Lesson 9-2 Two-Digit Number Stories **1.OA.A.1 Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem. (Result and Change Unknown up to 10)** **1.OA.A.2 Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.** **1.NBT.C.4 Add within 100, including adding a two-digit number and a one-digit number, and adding a two-digit number and a multiple of 10, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used. Understand that in adding two-digit numbers, one adds tens and tens, ones and ones; and sometimes it is necessary to compose a ten**	

Grade 1 Unit Nine Two-Digit Addition and Subtraction and Review	
Connections/Notes	**Additional Resources**
1.NBT.C.6 Subtract multiples of 10 in the range 10–90 from multiples of 10 in the range 10–90 (positive or zero differences), using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.	
Students tell, model, and solve number stories with two and three addends. Students should be exposed to problems both in and out of context and presented in horizontal and vertical forms. As students are solving problems, it is important that they use language associated with proper place value (see examples). They should always explain and justify their mathematical thinking both verbally and in a written format. Estimating the solution prior to finding the answer focuses students on the meaning of the operation and helps them attend to the actual quantities. This standard focuses on developing addition - **the intent is not to introduce traditional algorithms or rules.** Use various numbers to add within 100 by decomposing numbers into 10s and 1s. 	**Lessons:** Add Ones and Ones or Tens and Tens Critique Peer Strategies for Adding Two-Digit Numbers **Activities and Tasks:** Adding One-and Two-Digit Numbers **Templates and Visuals:** 120 Chart **Teaching Student-Centered Mathematics:** Pages 165-169 (Adding and Subtracting) 165-166 (Ten Frame Adding and Subtracting)
Lesson 9-3 Shopping at the School Store (Open Response) **1.NBT.C.4 Add within 100, including adding a two-digit number and a one-digit number, and adding a two-digit number and a multiple of 10, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used. Understand that in adding two-digit numbers, one adds tens and tens, ones and ones; and sometimes it is necessary to compose a ten.** **1.NBT.C.5 Given a two-digit number, mentally find 10 more or 10 less than the number, without having to count; explain the reasoning used. (Mentally)**	
Day 1: Students find the total cost of the three items and explain their strategies. **Day 2:** Students discuss explanations and revise their work.	

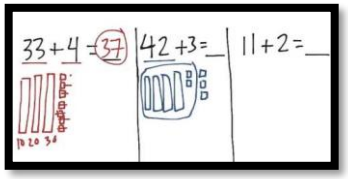
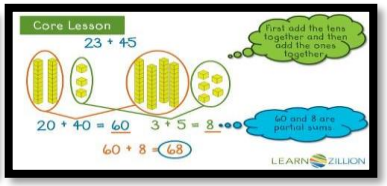
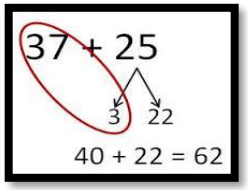
Grade 1 Unit Nine Two-Digit Addition and Subtraction and Review	
Connections/Notes	**Additional Resources**
Continue working on this standard through math meetings and classroom activities.	
Lesson 9-4 Exploring Broken Calculators, Fractions, and Facts (Explorations) **1.OA.C.6 Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g., 8 + 6 = 8 + 2 + 4 = 10 + 4 = 14); using the relationship between addition and subtraction (e.g., knowing that 8 + 4 = 12, one knows 12 – 8 = 4); and creating equivalent but easier or known sums (e.g., adding 6 + 7 by creating the known equivalent 6 + 6 + 1 = 12 + 1 = 13** **1.OA.D.7 Understand the meaning of the equal sign and determine if equations involving addition and subtraction are true or false. *For example, which of the following equations are true and which are false? 6 = 6, 7 = 8 – 1, 5 + 2 = 2 + 5, 4 + 1 = 5 + 2*** **1.NBT.C.4 Add within 100, including adding a two-digit number and a one-digit number, and adding a two-digit number and a multiple of 10, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used. Understand that in adding two-digit numbers, one adds tens and tens, ones and ones; and sometimes it is necessary to compose a ten** **1.G.A.3 Partition circles and rectangles into two and four equal shares, describe the shares using the words *halves*, *fourths*, and *quarters*, and use the phrases *half of*, *fourth of*, and *quarter of*. Describe the whole as two of, or four of the shares. Understand for these examples that decomposing into more equal shares creates smaller shares.**	
Students divide a rectangle into equal parts. They conduct a final Facts Inventory. Work on mastery of facts through 10 utilizing the strategies taught in terms 1-3. Continue working on these strategies within 10 then to 20: • Counting on (0,1,2,3) • Counting back (3,2,1,0) • Make a ten (3 + 7 = 10) • Subtracting from 10 (10 - 4 = 6) • Doubles addition (4 + 4 = 8) • Doubles subtraction (6 – 3 = 3) • Near Doubles Addition • Near Doubles Subtraction • Making a Ten by Decomposing 	**Activities and Tasks:** Utah Education Network for resources **Teaching Student-Centered Mathematics:** Pages 251-258 (Early Fraction Concepts)
Lesson 9-5 Vending Machine Addition and Subtraction **1.OA.A.1 Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem. (Result and Change Unknown up to 10)**	

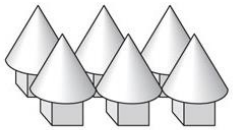
Grade 1 Unit Nine Two-Digit Addition and Subtraction and Review	
Connections/Notes	**Additional Resources**
1.OA.A.2 Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20, e.g., by using objects, drawings, and equations with a symbol for the unknown number ~~to represent the problem.~~ **1.NBT.C.4 Add within 100, including adding a two-digit number and a one-digit number, and adding a two-digit number and a multiple of 10, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used. Understand that in adding two-digit numbers, one adds tens and tens, ones and ones; and sometimes it is necessary to compose a ten** **1.NBT.C.6 Subtract multiples of 10 in the range 10–90 from multiples of 10 in the range 10–90 (positive or zero differences), using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.**	
Students apply a variety of strategies to add and subtract 2-digit numbers. Students extend their number fact and place value strategies to add within 100. **They represent a problem situation using any combination of words, numbers, pictures, physical objects, or symbols**. It is important for students to understand if they are adding a number that has 10s to a number with 10s, they will have more tens than they started with.	**Lessons:** Add Ones and Ones or Tens and Tens Critique Peer Strategies for Adding Two-Digit Numbers Critique Peer Solutions to Word Problems
Lesson 9-6 Two-Digit Comparison Number Stories **1.OA.A.1 Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem. (Result and Change Unknown up to 10)** **1.NBT.C.4 Add within 100, including adding a two-digit number and a one-digit number, and adding a two-digit number and a multiple of 10, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used. Understand that in adding two-digit numbers, one adds tens and tens, ones and ones; and sometimes it is necessary to compose a ten**	

<table>
<tr><th colspan="2">Grade 1 Unit Nine
Two-Digit Addition and Subtraction and Review</th></tr>
<tr><th>Connections/Notes</th><th>Additional Resources</th></tr>
<tr><td colspan="2">1.NBT.C.6 Subtract multiples of 10 in the range 10–90 from multiples of 10 in the range 10–90 (positive or zero differences), using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.</td></tr>
<tr><td></td><td><u>Lessons:</u>
Solve Compare with Difference Unknown Problems
Critique Peer Solutions to Word Problems
Critique Peer Solutions for Result and Addend Unknown Word Problems
Solve Compare with Bigger or Smaller Unknown

<u>Videos:</u>
Solving Word Problems</td></tr>
<tr><td colspan="2">Lesson 9-7 Efficient Strategies for 2-Digit Addition and Subtraction
1.OA.A.1 Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem. (Result and Change Unknown up to 10)
1.NBT.C.4 Add within 100, including adding a two-digit number and a one-digit number, and adding a two-digit number and a multiple of 10, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used. Understand that in adding two-digit numbers, one adds tens and tens, ones and ones; and sometimes it is necessary to compose a ten
1.NBT.C.6 Subtract multiples of 10 in the range 10–90 from multiples of 10 in the range 10–90 (positive or zero differences), using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.</td></tr>
<tr><td>Students choose and use tools and strategies to solve addition and subtraction number stories and explain their choices.</td><td><u>Activities and Tasks:</u>
Use 120 chart to find a pattern to find 10 more or 10 less
Use base ten blocks to build numbers and then to add tens

<u>Videos:</u>
1 more, 1 less, 10 more and 10 less</td></tr>
</table>

Grade 1 Unit Nine Two-Digit Addition and Subtraction and Review	
Connections/Notes	**Additional Resources**
Use various numbers to add within 100 by decomposing numbers into 10s and 1s.    	
Lesson 9-8 Review: Relations and Equivalence **1.OA.B.3 Apply properties of operations as strategies to add and subtract.** **1.OA.C.6 Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g., 8 + 6 = 8 + 2 + 4 = 10 + 4 = 14); using the relationship between addition and subtraction (e.g., knowing that 8 + 4 = 12, one knows 12 – 8 = 4); and creating equivalent but easier or known sums (e.g., adding 6 + 7 by creating the known equivalent 6 + 6 + 1 = 12 + 1 = 13** **1.OA.D.7 Understand the meaning of the equal sign and determine if equations involving addition and subtraction are true or false. *For example, which of the following equations are true and which are false? 6 = 6, 7 = 8 – 1, 5 + 2 = 2 + 5, 4 + 1 = 5 + 2*** **1.NBT.B.3 Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols >, =, and <. (Up to 99)** **1.NBT.C.4 Add within 100, including adding a two-digit number and a one-digit number, and adding a two-digit number and a multiple of 10, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used. Understand that in adding two-digit numbers, one adds tens and tens, ones and ones; and sometimes it is necessary to compose a ten**	
Students use <, =, and > to compare sums of prices.	**Videos:** Greater Than or Less Than Picture Flash Video **Teaching Student-Centered Mathematics:** Page 75 (Comparing Numbers)
Lesson 9-9 Review: Place Value **1.NBT.B.2 Understand that the two digits of a two-digit number represent amounts of tens and ones. Understand the following as special cases (Numbers 0-50):** **a. 10 can be thought of as a bundle of ten ones — called a "ten."** **b. The numbers from 11 to 19 are composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones.**	

Grade 1 Unit Nine Two-Digit Addition and Subtraction and Review	
Connections/Notes	**Additional Resources**
1.NBT.C.5 Given a two-digit number, mentally find 10 more or 10 less than the number, without having to count; explain the reasoning used. (Mentally)	
Students review place value. They apply their understanding of place value to solve number-grid puzzles.	**Activities and Tasks:** Add 10 to Target Number Interactive Website Subtract 10 from Target Number Interactive Website **Videos:** Ten More Ten Lesson
Lesson 9-10 Review: 3-Dimensional Geometry **1.G.A.1 Distinguish between defining attributes (e.g., triangles are closed and three-sided) versus non-defining attributes (e.g., color, orientation, overall size); build and draw shapes to possess defining attributes.** **1.G.A.2 Compose two-dimensional shapes (rectangles, squares, trapezoids, triangles, half-circles, and quarter-circles) or three-dimensional shapes (cubes, right rectangular prisms, right circular cones, and right circular cylinders) to create a composite shape and compose new shapes from the composite shape. (Students do not need to learn formal names such as "right rectangular prism.")**	
Students review defining attributes and names of 3-dimensional shapes. They use 3-dimensional shapes to form composite shapes.  A Composite 3-Dimensional Shape *Consider cutting out some of the templates before the lesson.	**Activities and Tasks:** Patch Tool **Videos:** 2-D Shape Song **Templates and Visuals:** Die cuts from Instructional Resource Center **Teaching Student-Centered Mathematics:** Pages 189-192 (Analysis of Shapes)

Grade 1 Unit Nine Two-Digit Addition and Subtraction and Review	
Connections/Notes	**Additional Resources**
Lesson 9-11 Review: Equal Shares **1.G.A.3 Partition circles and rectangles into two and four equal shares, describe the shares using the words *halves*, *fourths*, and *quarters*, and use the phrases *half of*, *fourth of*, and *quarter of*. Describe the whole as two of, or four of the shares. Understand for these examples that decomposing into more equal shares creates smaller shares.**	
Students review dividing shapes into 2 and 4 equal shares, naming one share, and naming the whole.	**Templates and Visuals:** Die Cuts from Instructional Resource Center **Teaching Student-Centered Mathematics:** Pages 251-258 (Early Fraction Concepts)
Lesson 9-12 Assessment (Option of 2 Days)	
	Math GR 1 Unit 9 Summative Assessment in eDoctrina