# 1st Grade Math Curriculum

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**Curriculum Revisions:**

**2019-2020**
- Unit 0 extended to 5 days
- Topic 1 and 2- switched order

BOE Approved June 20, 2019
Overview of Unit:
The first week of school is focused on setting up the classroom culture for the year and developing routines that support the development of the Standards for Mathematical Practice. Teachers will get to know their students as the students get to know themselves as math learners.

Essential Questions:
- How should we use math tools in the classroom?
- How can we talk to others about our thinking?
Enduring Understandings:

- Establish math classroom norms, such as these:
  - Students learn routines and procedures.
  - Students work toward being part of an equitable classroom community.
  - Students gain familiarity with math manipulatives.
  - Students begin to pay attention to using the language of math with precision.

Mathematical Practices:

- MP1 Make sense of problems and persevere in solving them
- MP2 Reason abstractly and quantitatively.
- MP3 Construct viable arguments and critique the reasoning of others.
- MP4 Model with mathematics.
- MP5 Use appropriate tools strategically.
- MP6 Attend to precision.
- MP7 Look for and make use of structure.
- MP8 Look for and express regularity in repeated reasoning.

Engaging Experience 1

Teaching Point: Today I am going to teach you about our first math norm: answers are important, but they are not the math.

Suggested Length of Time: 1 session

Detailed Description/Instructions: Students learn and practice the routines and expectations involved in Daily and Number Routines. Tell students that math norms are agreements that the class follows to help them be successful in mathematics. Post the math norms in an area of your room that will allow the class to reference them when needed.

What is this strategy?
A Number Routine is a pedagogical tool for building math thinking and academic discourse in a student-centered, teacher-facilitated way. Number Routines should not be used to introduce math content, but when a topic is new, they can be an opportunity for informal assessment of student familiarity and background.

Why would I use this strategy?
Number Routines serve to further understanding of math content while addressing Standard for Mathematical Practice 3: *Construct viable arguments and critique the reasoning of others.* They give students the opportunity to develop flexibility and fluency with mental visualization and computation. They offer opportunities to revisit math topics, approach common misconceptions, and deepen understanding by sharing multiple strategies and perspectives on a concept or skill.

When do I use this strategy?
This strategy can be used at any time, but is often done at the beginning of a math lesson. Because it does not need to be focused on the lesson’s content, the content of the Number Routine can vary according to the needs of students. Number Routines should happen 3 to 5 times a week for 10–15 minutes each.

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One way to do this… Launch number routines to teach students that a group of objects can be subitized and the subgroups added to find the total. *(See Math Norms Poster & Day 1 Number Talk in Schoology)*

**Engaging Experience 2**

**Teaching Point:** Today I am going to teach you about our second math norm: use multiple strategies and multiple representations.

**Suggested Length of Time:** 1 session

**Detailed Description/Instructions:** Students continue to learn and practice the routines and expectations involved in Daily and Number Routines.

- Counting correctly requires good one-to-one correspondence, knowing the order of the counting words, and understanding that the last number counted represents the number of objects in the set.
- Routines and expectations help us to learn together with efficiency and without conflict.

One way to do this… Students will create a number representation poster (see below) to demonstrate understanding of the math norm: use multiple strategies and multiple representations.

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**Engaging Experience 3**

**Teaching Point:** Today I am going to teach you about our third math norm: talking about
each other’s thinking.

**Suggested Length of Time:** 1 session

**Detailed Description/Instructions:** Students continue to learn and practice the routines and expectations involved in Daily and Number Routines.

- Counting correctly requires good one-to-one correspondence, knowing the order of the counting words, and understanding that the last number counted represents the number of objects in the set.
- Routines and expectations help us to learn together with efficiency and without conflict.

**One way to do this is to...** Use manipulatives for counting activities to teach students that there are multiple strategies for counting while fostering the new math norm learned today: talking about each other’s thinking.

**Engaging Experience 4**

**Teaching Point:** Today I am going to teach you about another math norm: errors are gifts that promote discussion.

**Suggested Length of Time:** 1 session

**Detailed Description/Instructions:** Students continue to learn and practice the routines and expectations involved in Daily and Number Routines.

- Counting correctly requires good one-to-one correspondence, knowing the order of the counting words, and understanding that the last number counted represents the number of objects in the set.
- Routines and expectations help us to learn together with efficiency and without conflict.

**One way to do this is to...** Build upon yesterday’s lesson by including counting activities on a ten frame to teach students that there are multiple strategies for counting while fostering the new math norm learned today: errors are gifts that promote discussion.

**Engaging Experience 5**

**Teaching Point:** Today I am going to teach you about our last math norm: ask questions until ideas make sense.

**Suggested Length of Time:** 1 session

**Detailed Description/Instructions:** Students continue to learn and practice the routines and expectations involved in Daily and Number Routines.

**One way to do this is to...** Use collecting data to teach students to ask questions until ideas make sense. Tell students that today they are going to spend some time getting to know one another better. Learning about one another is a good way to start making friends in the class.
Start by asking a few students how they got to school today. Once 2–3 categories have been mentioned (walk, drive, ride the bus, for example), tell students you’d like to find out how every student got to school today.

Have students raise their hands as you ask the questions, “Who rode in a car to get to school today?,” “Who walked to school today?,” etc.

Ask 2–3 more sets of questions about the students, for example, “Who has one (or none or more than one) brother or sister?,” “Who has (or doesn’t have) a pet?,” “Who likes red (or green or yellow) apples?,” etc.

Tell students that you are learning a lot about them, but it’s hard to count because they are all mixed up when they answer the questions. Ask them what they could do to make it easier to count the number of students in each category. Accept all replies. If students suggest standing together in groups to make it easier to count, or any other similar method, tell them that is what they will do next.

**Daily Routines**

| Introduce Daily Routines | Lead students through the Monthly Calendar, Daily Schedule, Number of Days in School, and Using the Number Line to 120 routines according to the Daily Routines section. Daily Routines do not need to be done during the math block. |

**What is this structure?**

Daily Routines are a cornerstone of the mathematics curriculum in the early primary grades. This structure provides opportunities for deeper learning that requires students to continuously revisit potentially abstract concepts in a concrete context. Although the basic routine structures will stay the same throughout the year, the complexity and focus will change and develop over time.

**Why would I use this structure?**

Routines can informally introduce concepts and skills from the Common Core Math Content and Practice Standards before they are formally taught in a math lesson/unit and can reinforce concepts that have been learned in previous lessons. Toward the end of the year, the routines will begin to develop concepts that bridge to the next grade level.

**When do I use this structure?**

Set up strong Daily Routines in the beginning of the year. These routines can be done as part of your formal math block or during a separate time of the day and should last 10–15 minutes. Certain routines can be incorporated into transitional periods. Depending on the particular focus, each routine should be done daily, weekly, or monthly.

**How could I use this structure during this unit?**

Below are the Daily Routines suggested for this unit. Once established, some routines may be continued all year, while others can introduce new concepts that build on previous routines.

**Daily Routines:** The Daily Routines listed below are used throughout the year. Introduce the Monthly Calendar, Daily Schedule, Number of Days in School, and Using the Number Line to 120 routines on Day 1 and repeat them all week.
**Monthly Calendar**

**Frequency:** Daily

**Objective:** To provide opportunities for students to develop a sense of time and to see and describe patterns.

**Description:** Calendar can be used to review months of the year, days of the week, and patterns. In Unit 0, use the monthly calendar to identify the date, the patterns of 7 days in the week, 30–31 days in a month, yesterday, today and tomorrow.

![August 2019 Calendar](https://www.calendarpedia.com)

**Daily Schedule**

**Frequency:** Daily

**Objective:** To provide opportunities for students to develop their sense of time.

**Description:** In First Grade, students should learn to tell time to the hour and half-hour. The Daily Schedule should help students see how the events of their day align with these times. The Daily Schedule should be proportional, so that students begin to notice that the length of time spent on an activity can be seen on the schedule. Use the materials included in this unit, or a commercially available product.

![Daily Schedule](https://www.calendarpedia.com)

**Number of Days in School**

**Frequency:** Daily

**Objective:** To practice counting and later, the regrouping of ones into tens.

**Description:** For each day of school, add one dot to the ten frame. When the ten frame is full, move it to the “tens” place on the board. Count the “tens” and “ones” to determine how many days students have been in school. It is not necessary to count the tens and ones every day, but the daily dot must be added.
Using the Number Line to 120

Frequency: 2–4 days per week

Objective: To provide students opportunities to count forward and backwards by 1’s and later by 10’s.

Description: A teacher-made or commercially available number line up to 120 should be posted in the classroom. Be sure teacher-made number lines have equal spacing between the numbers. In addition to being a tool for counting, adding, and subtracting, the number line is a way of measuring length or distance. The measurement standards in First Grade require students to understand that same-size length units are needed for accurate measurement of length.

The number line should be used to count in a variety of ways. Refer to Number Line Choral Counting Routines for counting routine suggestions.
Unit 1: Operations and Algebra

**Subject:** Math  
**Grade:** 1  
**Name of Unit:** Operations and Algebra  
**Length of Unit:** 67-68 days

**Overview of Unit:**

*In Topic 2,* students develop fluency for addition and subtraction within 10.  
*In Topic 1,* students represent and solve problems involving addition and subtraction within 10.  
*In Topic 3,* students explore strategies to add within 20.  
*In Topic 4,* students use strategies based on the properties of operations and the relationship between addition and subtraction to solve subtraction facts to 20.  
*In Topic 5,* students work with addition and subtraction equations. They learn how to find a missing number in an equation and determine if an equation is true or false.

<table>
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<th>Summative Assessment Options</th>
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<td>(Administered before or during a unit, topic or lesson to guide instruction and give feedback to students.)</td>
<td>(Administered at the end of unit or topic to assess mastery of learning objectives.)</td>
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</table>
| ● Math Interview/ Conference  
● Quick Checks (Check marks within lesson)  
● Topic Pretest  
● Convince Me | ● Online version  
● Topic Assessment Practice  
● Topic Performance Task  
● Cumulative/ Benchmark Assessment (print or online) |

**Math Review:**

- Math Anytime  
  - Daily Review  
  - Today’s Challenge  
  - Fluency  
    - enVision 2020  
- Topic Opener: Review What You Know  
- Vocabulary Review

**Number and Operation Routines (enVision 2020)**

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<th>Topic 5</th>
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</table>
| ● How Many Days  
● More or Less Than 20  
● Number of the Day  
● Ooh! And Aah! | ● Add it Up!  
● Double It and Move  
● In and Out  
● Jump On, Jump Back, and Jump Up  
● Pat and Show  
● Table Patterns  
● Toss and Cover | ● Climb the Ladder  
● Contig  
● Domino Sums and Differences  
● Order the Sums  
● Up and Down | ● How Many Ways  
● Part-Part-Whole Cards | ● Balance the Equation  
● Draw a Picture  
● Four and GONE!  
● Number Chain  
● Which One Is False? |

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Daily Routines

Below are the Daily Routines suggested for this unit. Once established, some routines may be continued all year, while others can introduce new concepts that build on previous routines. While engaged in Daily Routines, be sure to pay particular attention to equitable participation, allowing all students to participate.

Title: Monthly Calendar

Objective: To familiarize students with the structure and pattern of a calendar, and help students learn the names of the days of the week and the months of the year.

Description:
- Set up a reusable calendar in a permanent place in the classroom.
- Every day find the current day and have students read the day of the week, the month, the date number, and the year.
- Help students become familiar with the days of the week and calendar language with a Days Board, i.e., Yesterday was _______. Today is _______. Tomorrow will be _______.

Number Routines: Topic 2 and Topic 1

Number Talk: Ten-Frame with the Number 10

Five- and ten-frame number talks consist of 3-5 problems, each sequentially labeled A, B, C, and so on. The sequence of problems within a given number talk allows students to apply the strategies from previous problems to subsequent problems.

The focus for numbers 3-9 is to ask students, “How many dots do you see? How do you see them?” With frames for the number 10, the question shifts to, “How many more to make ten?”

Reference your copy of *Number Talks: Whole Number Computation* by Sherry Parrish

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Number Routines: Topic 3

Number Talk: Dot Images with the Numbers 3-10, targeting counting on (page 99)

Counting On is a transitional strategy used primarily in first and early-second grade. The students starts with one of the numbers and counts on from this point. When students are able to conceptualize a number, they will transition from Counting All to Counting On.

Dot image number talks consist of 3-5 problems, each sequentially labeled A, B, C, and so on. The sequence of problems within a given number talk allows students to apply the strategies from previous problems to subsequent problems or provides opportunities for students to reason with the same quantity from multiple perspectives. This provides an opportunity to informally assess whether the student is unitizing a specific amount and conserving number.

As each problem is shown, ask students, “How many dots do you see? How do you see them?”

Note that using two sets of dot images for each number talk provides an opportunity for students to unitize one quantity and count on.

Reference your copy of Number Talks: Whole Number Computation by Sherry Parrish

Number Talk: Rekenreks with the Numbers 3-10, targeting counting on (page 101)

Counting On is a transitional strategy used primarily in first and early-second grade. The students starts with one of the numbers and counts on from this point. When students are able to conceptualize a number, they will transition from Counting All to Counting On.

Rekenrek number talks consist of 3-5 problems, each sequentially labeled A, B, C, and so on. The sequence of problems within a given number talk allows students to apply the strategies from previous problems to subsequent problems.

As each problem is shown, ask students, “How many beads do you see? How do you see them?”
Number Routines: Topic 4

Number Talk: Double Ten-Frames Targeting Counting On (page 103)

Counting On is a transitional strategy used primarily in first and early-second grade. The students starts with one of the numbers and counts on from this point. When students are able to conceptualize a number, they will transition from Counting All to Counting On.

Frames number talks consist of 3-5 problems, each sequentially labeled A, B, C, and so on. The sequence of problems within a given number talk allows students to apply the strategies from previous problems to subsequent problems.

As each problem is shown, ask students, “How many dots do you see? How do you see them?”

Number Routines: Topic 5

Number Talk: Rekenreks Targeting Double/Near Doubles (page 107)
Beginning as early as kindergarten, children are able to recall sums for many doubles. This strategy capitalizes on this strength by adjusting one or both numbers to make a double or near-double combination.

Rekenrek number talks consist of 3-5 problems, each sequentially labeled A, B, C, and so on. The sequence of problems within a given number talk allows students to apply the strategies from previous problems to subsequent problems.

As each problem is shown on the rekenrek, ask students “How many dots do you see? How do you see them?”

Reference your copy of *Number Talks: Whole Number Computation* by Sherry Parrish

**Additional Personalized Practice and Application Suggestions:**

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<td>● Additional Practice</td>
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**Learning Station Bank**

Learning stations are an activity based structure that provides students with opportunities for student-led engagement with or extensions of previously taught concepts. Below are some learning stations suggested for this unit. Once established, some stations may be continued all year, while others can introduce new concepts that build on previous activities. You may choose which learning stations to use and for how long according to the needs of your students.

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<td></td>
<td>Pattern blocks</td>
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</table>
Objective: Establish learning station routines and behaviors; allow students to play and become familiar with math materials; provide opportunities for teacher to assess beginning numeracy skills on the K.0-1 Observation Sheet.

- Continue with material explorations until students exhibit appropriate behaviors and numeracy skills of all students have been assessed.
- These Materials Exploration stations may be switch out with new stations one or two at a time as the unit progresses.

Title: Number Writing
Objective: Practice writing numerals

- Cut the Writing Numbers Example BLM into strips of individual numbers. The strips may be glued to the top of lined paper and laminated for reuse, or left for single use.
- Choose a material for students to use and have students practice writing their numerals. Your choice may depend on the students’ interest level, ability to use alternative materials, or your need for a record.

Title: Counting onto Ten and Double Ten Frames
Objective: To assess students’ understanding of the counting sequence, one-to-one correspondence, and cardinality.

Description:
1. Show students the counters and the ten frames and ask students what they know about these tools. Accept all replies.
2. Tell students they will be counting the counters onto the ten frame. When the ten frame is full, they should empty it out and count again.
3. They may use any kind of counter, but they must use all the same type of counters for each count.
4. If students show proficiency with counting to ten, replace the ten frame with a double ten frame.

Title: Linking or Unifix Cube Trains
Objective: To build fluency with counting with one-to-one correspondence with optional addition fluency practice.

Description:
1. Students play with a partner.
2. Each player draws a card from the pile and makes a linking cube train with that many cubes.
3. Players confirm the accuracy of each others trains.
4. Cubes are then returned to the pile and new cards drawn.

Variations:
1. Students may add their 2 trains together to find the total.
2. Students may compare their trains to determine whose train is longer or shorter. Students may also determine how much longer or shorter their train is.
3. Students may subtract the length of one train from the other to find the difference.

Title: Ten Frame Fill
Objective: To build fluency with combinations of 10.

Description:
1. Students take turns rolling a die and filling a ten frame with that many counters.
2. Students fill the remaining spaces with different-colored counters.
3. Students share the combination of 10 by using the sentence frame, “10 is ___ plus ___.”
4. Students record their combinations of 10 in a number bond.

Title: Visual Representation Concentration

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Objective: To build fluency with a variety of representations of quantities to each other and their numeral.

Description:
1. Students play with a partner
2. Lay out the cards face down.
3. The first player chooses 2 cards, turns them over, and decides if they match.
4. If they match, the player adds them to his/her pile. If they do not match, the cards are returned to their previous location.
5. Player 2 takes their turn. Players take turns until all cards are matched.

Variations:
1. Use only 1 set (2 cards each) for each number.
2. Use only the numbers 0–5, or any other subset, to restrict the quantity of cards.
3. Add the optional number word cards and remove another representation so that the total number of cards for one number remains even.

Optional Number Word Cards

Topic 2: Fluently Add and Subtract Within 10
Students develop fluency for addition and subtraction within 10. They explore strategies to add within 20.

Essential Questions:
● What strategies can be used to find addition and subtraction facts?

Enduring Understandings:
● There are multiple strategies to use when adding and subtracting.

Priority Standards:
● 1.RA.C.8 Demonstrate fluency with addition and subtraction within 10

Supporting Standards:
● 1.RA.B.6 Demonstrate that subtraction can be solved as an unknown-addend problem
● 1.RA.B.5 Use properties as strategies to add and subtract.

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Unit Vocabulary:

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<tr>
<td>Doubles Fact</td>
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<tr>
<td>Near Doubles Fact</td>
<td></td>
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<tr>
<td>Count Back</td>
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Engaging Experience 1
Teaching Point: Today I’m going to teach you to count on from a number to add by using a

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number line.

**Suggested Length of Time:** 1 session

**Standards Addressed**

- **Priority:** 1.RA.C.8 Demonstrate fluency with addition and subtraction within 10

**Detailed Description/Instructions:**

**One way to do this** Use lesson 2-1 to teach students you can count on to find the sum for addition facts. A number line can help you count on.

**Bloom’s Levels:** apply

**Webb’s DOK:** 2

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**Engaging Experience 2**

**Teaching Point:** Today I’m going to teach you to use doubles to add by using cubes.

**Suggested Length of Time:** 1 session

**Standards Addressed**

- **Priority:** 1.RA.C.8 Demonstrate fluency with addition and subtraction within 10

**Detailed Description/Instructions:**

**One way to do this** Use lesson 2-1 to teach students doubles facts have the same number for both addends and can be used to solve problems involving real world

**Bloom’s Levels:** apply

**Webb’s DOK:** 2

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**Engaging Experience 3**

**Teaching Point:** Today I’m going to teach you to use near doubles facts to add by using doubles facts.

**Suggested Length of Time:** 1 session

**Standards Addressed**

- **Priority:** 1.RA.C.8 Demonstrate fluency with addition and subtraction within 10
- **Supporting:** 1.RA.B.6 Demonstrate that subtraction can be solved as an unknown-addend problem

**Detailed Description/Instructions:**

**One way to do this** Use lesson 2-3 to teach students basic addition facts that are near doubles can be found using a related doubles fact.

**Bloom’s Levels:** apply

**Webb’s DOK:** 2

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**Engaging Experience 4**

**Teaching Point:** Today I’m going to teach you to solve addition facts with 5 and 10 by using a ten-frame.

**Suggested Length of Time:** 1 session

**Standards Addressed**

- **Priority:** 1.RA.C.8 Demonstrate fluency with addition and subtraction within 10

**Detailed Description/Instructions:**

**One way to do this** Use lesson 2-4 to teach students facts with sums 6-10 can be broken into 5 plus some more.

**Bloom’s Levels:** apply

**Webb’s DOK:** 2

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Engaging Experience 5
Teaching Point: Today I’m going to teach you to use the same addends to write two different equations with the same sum by using cubes.
Suggested Length of Time: 1 session
Standards Addressed
  Priority: 1.RA.C.8 Demonstrate fluency with addition and subtraction within 10
  Supporting: 1.RA.B.5 Use properties as strategies to add and subtract.
Detailed Description/Instructions:
  One way to do this Use lesson 2-5 to teach students two numbers can be added in any order and the sum will stay the same.
Bloom’s Levels: apply
Webb’s DOK: 2

Engaging Experience 6
Teaching Point: Today I’m going to teach you to count back to solve subtraction problems by using a number line.
Suggested Length of Time: 1 session
Standards Addressed
  Priority: 1.RA.C.8 Demonstrate fluency with addition and subtraction within 10
Detailed Description/Instructions:
  One way to do this Use lesson 2-6 to teach students you can count back to find the difference for subtraction facts. A number line can help you count back.
Bloom’s Levels: apply
Webb’s DOK: 2

Engaging Experience 7
Teaching Point: Today I’m going to teach you to use addition facts to 10 to solve subtraction problems by using a part-part-whole model.
Suggested Length of Time: 1 session
Standards Addressed
  Priority: 1.RA.C.8 Demonstrate fluency with addition and subtraction within 10
  Supporting: 1.RA.B.6 Demonstrate that subtraction can be solved as an unknown-addend problem
Detailed Description/Instructions:
  One way to do this Use lesson 2-7 to teach students addition and subtraction have an inverse relationship. This relationship can be used to solve subtraction facts; every subtraction fact has a related addition fact.
Bloom’s Levels: apply
Webb’s DOK: 2

Engaging Experience 8
Teaching Point: Today I’m going to teach you to solve word problems by drawing pictures and writing equations.
Suggested Length of Time: 1 session
Standards Addressed
BOE Approved June 20, 2019
Priority: 1.RA.C.8 Demonstrate fluency with addition and subtraction within 10

Supporting: 1.RA.B.6 Demonstrate that subtraction can be solved as an unknown-addend problem

Detailed Description/Instructions:

One way to do this Use lesson 2-8 to teach students drawings and equations can help you solve different types of word problems.

Bloom’s Levels: apply
Webb’s DOK: 2

Engaging Experience 9

Teaching Point: Today I’m going to teach you to use structure and identify patterns in order to solve word problems by making a table.

Suggested Length of Time: 1 session

Standards Addressed

Priority: 1.RA.C.8 Demonstrate fluency with addition and subtraction within 10

Supporting: 1.RA.B.6 Demonstrate that subtraction can be solved as an unknown-addend problem

Detailed Description/Instructions:

One way to do this Use lesson 2-9 to teach students good math thinkers look for patterns in math to help solve problems.

Bloom’s Levels: analyze
Webb’s DOK: 2

Topic 1: Understand Addition and Subtraction

Students represent and solve problems involving addition and subtraction within 10.

Essential Questions:

● What are ways to think about addition and subtraction?

Enduring Understandings:

● Numbers can be broken into parts of the whole in different ways.
● Parts of a whole and joining parts are interpretations of addition. Additional number sentences can be used to show parts of a whole and joining situations.
● A missing part of a whole can be found when the whole and the other parts are known.
● There are different interpretations of subtraction. Subtraction number sentences can be used to show each interpretation.
● Addition and subtraction have an inverse relationship.
● The difference can be written at the beginning of or end of a subtraction sentence, as long as the number or expression on each side of the equal sign are the same amount.

Priority Standards:

● 1.RA.C.8: Demonstrate fluency with addition and subtraction within 10

Supporting Standards:

● 1.RA.B.5 Use properties as strategies to add and subtract
● 1.NS.A.2 Read and write numerals and represent a number of objects with a written numeral
● 1.NS.A.3 Count backward from a given number between 20 and 1 (Daily Routine)

BOE Approved June 20, 2019
### Engaging Experience 1

**Teaching Point:** Today I’m going to teach you to solve addition problems involving situations of “add to” by using cubes or drawing a picture.

**Suggested Length of Time:** 2 sessions

**Standards Addressed**
- **Priority:** 1.RA.C.8: Demonstrate fluency with addition and subtraction within 10
- **Supporting:** 1.NS.A.2 Read and write numerals and represent a number of objects within a written numeral

**Detailed Description/Instructions:**
- **One way to do this** Use hands on activities with cubes to teach students to model “add to” addition situations. Have students also model the situations by drawing a picture. The focus should be on modeling and verbalizing the number sentence (three and four is seven). A number sentence uses the words and equals.
- **Another way to do this** Use lesson 1-1 to teach students an addition equation. An equation uses math symbols such as + and =.

**Bloom’s Levels:** apply

**Webb’s DOK:** 2

### Engaging Experience 2

**Teaching Point:** Today I’m going to teach you to solve addition problems involving situations of putting two parts together by using cubes or drawing a picture.

**Suggested Length of Time:** 2 sessions

**Standards Addressed**
- **Priority:** 1.RA.C.8: Demonstrate fluency with addition and subtraction within 10

**Detailed Description/Instructions:**
- **One way to do this** Use hands on activities with cubes to teach students to model “put together” addition situations. Have students also model the situations by drawing a picture. The focus should be on modeling and verbalizing the number sentence.
- **Another way to do this** Use lesson 1-2 to teach students to use an addition equation.

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### Unit Vocabulary:

<table>
<thead>
<tr>
<th>Academic Cross-Curricular Words</th>
<th>Content/Domain Specific</th>
</tr>
</thead>
<tbody>
<tr>
<td>add, plus, sum, equals, parts, whole, equation, subtract, minus, difference, more, compare, fewer, addend</td>
<td></td>
</tr>
</tbody>
</table>

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to show situations in which two parts are put together. The focus should be on representing addition with an equation.

**Bloom’s Levels:** apply  
**Webb’s DOK:** 2

**Engaging Experience 3**

**Teaching Point:** Today I’m going to teach you to solve addition word problems by breaking apart a total number of objects.

**Suggested Length of Time:** 2 sessions

**Standards Addressed**

**Priority:** 1.RA.C.8: Demonstrate fluency with addition and subtraction within 10

**Detailed Description/Instructions:**

**One way to do this** Use hands on activities with cubes to teach students to model both parts unknown addition situations. Have students also model the situations by drawing a picture. The focus should be on modeling and verbalizing the number sentence. In lesson 1-3, students will see equations where the whole is written first.

**Another way to do this** Use lesson 1-3 to teach students that addition equations can be used to show addition situations where both parts are unknown.

**Bloom’s Levels:** apply  
**Webb’s DOK:** 2

**Engaging Experience 4**

**Teaching Point:** Today I’m going to teach you to solve subtraction problems involving taking from a group by using cubes or drawing a picture.

**Suggested Length of Time:** 2 sessions

**Standards Addressed**

**Priority:** 1.RA.C.8: Demonstrate fluency with addition and subtraction within 10

**Detailed Description/Instructions:**

**One way to do this** Use hands on activities with cubes to teach students to model “take from” subtraction situations. Have students also model the situations by drawing a picture. The focus should be on modeling and verbalizing the number sentence.

**Another way to do this** Use lesson 1-4 to teach students that subtraction equations can be used to show subtraction situations in which one part is taken from the whole.

**Bloom’s Levels:** apply  
**Webb’s DOK:** 2

**Engaging Experience 5**

**Teaching Point:** Today I’m going to teach you to solve problems involving comparing to find how many more objects are in one group than another.

**Suggested Length of Time:** 2-3 sessions

**Standards Addressed**

**Priority:** 1.RA.C.8: Demonstrate fluency with addition and subtraction within 10  
**Supporting:** 1.RA.B.5 Use properties as strategies to add and subtract

**Detailed Description/Instructions:**

**One way to do this** Use hands on activities with cubes to teach students to model
problems that involve comparing. Have students also model the situations by drawing a picture. The focus should be on using Greg Tang’s 6 step framework for solving problems to support students’ conceptual understanding of word problems.

**Another way to do this** Use lesson 1-5 to teach students that subtraction or addition equations can be used to show situations in which two quantities are compared.

Bloom’s Levels: analyze
Webb’s DOK: 2

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### Engaging Scenario

**3- ACT Math: Grab A Bite**
In the 3-Act Math for Topic 1, students draw on their conceptual understanding of addition and subtraction. They make use of representations and tools such as

- Ten frames,
- Pictures, and
- Verbal counting.

---

**Engaging Experience 6**

**Teaching Point:** Today I’m going to teach you to solve problems involving comparing to find how many fewer objects are in one group than another.

**Suggested Length of Time:** 1 session

**Standards Addressed**

- **Priority:** 1.RA.C.8: Demonstrate fluency with addition and subtraction within 10
- **Supporting:** 1.RA.B.5 Use properties as strategies to add and subtract

**Detailed Description/Instructions:**

**One way to do this** Use lesson 1-6 to teach students that subtraction or addition equations can be used to show situations in which two quantities are compared.

Bloom’s Levels: analyze
Webb’s DOK: 2

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**Engaging Experience 7**

**Teaching Point:** Today I’m going to teach you to solve addition problems with a missing addend by using cubes or drawing a picture.

**Suggested Length of Time:** 2 sessions

**Standards Addressed**

- **Priority:** 1.RA.C.8: Demonstrate fluency with addition and subtraction within 10

**Detailed Description/Instructions:**

**One way to do this** Use hands on activities with cubes to teach students to model problems that involve a missing addend. Have students also model the situations by drawing a picture. The focus should be on using Greg Tang’s 6 step framework for solving problems to support students’ conceptual understanding of word problems.

**Another way to do this** Use lesson 1-7 to teach students that addition equations can be used to find a missing addend.

Bloom’s Levels: apply
Webb’s DOK: 2

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Engaging Experience 8
Teaching Point: Today I’m going to teach you to solve problems involving putting together or taking apart by using cubes or drawing a picture.
Suggested Length of Time: 1 session
Standards Addressed
  Priority: 1.RA.C.8: Demonstrate fluency with addition and subtraction within 10
Detailed Description/Instructions:
  One way to do this
  Another way to do this Use lesson 1-8 to teach students that addition or subtraction equations can be used to show situations involving a missing part. The focus should be on using Greg Tang’s 6 step framework for solving problems to support students’
Bloom’s Levels: apply
Webb’s DOK: 2

Engaging Experience 9
Teaching Point: Today I’m going to teach you to explain your thinking in order to solve addition and subtraction problems by using pictures, numbers, or words.
Suggested Length of Time: 1 session
Standards Addressed
  Priority: 1.RA.C.8: Demonstrate fluency with addition and subtraction within 10
Detailed Description/Instructions:
  One way to do this
  Another way to do this Use lesson 1-9 to teach students that good math thinkers use math to explain why they are right. They can talk about the math that others do, too.
Bloom’s Levels: evaluate
Webb’s DOK: 3

Topic 3: Addition Facts to 20: Use Strategies
Students explore strategies to add within 20

Essential Questions:
○ What strategies can be used to find addition facts?
Enduring Understandings:
○ There are multiple strategies to use when adding.
Priority Standards:
○ 1.RA.C.7: Add and subtract within 20
○ 1.RA.B.5: Use properties as strategies to add and subtract

<table>
<thead>
<tr>
<th>Standard</th>
<th>Unwrapped Concepts (Students need to know)</th>
<th>Unwrapped Skills (Students need to be able to do)</th>
<th>Bloom’s Taxonomy Levels</th>
<th>Webb's DOK</th>
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<tbody>
<tr>
<td>1.RA.C.7</td>
<td>within 20</td>
<td>add, subtract</td>
<td>apply</td>
<td>2</td>
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Unit Vocabulary:

<table>
<thead>
<tr>
<th>Academic Cross-Curricular Words</th>
<th>Content/Domain Specific</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Open Number Line</td>
</tr>
<tr>
<td></td>
<td>Doubles Plus Facts</td>
</tr>
<tr>
<td></td>
<td>Make 10</td>
</tr>
</tbody>
</table>

**Engaging Experience 1**

**Teaching Point:** Today I’m going to teach you to count on to add by using a number line.

**Suggested Length of Time:** 1 session

**Standards Addressed**

**Priority:**
- 1.RA.C.7: Add and subtract within 20
- 1.RA.B.5: Use properties as strategies to add and subtract

**Detailed Description/Instructions:**

**One way to do this** Use lesson 3-1 to teach students to solve an addition problem by using a number line to count on.

**Bloom’s Levels:** apply

**Webb’s DOK:** 2

**Engaging Experience 2**

**Teaching Point:** Today I’m going to teach you to count on to add by using an open number line.

**Suggested Length of Time:** 1 session

**Standards Addressed**

**Priority:**
- 1.RA.C.7: Add and subtract within 20
- 1.RA.B.5: Use properties as strategies to add and subtract

**Detailed Description/Instructions:**

**One way to do this** Use lesson 3-2 to teach students to solve addition problems by counting on an open number line.

**Bloom’s Levels:** apply

**Webb’s DOK:** 2

**Engaging Experience 3**

**Teaching Point:** Today I’m going to teach you memorize doubles facts by using cubes.

**Suggested Length of Time:** 1 session

**Standards Addressed**

**Priority:**
- 1.RA.C.7: Add and subtract within 20
- 1.RA.B.5: Use properties as strategies to add and subtract

**Detailed Description/Instructions:**

**One way to do this** Use lesson 3-3 to teach students that doubles facts has the same number for both addends and can be used to solve problems using real life situations.

**Bloom’s Levels:** apply

**Webb’s DOK:** 2

**Engaging Experience 4**

BOE Approved June 20, 2019
Teaching Point: Today I’m going to teach you to solve doubles plus facts by using doubles facts.

Suggested Length of Time: 1 session

Standards Addressed

Priority: 1.RA.C.7: Add and subtract within 20
  1.RA.B.5: Use properties as strategies to add and subtract

Detailed Description/Instructions:

One way to do this Use lesson 3-4 to teach students basic addition facts that are near doubles can be found using a related doubles fact.

Bloom’s Levels: apply

Webb’s DOK: 2

Engaging Experience 5

Teaching Point: Today I’m going to teach you to make 10 to add numbers to 20 by numbers a ten frame.

Suggested Length of Time: 1 session

Standards Addressed

Priority: 1.RA.C.7: Add and subtract within 20
  1.RA.B.5: Use properties as strategies to add and subtract

Detailed Description/Instructions:

One way to do this Use lesson 3-5 to teach students some addition facts can be solved by changing them to an equivalent fact with 10.

Bloom’s Levels: apply

Webb’s DOK: 2

Engaging Experience 6

Teaching Point: Today I’m going to teach you to make 10 to add numbers to 20 by using a number line.

Suggested Length of Time: 1 session

Standards Addressed

Priority: 1.RA.C.7: Add and subtract within 20
  1.RA.B.5: Use properties as strategies to add and subtract

Detailed Description/Instructions:

One way to do this Use lesson 3-6 to teach students some addition facts can be solved by changing them to an equivalent fact with 10.

Bloom’s Levels: apply

Webb’s DOK: 2

Engaging Experience 7

Teaching Point: Today I’m going to teach you to solve addition problems by using different strategies.

Suggested Length of Time: 1 session

Standards Addressed

Priority: 1.RA.C.7: Add and subtract within 20
  1.RA.B.5: Use properties as strategies to add and subtract

Detailed Description/Instructions:

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**Engaging Scenario**

3- ACT Math: Go For A Spin
In the 3-Act Math for Topic 3, students draw on their conceptual understanding of addition and near doubles. They use representations and tools such as:
- Counters,
- Cubes, and
- Number lines.

**Engaging Experience 8**
**Teaching Point:** Today I’m going to teach you to solve different types of addition word problems by using a variety of strategies.

**Suggested Length of Time:** 1 session

**Standards Addressed**
- **Priority:** 1.RA.C.7: Add and subtract within 20
  1.RA.B.5: Use properties as strategies to add and subtract

**Detailed Description/Instructions:**
- **One way to do this** Use lesson 3-8 to teach students objects, drawings, and equations can help you solve different types of word problems.

**Bloom’s Levels:** analyze
**Webb’s DOK:** 2

**Engaging Experience 9**
**Teaching Point:** Today I’m going to teach you to critique the reasoning of others by using known information about addition and subtraction.

**Suggested Length of Time:** 1 session

**Standards Addressed**
- **Priority:** 1.RA.C.7: Add and subtract within 20
  1.RA.B.5: Use properties as strategies to add and subtract

**Detailed Description/Instructions:**
- **One way to do this** Use lesson 3-9 to teach students good math thinkers use math to explain why they are right. They can talk about the math that others do, too.

**Bloom’s Levels:** evaluate
**Webb’s DOK:** 3

**Topic 4: Subtraction Facts to 20: Use Strategies**
Students use strategies based on the properties of operations and the relationship

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Essential Questions:
- What strategies can be used to find subtraction facts?

Enduring Understandings:
- There are multiple strategies to use when subtracting.

Priority Standards:
- 1.RA.C.7: Add and subtract within 20
- 1.RA.B.5: Use properties as strategies to add and subtract

<table>
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<tr>
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<td>add, subtract</td>
<td>apply</td>
<td>2</td>
</tr>
<tr>
<td>1.RA.B.5</td>
<td>properties as strategies to add and subtract</td>
<td>use</td>
<td>apply</td>
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Unit Vocabulary:

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<thead>
<tr>
<th>Academic Cross-Curricular Words</th>
<th>Content/Domain Specific</th>
</tr>
</thead>
<tbody>
<tr>
<td>Related Facts</td>
<td>Fact Family</td>
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</tbody>
</table>

Engaging Experience 1
Teaching Point: Today I’m going to teach you to count on or back to subtract by using a number line.

Suggested Length of Time: 1 session

Standards Addressed
Priority: 1.RA.C.7: Add and subtract within 20
1.RA.B.5: Use properties as strategies to add and subtract

Detailed Description/Instructions:
One way to do this Use lesson 4-1 to teach students you can count back the number of spaces you are subtracting or find the distance between the two numbers when using a number line.

Bloom’s Levels: apply
Webb’s DOK: 2

Engaging Experience 2
Teaching Point: Today I’m going to teach you make 10 to subtract by using ten frames.

Suggested Length of Time: 1 session

Standards Addressed
Priority: 1.RA.C.7: Add and subtract within 20
1.RA.B.5: Use properties as strategies to add and subtract

Detailed Description/Instructions:
One way to do this Use lesson 4-2 to teach students some subtraction facts can be

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simplified by making use of the numbers’ relationships to 10.

Bloom’s Levels: apply
Webb’s DOK: 2

Engaging Experience 3
Teaching Point: Today I’m going to teach you to use 10 as a landmark for counting on to subtract by using ten frames.
Suggested Length of Time: 1 session

Standards Addressed
Priority: 1.RA.C.7: Add and subtract within 20
1.RA.B.5: Use properties as strategies to add and subtract

Detailed Description/Instructions:
One way to do this Use lesson 4-3 to teach students some subtraction facts can be simplified by making use of the numbers’ relationships to 10.

Bloom’s Levels: apply
Webb’s DOK: 2

Engaging Experience 4
Teaching Point: Today I’m going to teach you make addition and subtraction facts with the same 3 numbers by using part-part-whole models.
Suggested Length of Time: 1 session

Standards Addressed
Priority: 1.RA.C.7: Add and subtract within 20
1.RA.B.5: Use properties as strategies to add and subtract

Detailed Description/Instructions:
One way to do this Use lesson 4-4 to teach students the inverse relationship between addition and subtraction can be used to find subtraction facts; every subtraction fact has at least one related addition fact.

Bloom’s Levels: apply
Webb’s DOK: 2

Engaging Experience 5
Teaching Point: Today I’m going to teach you to use addition facts to find subtraction facts by using part-part-whole models.
Suggested Length of Time: 1 session

Standards Addressed
Priority: 1.RA.C.7: Add and subtract within 20
1.RA.B.5: Use properties as strategies to add and subtract

Detailed Description/Instructions:
One way to do this Use lesson 4-5 to teach students the inverse relationship between addition and subtraction can be used to find subtraction facts; every subtraction fact has at least one related addition fact.

Bloom’s Levels: apply
Webb’s DOK: 2

Engaging Experience 6
Teaching Point: Today I’m going to teach you to find subtraction facts by using addition facts.

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Engaging Experience 7
Teaching Point: Today I’m going to teach you to solve subtraction problems by using a variety of strategies.
Suggested Length of Time: 1 session
Standards Addressed
  Priority: 1.RA.C.7: Add and subtract within 20
  1.RA.B.5: Use properties as strategies to add and subtract
Detailed Description/Instructions:
  One way to do this Use lesson 4-6 to teach students the inverse relationship between addition and subtraction can be used to find subtraction facts; every subtraction fact has at least one related addition fact.
Bloom’s Levels: apply
Webb’s DOK: 2

Engaging Experience 8
Teaching Point: Today I’m going to teach you to solve different types of addition and subtraction problems with unknowns in different positions by drawing a picture.
Suggested Length of Time: 1 session
Standards Addressed
  Priority: 1.RA.C.7: Add and subtract within 20
  1.RA.B.5: Use properties as strategies to add and subtract
Detailed Description/Instructions:
  One way to do this Use lesson 4-7 to teach students there are different ways to solve subtraction facts. Certain strategies may be easier to use for certain facts.
Bloom’s Levels: apply
Webb’s DOK: 2

Engaging Experience 9
Teaching Point: Today I’m going to teach you to write and solve number stories by using reasoning.
Suggested Length of Time: 1 session
Standards Addressed
  Priority: 1.RA.C.7: Add and subtract within 20
  1.RA.B.5: Use properties as strategies to add and subtract
Detailed Description/Instructions:
  One way to do this Use lesson 4-9 to teach students good math thinkers know how
to think about words and numbers to solve problems.

**Bloom’s Levels:** apply  
**Webb’s DOK:** 2

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**Topic 5: Work with Addition and Subtraction Equations**

Students work with addition and subtraction equations. They learn how to find a missing number in an equation and determine if an equation is true or false.

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**Essential Questions:**
- How can adding and subtracting help you solve or complete equations?

**Enduring Understandings:**
- The equal sign means “the same value as”.

**Priority Standards:**
- 1.RA.A.1 Use addition and subtraction within 20 to solve (word problems)
- 1.RA.B.5: Use properties as strategies to add and subtract

**Supporting Standards:**
- 1.RA.A.2 Solve problems that call for addition of three whole numbers whose sum is within 20
- 1.RA.A.3 Develop the meaning of the equal sign and determine if equations involving addition and subtraction are true or false.
- 1.RA.A.4 Determine the unknown whole number in an addition or subtraction equation relating three whole numbers

![Table with Standards, Unwrapped Concepts, Unwrapped Skills, Bloom’s Taxonomy Levels, and Webb's DOK]

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**Unit Vocabulary:**

<table>
<thead>
<tr>
<th>Academic Cross-Curricular Words</th>
<th>Content/Domain Specific</th>
</tr>
</thead>
<tbody>
<tr>
<td>Properties</td>
<td>Addition</td>
</tr>
<tr>
<td>Strategies</td>
<td>subtraction</td>
</tr>
</tbody>
</table>

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**Engaging Experience 1**

**Teaching Point:** Today I’m going to teach you to find the unknown number in an equation by using counters.

**Suggested Length of Time:** 1 session

**Standards Addressed**

**Priority:** 1.RA.A.1 Use addition and subtraction within 20 to solve (word problems)
- 1.RA.B.5: Use properties as strategies to add and subtract

**Detailed Description/Instructions:**

**One way to do this** Use lesson 5-1 to teach students models and the relationship

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between addition and subtraction can be used to solve equations with an unknown part.

**Bloom’s Levels:** apply  
**Webb’s DOK:** 2

### Engaging Experience 2
**Teaching Point:** Today I’m going to teach you to determine if addition and subtraction equations are true or false by using counters.

**Suggested Length of Time:** 1 session

**Standards Addressed**

- **Priority:** 1.RA.A.1 Use addition and subtraction within 20 to solve (word problems)  
  1.RA.B5: Use properties as strategies to add and subtract
- **Supporting:** 1.RA.A.3 Develop the meaning of the equal sign and determine if equations involving addition and subtraction are true or false.

**Detailed Description/Instructions:**

**One way to do this** Use lesson 5-2 to teach students an addition or subtraction equation is true if the values on each side of the equal sign are the same. An addition or subtraction equation is false if the values on each side of the equal sign are not the same.

**Bloom’s Levels:** apply  
**Webb’s DOK:** 2

### Engaging Experience 3
**Teaching Point:** Today I’m going to teach you to find the missing numbers in equations to make them true by using counters.

**Suggested Length of Time:** 1 session

**Standards Addressed**

- **Priority:** 1.RA.A.1 Use addition and subtraction within 20 to solve (word problems)  
  1.RA.B5: Use properties as strategies to add and subtract
- **Supporting:** 1.RA.A.3 Develop the meaning of the equal sign and determine if equations involving addition and subtraction are true or false.

**Detailed Description/Instructions:**

**One way to do this** Use lesson 5-3 to teach students an addition or subtraction equation is true if the values on each side of the equal sign are the same. Models, addition facts, and subtraction facts can be used to solve equations with an unknown part.

**Bloom’s Levels:** apply  
**Webb’s DOK:** 2

### Engaging Experience 4
**Teaching Point:** Today I’m going to teach you to add three numbers by using a variety of strategies.

**Suggested Length of Time:** 1 session

**Standards Addressed**

- **Priority:** 1.RA.A.1 Use addition and subtraction within 20 to solve (word problems)  
  1.RA.B5: Use properties as strategies to add and subtract
- **Supporting:** 1.RA.A.2 Solve problems that call for addition of three whole numbers

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whose sum is within 20

Detailed Description/Instructions:

One way to do this Use lesson 5-4 to teach students three numbers can be grouped and added in any order.

Bloom’s Levels: apply
Webb’s DOK: 2

Engaging Experience 5
Teaching Point: Today I’m going to teach you to solve word problems with 3 addends by using different strategies.
Suggested Length of Time: 1 session
Standards Addressed

Priority: 1.RA.A.1 Use addition and subtraction within 20 to solve (word problems)
1.RA.B5: Use properties as strategies to add and subtract

Supporting: 1.RA.A.2 Solve problems that call for addition of three whole numbers whose sum is within 20
1.RA.A.4 Determine the unknown whole number in an addition or subtraction equation relating three whole numbers

Detailed Description/Instructions:

One way to do this Use lesson 5-5 to teach students numbers can be grouped in different ways to solve word problems with three addends.

Bloom’s Levels: apply
Webb’s DOK: 2

Engaging Scenario

3- ACT Math: Weighed Down
In the 3-Act Math for Topic 5, students draw on their conceptual understanding of addition and subtraction. They make use of representations and tools such as

- A balance
- Drawing a picture, and
- Numerical expressions

Engaging Experience 6
Teaching Point: Today I’m going to teach you to solve word problems involving comparison by using models.
Suggested Length of Time: 1 session
Standards Addressed

Priority: 1.RA.A.1 Use addition and subtraction within 20 to solve (word problems)
1.RA.B5: Use properties as strategies to add and subtract

Detailed Description/Instructions:

One way to do this Use lesson 5-6 to teach students objects, drawings, models, and equations can help you solve different types of word problems.

Bloom’s Levels: apply
Webb’s DOK: 2

Engaging Experience 7

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**Teaching Point:** Today I’m going to teach you to determine the missing number or symbol in an equation by making the equation true.

**Suggested Length of Time:** 1 session

**Standards Addressed**
- **Priority:** 1.RA.A.1 Use addition and subtraction within 20 to solve (word problems)
  - 1.RA.B5: Use properties as strategies to add and subtract

**Detailed Description/Instructions:**
- **One way to do this** Use lesson 5-7 to teach students good math thinkers are careful about what they write and say, so their ideas about math are clear.

**Bloom’s Levels:** apply

**Webb’s DOK:** 2
Overview of Unit:
In Topic 6, students organize and interpret data to answer questions. They learn to represent data visually using tally charts and picture graphs.

Formative Assessment Options
(Administered before or during a unit, topic or lesson to guide instruction and give feedback to students.)
- Math Interview/ Conference
- Quick Checks (Check marks within lesson)
- Topic Pretest
- Convince Me

Summative Assessment Options
(Administered at the end of unit or topic to assess mastery of learning objectives.)
- Online version
- Topic Assessment Practice
- Topic Performance Task
- Cumulative/ Benchmark Assessment (print or online)

Math Review:
- Math Anytime
  - Daily Review
  - Today’s Challenge
  - Fluency
    - enVision 2020
- Topic Opener: Review What You Know
- Vocabulary Review

Number and Operation Routines (enVision 2020)

| Topic 6 | Voting Data |

Daily Routines
Below are the Daily Routines suggested for this unit. Once established, some routines may be continued all year, while others can introduce new concepts that build on previous routines. While engaged in Daily Routines, be sure to pay particular attention to equitable participation, allowing all students to participate.

Title: Data and Graphing
Objective: To provide students opportunities to gather, organize, represent and interpret data.
Description:
- Using a topic of interest to students, ask a question that can be answered within 2–3 categories such as have a sibling/don’t have a sibling, no siblings/1 sibling/more than 1 sibling, like red apples/green apples/yellow apples better, etc. Organize the data in a different way each time data is collected; for example, randomly placed, in the order it is collected, on a T-chart, on a Venn diagram, with tally

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marks, with Post-Its, organized into rows or columns, etc.

- The purpose is to expose students to a variety of different organizational strategies for data. Once several strategies have been introduced, allow students to choose the strategy that works the best for them. Choose 2–3 student representations to compare and contrast, always working toward representations that show the information clearly and allow for easy comparison between categories.
- After the data is recorded, discuss which category has more, which has less, how many responses there are altogether and if the representation was helpful in answering the questions.

Number Routines: Topic 6

Number Talk: Coin Images

**Description:** Show students a set of coin (either by picture or coins under the document camera). Ask students to use numbers to describe what they see. (ex, I see 4 brown coins. I see 2 coins with faces and 5 coins with buildings).

**Goal:** To use numbers to describe coins they see. This will be used to expose students to coins before Unit 4 where they will be identifying coin amounts.

Learning Station Bank

Learning stations are an activity based structure that provides students with opportunities for student-led engagement with or extensions of previously taught concepts. Below are some learning stations suggested for this unit. Once established, some stations may be continued all year, while others can introduce new concepts that build on previous activities. You may choose which learning stations to use and for how long according to the needs of your students.

<table>
<thead>
<tr>
<th>Learning Station Descriptions</th>
<th>Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Title:</strong> Cube Stacks</td>
<td>Dice</td>
</tr>
<tr>
<td><strong>Objective:</strong> To gain flexibility in grouping ten 1s to make one 10.</td>
<td>Linking cubes</td>
</tr>
<tr>
<td><strong>Directions:</strong></td>
<td>Place value mat</td>
</tr>
<tr>
<td>1. Partner 1 rolls the die and counts out that many linking cubes, placing them on the first square of Partner 1 Stack on the game board.</td>
<td>Cube Stacks Game Board</td>
</tr>
<tr>
<td>2. Partner 2 does the same, and adds the cubes to Partner 2 Stack.</td>
<td>Cube Stacks Record Sheet</td>
</tr>
<tr>
<td>3. Partners take turns rolling the die and placing their cubes on the game board until all squares are filled.</td>
<td></td>
</tr>
<tr>
<td>4. Both partners regroup their cubes into sticks of 10 and write the resulting two digit number on the record sheet.</td>
<td></td>
</tr>
<tr>
<td>5. Together, partners decide which number is greater and record the appropriate comparison symbol.</td>
<td></td>
</tr>
<tr>
<td><strong>Variation:</strong> Use the Optional 8 Section Cube Stacks Game Board</td>
<td>2 dice</td>
</tr>
<tr>
<td><strong>Dice Addition</strong> (from Unit 1.1)</td>
<td>Counters in 2 colors</td>
</tr>
<tr>
<td></td>
<td>Ten Frames BLM</td>
</tr>
</tbody>
</table>

BOE Approved June 20, 2019
Variations:
1. Players can use three dice to practice adding three numbers.
2. Players can use 0–5 dice to practice addition within 10.

**Pop! - Add 0, 1, and 2 (From Unit 1.3)**

Variations:
Play with only the 1–10 cards, only the 10–20 cards, only the +1 cards, or only the +2 cards.

**Additional Personalized Practice and Application Suggestions:**

<table>
<thead>
<tr>
<th>Intervention</th>
<th>On-level</th>
<th>Advanced</th>
</tr>
</thead>
<tbody>
<tr>
<td>● Reteach to Build Understanding</td>
<td>● Build Mathematical Fluency</td>
<td>● Enrichment</td>
</tr>
<tr>
<td>● Intervention Activity</td>
<td>● Additional Practice</td>
<td>● Pick a Project</td>
</tr>
<tr>
<td>● Additional Practice</td>
<td></td>
<td>● enVision STEM Activity</td>
</tr>
</tbody>
</table>

**Topic 6: Represent and Interpret Data**

Students organize and interpret data to answer questions. They learn to represent data visually using tally charts and picture graphs.

**Essential Questions:**
- How can graphs be used to show data and answer questions?

**Enduring Understandings:**
- Tally charts are useful for recording and organizing some kinds of data.
- A picture graph uses pictures to show and organize data.
- Some problems can be solved by making, reading, and analyzing a tally chart or picture graph.

**Priority Standards for unit:**
- 1.DS.A.1 - Collect, organize and represent data with up to three categories.
- 1.DS.A.2 - Draw conclusions from object graphs, picture graphs, T-charts and tallies.

**Supporting Standards for unit:**
- 1.GM.C.9 - Know the value of a penny, nickel, dime and quarter. (Number Routines)
Engaging Experience 1

**Teaching Point:** Today I’m going to teach you to organize data into categories by using tally marks.

**Suggested Length of Time:** 1 session

**Standards Addressed**

**Priority:**

1.DS.A.1 - Collect, organize and represent data with up to three categories.
1.DS.A.2 - Draw conclusions from object graphs, picture graphs, T-charts and tallies.

**Detailed Description/Instructions:**

**One way to do this** Use lesson 6-1 to teach students that tally charts are useful for recording and organizing some kinds of data. The visual learning for lesson 6-1 teaches each tally mark stands for an object. It also supports counting tallies by groups of 5.

**Another way to do this** Use your lunch count system to teach students that tally charts are useful for recording and organizing some kinds of data. Engage your students in reporting the lunch choices for the day to the cafeteria so the right number of lunches are ready to go for the class. Ask questions about the data to interpret most, least, how many, and in all. These questions build a foundation for interpreting data, leading up to comparing the data in lesson 6-3.

**Another way to do this** Use the pick a project to teach students that tally charts are useful for recording and organizing some kinds of data. You can use Realize 6-1 “Organize Data into Three Categories: Another Look” as a quick video model for collecting data. Collect and organize data today. Ask questions about the data to interpret most, least, how many, and in all. These questions build a foundation for interpreting data, leading up to comparing the data in lesson 6-3. The visual learning for lesson 6-1 teaches each tally mark stands for an object. It also supports counting tallies by groups of 5.

**Bloom’s Levels:** Organize

**Webb’s DOK:** 2

Engaging Experience 2

**Teaching Point:** Today I’m going to teach you to collect and organize information by using a
picture graph.

**Suggested Length of Time:** 1 session

**Standards Addressed**

**Priority:** 1.DS.A.1 - Collect, organize and represent data with up to three categories.

1.DS.A.2 - Draw conclusions from object graphs, picture graphs, T-charts and tallies.

**Detailed Description/Instructions:**

**One way to do this** Use lesson 6-2 to teach students that a picture graph uses pictures to show and organize data. Translating data from a tally chart to a picture graph helps students understand that the same data can be displayed in different formats. The visual learning for 6-2 introduces the idea that a picture graph is organized in a way that makes it easier to see most/least.

**Another way to do this** Use your lunch count system to teach students to collect and organize information on a picture graph. Engage your students in reporting the lunch choices for the day to the cafeteria in a picture graph. Ask questions about the data to interpret favorite, most, least, how many, and in all. These questions build a foundation for interpreting data, leading up to comparing the data in lesson 6-3.

**Another way to do this** Use the pick a project to teach students to organize information on a picture graph. You can use Realize 6-2 “Organize Data into Three Categories: Another Look” as a quick video model for collecting data. Ask questions about the data to interpret favorite, most, least, how many, and in all. These questions build a foundation for interpreting data, leading up to comparing the data in lesson 6-3.

**Bloom’s Levels:** Organize

**Webb’s DOK:** 2

**Engaging Experience 3**

**Teaching Point:** Today I’m going to teach you to compare data by using a picture graph.

**Suggested Length of Time:** 1 session

**Standards Addressed**

**Priority:** 1.DS.A.2 - Draw conclusions from object graphs, picture graphs, T-charts and tallies.

**Detailed Description/Instructions:**

**One way to do this** Use lesson 6-3 to teach students that a picture graph can be used to compare data.

**Another way to do this** Pose a high interest topic with 3 options. Use a tally chart to collect and organize the data. Engage the students in using the data in the tally chart to make a picture graph. Ask questions about the data with an emphasis on using the picture graph to compare (how many more, how many fewer).

**Another way to do this** Use the pick a project to teach students to interpret data. Ask questions about the data with an emphasis on using the picture graph to compare (how many more, how many fewer).

**Bloom’s Levels:** Compare

**Webb’s DOK:** 2

**Engaging Experience 4**

**Teaching Point:** Today I’m going to teach you to solve problems by using a picture graph.

**Suggested Length of Time:** 1 session

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Standards Addressed

Priority: 1.DS.A.2 - Draw conclusions from object graphs, picture graphs, T-charts and tallies.

Detailed Description/Instructions:

One way to do this Use lesson 6-4 to teach students some problems can be solved by making, reading, and analyzing a tally chart or picture graph. The visual learning models how to count on with tally marks to find a missing part in the data.

Another way to do this Take a blind survey of the class for a graph with 2 categories. Only record 1 of the categories. Engage the students in solving and recording how many students voted for the 2nd category.

Another way to do this

Bloom’s Levels: Interpret
Webb’s DOK: 2

Engaging Experience 5

Teaching Point: Today I’m going to teach you how to persevere by solving problems about sets of data.

Suggested Length of Time: 1 session

Standards Addressed

Math Practice: 1 - Make sense of problems and persevere in solving them.
Priority: N/A

Detailed Description/Instructions:

One way to do this Use lesson 6-5 to teach students that good math thinkers know what the problem is about. They have a plan to solve it. They keep trying if they get stuck.

Another way to do this Use this session to differentiate. Have students who are demonstrating understanding of the priority standards use 6-5 to persevere. Reteach or provide reinforcement to students who have not yet mastered the priority standards.

Another way to do this Use the pick a project individually, in partners, or small groups to apply the priority standards.

Bloom’s Levels: Apply
Webb’s DOK: 3
Unit 3: Numbers and Computation

Subject: Math
Grade: 1
Name of Unit: Operations and Algebra
Length of Unit: 56 days

Overview of Unit:
In Topic 7, students extend their understanding of the counting sequence to numbers through 120.
In Topic 8 & 9, students learn that two digit numbers represent amounts of tens and ones. They use their understanding of place value to compare numbers.
In Topic 10 & 11, students use strategies based on place value and properties of operations to add within 100 and subtract multiples of 10 within 100.

Formative Assessment Options (Administered before or during a unit, topic or lesson to guide instruction and give feedback to students.)

- Math Interview/ Conference
- Quick Checks (Check marks within lesson)
- Topic Pretest
- Convince Me

Summative Assessment Options (Administered at the end of unit or topic to assess mastery of learning objectives.)

- Online version
- Topic Assessment Practice
- Topic Performance Task
- Cumulative/ Benchmark Assessment (print or online)

Math Review:
- Math Anytime
  - Daily Review
  - Today’s Challenge
  - Fluency
    - enVision 2020
    - Sparkle and Happy Counting (see Schoology: 1st Grade: Math:Fluency Routines- Flash Activities)
- Topic Opener: Review What You Know
- Vocabulary Review

Number and Operation Routines (enVision 2020)

<table>
<thead>
<tr>
<th>Topic 7</th>
<th>Topic 8</th>
<th>Topic 9</th>
<th>Topic 10</th>
</tr>
</thead>
<tbody>
<tr>
<td>How Many Tens?</td>
<td>Dance the Numbers by Tens and Ones</td>
<td>Mystery Number</td>
<td>Make 30</td>
</tr>
<tr>
<td></td>
<td>Digit Place</td>
<td></td>
<td>Number Scavenger Hunt</td>
</tr>
</tbody>
</table>

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Daily Routines

Below are the Daily Routines suggested for this unit. Once established, some routines may be continued all year, while others can introduce new concepts that build on previous routines. While engaged in Daily Routines, be sure to pay particular attention to equitable participation, allowing all students to participate.

Title: One More/One Less, Ten More/Ten Less

Objective: To practice number concepts using the hundreds chart.

Description:
- Cover a number on the 99 chart and have students determine which number is under the cover. Require students to support their number choice with reasoning about place value and the number’s position on the chart.

- After students show success with one number, cover a few numbers in patterns to see if student can determine which numbers are under the cover. See possible examples below:

Number Routines: Topic 7

Double Ten-Frames Targeting Doubles/Near Doubles (page 109)

Beginning as early as kindergarten, children are able to recall sums for many doubles. This strategy capitalizes on this strength by adjusting one or both numbers to make a double or near-double combination.

Frame number talks consist of three to five problems, each sequentially labeled A, B, C, and so on. The sequence of problems within a given number talk allows students to apply the strategies from previous problems to subsequent problems.

As each problem is shown, ask students, “How many dots you see? How do you see them?”

Reference your copy of Number Talks: Whole Number Computation by Sherry Parrish

Number Routines: Topics 8 and 9

Number Talk: Rekenreks Targeting Making 10 (page 112)

BOE Approved June 20, 2019
The focus of this strategy is to be able to utilize fluency with ten to expedite adding. Being able to take numbers apart with ease, or fluency, is the key to using this strategy.

Rekenrek number talks consist of three to five problems, each sequentially labeled A, B, C, and so on. The sequence of problems within a given number talk allows students to apply strategies from previous problems to subsequent problems.

As each problem is shown on a rekenrek, ask students, “How many beads do you see? How do you see them?”

Reference your copy of *Number Talks: Whole Number Computation* by Sherry Parrish

### Number Talk: Double Ten-Frames Targeting Making 10 (page 114)

The focus of this strategy is to be able to utilize fluency with ten to expedite adding. Being able to take numbers apart with ease, or fluency, is the key to using this strategy.

Frames number talks consist of three to five problems, each sequentially labeled A, B, C, and so on. The sequence of problems within a given number talk allows students to apply the strategies from previous problems to subsequent problems.

As each problem is shown, ask students, “How many dots you see? How do you see them?”

Reference your copy of *Number Talks: Whole Number Computation* by Sherry Parrish

### Number Routines: Topics 10 and 11

#### Number Talk: Number Sentences Targeting Counting on (page 106)

Counting On is a transitional strategy used primarily in first and early-second grade. The students starts with one of the numbers and counts on from this point. When students are able to conceptualize a number, they will transition from Counting All to Counting On.

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These number talks consist of three to five problems. The sequence of problems within a given number talk allows students to apply strategies from previous problems to subsequent problems.

```
3 + 6  4 + 6  9 + 1
3 + 7  7 + 4  9 + 3
3 + 8  4 + 8  9 + 5
     4 + 9  9 + 7
```

Reference your copy of *Number Talks: Whole Number Computation* by Sherry Parrish

**Number Talk: Number Sentences Targeting Doubles/Near Doubles (page 111)**

Beginning as early as kindergarten, children are able to recall sums for many doubles. This strategy capitalizes on this strength by adjusting one or both numbers to make a double or near-double combination.

These number talks consist of three to five problems. The sequence of problems within a given number talk allows students to apply strategies from previous problems to subsequent problems.

```
2 + 2  7 + 7  12 + 12
2 + 3  7 + 6  12 + 13
3 + 3  7 + 8  13 + 13
3 + 4  8 + 8  13 + 14
```

Reference your copy of *Number Talks: Whole Number Computation* by Sherry Parrish

**Number Talk: Number Sentences Targeting Making 10 (page 117)**

These number talks consist of three to five problems. The sequence of problems within a given number talk allows students to apply strategies from previous problems to subsequent problems.

The focus of this strategy is to be able to utilize fluency with ten to expedite adding. Being able to take numbers apart with ease, or fluency, is the key to using this strategy.

```
9 + 1  5 + 5  8 + 2
9 + 3  9 + 5  8 + 3
9 + 1  9 + 5  8 + 5
9 + 3  9 + 5  2 + 5
9 + 5  9 + 7  8 + 8
```

Reference your copy of *Number Talks: Whole Number Computation* by Sherry Parrish

**Learning Station Bank**

Learning stations are an activity based structure that provides students with opportunities for student-led engagement with or extensions of previously taught concepts. Below are some learning stations suggested for this unit. Once established, some stations may be continued all year, while others can introduce new concepts that build on previous activities. You may choose which learning stations to use and for how long according to the needs of your students.

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<th>Learning Station Descriptions</th>
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</tr>
</thead>
</table>

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<table>
<thead>
<tr>
<th>Title: Addition Triangles</th>
<th>Objective: Practice addition to 20</th>
</tr>
</thead>
<tbody>
<tr>
<td>Directions:</td>
<td>Students fill in the blank circles on each vertex.</td>
</tr>
<tr>
<td></td>
<td>The number in each square along the sides is equal to the sum of the numbers in the circles on the vertices of each side.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Title: Puzzles on a 99 Chart</th>
<th>Objective: Use patterns in the 99 chart to label missing pieces of the grid.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Directions:</td>
<td>Students use their understanding of skip counting, mentally finding +1/-1 and +10/-10, and the patterns on the 99 chart to complete a section of the chart.</td>
</tr>
<tr>
<td></td>
<td>Students may use the 99 chart to support them; they may use it at first and phase out its use as they develop strategies.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Title: Towers to 100</th>
<th>Objective: Understand 10 ones as a unit called a “ten.”</th>
</tr>
</thead>
<tbody>
<tr>
<td>Directions:</td>
<td>Students take turns rolling a die and taking that many linking cubes to place in a collective pile.</td>
</tr>
<tr>
<td></td>
<td>When 10 or more cubes have been collected, students take turns assembling them into towers of 10.</td>
</tr>
<tr>
<td></td>
<td>Play continues until students have created 10 towers of 10.</td>
</tr>
<tr>
<td>Variation:</td>
<td>Students can use a 99 or 100 chart to place each linking cube, connecting the cubes when they get 10 on a row.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Title: Exchange to 100</th>
<th>Objective: Understand 10 ones as a unit called a “ten.”</th>
</tr>
</thead>
<tbody>
<tr>
<td>Directions:</td>
<td>Students roll two dice, add them together and collect the same number of cubes as the number rolled.</td>
</tr>
<tr>
<td></td>
<td>Students exchange 10 ones cubes for 1 tens rod whenever possible. Students call out “Exchange!” anytime they can make that exchange.</td>
</tr>
<tr>
<td></td>
<td>The winner is the person who can exchange 10 tens rods for a 1 hundreds flat.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Title: Number Jumping</th>
<th>Objective: Find 1 more/less, 10 more/less, and 100 more/less than a given number.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Directions:</td>
<td>Draw 2 cards and arrange them to make the greatest number</td>
</tr>
<tr>
<td></td>
<td>Write the number in expanded notation</td>
</tr>
<tr>
<td></td>
<td>Pick a Change Card</td>
</tr>
<tr>
<td></td>
<td>Add or subtract the number on the card</td>
</tr>
<tr>
<td></td>
<td>Write the new number in the last column of the recording sheet</td>
</tr>
</tbody>
</table>

### Additional Personalized Practice and Application Suggestions:

<table>
<thead>
<tr>
<th>Intervention</th>
<th>On-level</th>
<th>Advanced</th>
</tr>
</thead>
</table>

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Topic 7: Extending the Counting Sequence
Students extend their understanding of the counting sequence to numbers through 120.

**Essential Questions:**
- What number patterns are there when counting to 120?

**Enduring Understandings:**
- The decade numbers are built on groups of ten. The oral names are similar, but not the same as the numbers of tens counted.
- Numbers can be used to tell how many. Numbers 11-19 can be shown as a group of 10 and up to 9 more.
- Counting and place value patterns can be seen on a hundreds chart.
- Skip counting can be used to find the total number of objects in a collection of equal groups.

**Priority Standards for unit:**
- 1.NBT.A.1 - Understand that 10 can be thought of as a bundle of 10 ones - called a “ten”.

**Supporting Standards for unit:**
- 1.NS.A.1 - Count to 120, starting at any number less than 120.
- 1.NS.A.4 - Count by 5s to 100 starting at any multiple of five.
- 1.NBT.A.4 - Count by 10s to 120 starting at any number.

<table>
<thead>
<tr>
<th>Standard</th>
<th>Unwrapped Concepts (Students need to know)</th>
<th>Unwrapped Skills (Students need to be able to do)</th>
<th>Bloom's Taxonomy Levels</th>
<th>Webb's DOK</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.NBT.A.2</td>
<td>two-digit numbers are composed of ten(s) and one(s)</td>
<td>understand</td>
<td>understand</td>
<td>1</td>
</tr>
</tbody>
</table>

**Unit Vocabulary:**

<table>
<thead>
<tr>
<th>Academic Cross-Curricular Words</th>
<th>Content/Domain Specific</th>
</tr>
</thead>
<tbody>
<tr>
<td>row, column</td>
<td>hundred chart, tens digit, ones digit</td>
</tr>
</tbody>
</table>

**Engaging Experience 1**

**Teaching Point:** Today I’m going to teach you to count by 10s to 120 by using ten-frames.

**Suggested Length of Time:** 1 session

**Standards Addressed**

**Priority:** 1.NBT.A.1 - Understand that 10 can be thought of as a bundle of 10 ones -
called a “ten”.

**Supporting:**
1.NBT.A.4 - Count by 10s to 120 starting at any number.  
1.NS.A.4 - Count by 5s to 100 starting at any multiple of five.

**Detailed Description/Instructions:**
- **One way to do this** Use lesson 7-1 to teach students that decade numbers are built on groups of 10. The oral names are similar, but not the same as the number of tens counted. (This may be a very short session)
- **Another way to do this** This could be taught/practiced during the Number Routine portion of the day.

**Bloom’s Levels:** understand  
**Webb’s DOK:** 1

**Engaging Experience 2**

**Teaching Point:** Today I am going to teach you to count by 1s to 120.

**Suggested Length of Time:** 1 session

**Standards Addressed**
- **Priority:** N/A
- **Supporting:**
  1.NS.A.1 - Count to 120, starting at any number less than 120.  
  1.NS.A.2 - Read and write numerals and represent a number of objects with a written numeral.

**Detailed Description/Instructions:**
- **One way to do this** Combine lesson 7-2 and 7-3 to teach students to count forward by 1s to 120 following the same place-value counting rules they know and a hundreds chart. Pose essential question 7-2: “How is counting forward from 100 to 120 like counting forward to a two-digit number? How is it different?” Then, continue on with lesson 7-3.

**Bloom’s Levels:** understand  
**Webb’s DOK:** 1

**Engaging Experience 3**

**Teaching Point:** Today I am going to teach you how to find number patterns on a number chart.

**Suggested Length of Time:** 1 session

**Standards Addressed**
- **Priority:** 1.NBT.A.1 - Understand that 10 can be thought of as a bundle of 10 ones - called a “ten”.
- **Supporting:** 1.NS.A.1 - Count to 120, starting at any number less than 120.

**Detailed Description/Instructions:**
- **One way to do this** Use lesson 7-4 to teach students that counting and place-value patterns can be seen on a number chart.

**Bloom’s Levels:** understand  
**Webb’s DOK:** 1
Engaging Scenario

3- ACT Math: Super Selfie
In the 3-Act Math for Topic 7, students draw on their conceptual understanding of counting. They make use of representations and tools such as
- Skip counting,
- Diagrams, and
- ten-frames.

Engaging Experience 4
Teaching Point: Today I am going to teach you how to count to 120 by using an open number line.
Suggested Length of Time: 1 session
Standards Addressed
Priority: N/A
Supporting: 1.NS.A.1 - Count to 120, starting at any number less than 120.
1.NBT.A.4 - Count by 10s to 120 starting at any number.
Detailed Description/Instructions:
- One way to do this: Use lesson 7-5 to teach students that an open number line can be used to show counting by tens and ones.
Bloom’s Levels: understand
Webb’s DOK: 1

Engaging Experience 5
Teaching Point: Today I am going to teach you how to write the number of objects in a group by counting tens and ones.
Suggested Length of Time: 1 session
Standards Addressed
Priority: 1.NBT.A.1: Understand that 10 can be thought of as a bundle of 10 ones - called a “ten”.
Supporting: 1.NS.A.1 - Count to 120, starting at any number less than 120.
1.NS.A.2 - Read and write numerals and represent a number of objects with a written numeral.
Detailed Description/Instructions:
- One way to do this: Use lesson 7-6 to teach that the number of objects in a group is determined by the last number said when they are counted. Counting objects by tens and then ones can help you count objects faster than counting by just ones.
Bloom’s Levels: understand
Webb’s DOK: 1

Engaging Experience 6
Teaching Point: Today I am going to teach you how to find better and faster ways to solve problems by looking for repeated patterns.
Suggested Length of Time: 1 session
Standards Addressed
BOE Approved June 20, 2019
Priority: N/A

Supporting: 1.NS.A.1 - Count to 120, starting at any number less than 120.
1.NS.A.2 - Read and write numerals and represent a number of objects with a written numeral.

Detailed Description/Instructions:
- One way to do this Use lesson 7-7 to teach students good math thinkers look for things that repeat in a problem. They use what they learn from one problem to help them solve other problems.

Bloom’s Levels: analyze
Webb’s DOK: 2

Topic 8: Understand Place Value
Students learn that two-digit numbers represent amounts of tens and ones.

Essential Questions:
- How can the numbers 10 and higher be shown, counted, read and written?

Enduring Understandings:
- Sets of 10 can be perceived as single entities. In a standard numeral, the tens are written to the left of the ones.
- When objects are grouped in sets of 10 and leftovers (ones), counting the groups of tens and adding the ones tells how many there are in all.
- Numbers greater than 10 can be represented as the sum of all the tens and ones.
- Numbers greater than 10 can be name in more than one way and have the same value.

Priority Standards for unit:
- 1.NBT.A.2: Understand two-digit numbers are composed of ten(s) and one(s)

Supporting Standards for unit:
- 1.NBT.A.1 Understand that 10 can be thought of as a bundle of 10 ones - called a “ten”.

<table>
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<tbody>
<tr>
<td></td>
<td>tens, ones, break apart</td>
</tr>
</tbody>
</table>

Engaging Experience 1

Teaching Point: Today I am going to teach you to read and write numbers 11-19 by identifying tens and ones.

Suggested Length of Time: 1 session

Standards Addressed
- Priority: 1.NBT.A.2 Understand 2-digit numbers are composed of ten(s) and one(s).

BOE Approved June 20, 2019
Detailed Description/Instructions:

- **One way to do this** Use lesson 8-1 to teach students numbers 11-19 can be shown as a group of ten and up to 9 more ones; they can be written as a number word.

**Bloom’s Levels:** understand  
**Webb’s DOK:** 1

**Engaging Experience 2**

**Teaching Point:** Today I am going to teach you how to show groups of ten by using connecting cubes.

**Suggested Length of Time:** 1 session

**Standards Addressed**

- **Priority:** N/A
- **Supporting:** 1.NBT.A.1 Understand that 10 can be thought of as a bundle of 10 ones - called a “ten”.

**Detailed Description/Instructions:**

- **One way to do this** Use lesson 8-2 to teach students when there are only tens, counting by 10s can be used to find how many there are in all.

**Bloom’s Levels:** understand  
**Webb’s DOK:** 1

**Engaging Experience 3**

**Teaching Point:** Today I am going to teach you to solve problems by grouping tens.

**Suggested Length of Time:** 1 session

**Standards Addressed**

- **Priority:** 1.NBT.A.2 Understand 2-digit numbers are composed of ten(s) and one(s).
- **Supporting:** 1.NBT.A.1 Understand that 10 can be thought of as a bundle of 10 ones - called a “ten”.

**Detailed Description/Instructions:**

- **One way to do this** Use lesson 8-3 to teach students that when objects are grouped in sets of tens and leftovers (ones), counting the groups of tens and adding ones tell how many there are in all. In a standard numerals, the tens are written to the left of the ones.

**Bloom’s Levels:** understand  
**Webb’s DOK:** 1

**Engaging Experience 4**

**Teaching Point:** Today I am going to teach you how to count tens and ones to find a two-digit number by using connecting cubes.

**Suggested Length of Time:** 1 session

**Standards Addressed**

- **Priority:** 1.NBT.A.2 Understand 2-digit numbers are composed of ten(s) and one(s).
- **Supporting:** 1.NBT.A.1 Understand that 10 can be thought of as a bundle of 10 ones - called a “ten”.

**Detailed Description/Instructions:**

- **One way to do this** Use lesson 8-4 to teach students that when objects are grouped in sets of tens and leftovers (ones), counting the groups of tens and adding ones tell how
many there are in all. In a standard numerals, the tens are written to the left of the
ones.
Bloom’s Levels: understand
Webb’s DOK: 1

Engaging Experience 5
Teaching Point: Today I am going to teach you how to solve problems with tens and ones by
using drawings of tens and ones.
Suggested Length of Time: 1 session
Standards Addressed
Priority: 1.NBT.A.2 Understand 2-digit numbers are composed of ten(s) and one(s).
Supporting: 1.NBT.A.1 Understand that 10 can be thought of as a bundle of 10 ones -
called a “ten”.
Detailed Description/Instructions:
• One way to do this Use lesson 8-5 to teach students that a drawing can show how
many tens and ones are in a number.
Bloom’s Levels: understand
Webb’s DOK: 1

Engaging Experience 6
Teaching Point: Today I am going to teach you how to decompose numbers by using
connecting cubes and drawings of tens and ones.
Suggested Length of Time: 1 session
Standards Addressed
Priority: 1.NBT.A.2 Understand 2-digit numbers are composed of ten(s) and one(s).
Supporting: 1.NBT.A.1 Understand that 10 can be thought of as a bundle of 10 ones -
called a “ten”.
Detailed Description/Instructions:
• One way to do this use lesson 8-6 to teach students numbers can be named in many
ways.
Bloom’s Levels: understand
Webb’s DOK: 1

Engaging Experience 7
Teaching Point: Today I am going to teach you how to use tens and ones to make numbers in
different ways by using a table.
Suggested Length of Time: 1 session
Standards Addressed
Priority: 1.NBT.A.2 Understand 2-digit numbers are composed of ten(s) and one(s).
Supporting: 1.NBT.A.1 Understand that 10 can be thought of as a bundle of 10 ones -
called a “ten”.
Detailed Description/Instructions:
• One way to do this Use lesson 8-7 to teach students good math thinkers look for
patterns in math to help solve problems.
Bloom’s Levels: analyze
Webb’s DOK: 2

BOE Approved June 20, 2019
Topic 9: Compare Two-Digit Numbers
Students use their understanding of place value to compare numbers.

**Essential Questions:**
- How can the numbers to 100 be compared?

**Enduring Understandings:**
- 1 more, 1 less, 10 more, 10 less express a relationship between two numbers.
- Place value relationships can be represented on a hundred chart.
- For 2 two-digit numbers, the number with more tens is greater. If the 2 numbers have an equal number of tens, then the number with more ones is greater.
- Any two-digit number shown on a number line, the numbers to its left are less than the number and the numbers to its right are greater than the number.

**Priority Standards for unit:**
- 1.NBT.A.2 Understand two-digit number are composed of ten(s) and one(s).

**Supporting Standards for unit:**
- 1.NBT.B.6 Calculate 10 more or 10 less than a given number mentally without having to count.
- 1.NBT.A.3 Compare two two-digit numbers using the symbols >, = or <.

<table>
<thead>
<tr>
<th>Standard</th>
<th>Unwrapped Concepts (Students need to know)</th>
<th>Unwrapped Skills (Students need to be able to do)</th>
<th>Bloom’s Taxonomy Levels</th>
<th>Webb's DOK</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.NBT.A.2</td>
<td>two-digit numbers are composed of ten(s) and one(s)</td>
<td>understand</td>
<td>remember</td>
<td>1</td>
</tr>
</tbody>
</table>

**Unit Vocabulary:**

<table>
<thead>
<tr>
<th>Academic Cross-Curricular Words</th>
<th>Content/Domain Specific</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less, compare</td>
<td>greater than ( &gt; ), less than ( &lt; )</td>
</tr>
</tbody>
</table>

**Engaging Experience 1**

**Teaching Point:** Today I am going to teach you to find numbers that are more or less than a given number by using place value blocks.

**Suggested Length of Time:** 1 session

**Standards Addressed**
- **Priority:** 1.NBT.A.2 Understand two-digit numbers are composed of ten(s) and one(s).
- **Supporting:** 1.NBT.B.6 Calculate 10 more or 10 less than a given number mentally without having to count.

**Detailed Description/Instructions:**
- **One way to do this** Use lesson 9-1 to teach students 1 more, 1 less, 10 more and 10 less express a relationship between 2 numbers.

**Bloom’s Levels:** understand

**Webb’s DOK:** 1

BOE Approved June 20, 2019
Engaging Experience 2

Teaching Point: Today I am going to teach you to find 1 more, 1 less, 10 more and 10 less by using a hundred chart.

Suggested Length of Time: 1 session

Standards Addressed

Priority: 1.NBT.A.2 Understand two-digit numbers are composed of ten(s) and one(s).
Supporting: 1.NBT.B.6 Calculate 10 more or 10 less than a given number mentally without having to count.

Detailed Description/Instructions:

- **One way to do this** use lesson 9-2 to teach students that place-value relationships can be represented on a hundred chart.

Bloom’s Levels: understand
Webb’s DOK: 1

Engaging Experience 3

Teaching Point: Today I am going to teach you how to compare 2 two-digit numbers by using place-value blocks.

Suggested Length of Time: 1 session

Standards Addressed

Priority: 1.NBT.A.2 Understand two-digit numbers are composed of ten(s) and one(s).
Supporting: 1.NBT.A.3 Compare two two-digit numbers using the symbols >, = or <.

Detailed Description/Instructions:

- **One way to do this** use lesson 9-3 to teach students that when comparing 2 two-digit numbers, the number with more tens is greater. If the 2 numbers have an equal number of tens, then the number with more ones is greater.

Bloom’s Levels: analyze
Webb’s DOK: 2

Engaging Experience 4

Teaching Point: Today I am going to teach you how to compare 2 numbers by using the greater than, less than or equal to sign.

Suggested Length of Time: 2 sessions

Standards Addressed

Priority: 1.NBT.A.2 Understand two-digit numbers are composed of ten(s) and one(s).
Supporting: 1.NBT.A.3 Compare two two-digit numbers using the symbols >, = or <.

Detailed Description/Instructions:

- **One way to do this** use lesson 9-4 to teach students that when comparing 2 two-digit numbers, the number with more tens is greater. If the 2 numbers have an equal number of tens, then the number with more ones is greater.
- **Another way to do this** use Eureka lesson 9 for additional practice. Lesson can be found on Schoology.

Bloom’s Levels: analyze
Webb’s DOK: 2

Engaging Experience 5

BOE Approved June 20, 2019
Teaching Point: Today I am going to teach you how to compare and write 2 two-digit numbers using an open number line.

Suggested Length of Time: 1 session

Standards Addressed

Priority: 1.NBT.A.2 Understand two-digit numbers are composed of ten(s) and one(s).
Supporting: 1.NBT.A.3 Compare two two-digit numbers using the symbols >, = or <.

Detailed Description/Instructions:

- **One way to do this** use lesson 9-5 to teach students that for any two-digit number shown on a number line, the numbers to its left are less than the number and the numbers to its right are greater than the number.

Bloom’s Levels: analyze
Webb’s DOK: 2

**Engaging Scenario**

3- ACT Math: Digit Flip
In the 3-Act Math for Topic 9, students draw on their conceptual understanding of place value and comparing numbers. They make use of representations and tools, such as
- Game cards,
- Place value, and
- Strategy.

Engaging Experience 6

Teaching Point: Today I am going to teach you how to solve problems by making sense of the problem and finding the best way to solve it.

Suggested Length of Time: 1 session

Standards Addressed

Priority: 1.NBT.A.2 Understand two-digit numbers are composed of ten(s) and one(s).

Detailed Description/Instructions:

- **One way to do this** use lesson 9-6 to teach students that good math thinkers know what the problem is about. They have a plan to solve it. They keep trying if they get stuck.

Bloom’s Levels: analyze
Webb’s DOK: 2

**Topic 10: Use Models and Strategies to Add Tens and Ones**
Students use strategies based on place value and properties of operations to add within 100.

**Essential Questions:**
- What are ways to add with tens and ones?

**Enduring Understandings:**
- Adding groups of 10 is similar to adding numbers less than 10
- When adding tens to a two-digit number, only the tens digit changes.
- When a two-digit number is added to another two-digit number, sometimes it is necessary

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to compose a ten.

**Priority Standards for unit:**
- 1.NBT.A.5: Add within 100.
- 1.NBT.B.7: Add or subtract a multiple of 10 from another two-digit number, and justify the solution.

**Supporting Standards for unit:**
N/A

<table>
<thead>
<tr>
<th>Standard</th>
<th>Unwrapped Concepts (Students need to know)</th>
<th>Unwrapped Skills (Students need to be able to do)</th>
<th>Bloom’s Taxonomy Levels</th>
<th>Webb's DOK</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.NBT.A.5</td>
<td>within 100</td>
<td>add</td>
<td>apply</td>
<td>1</td>
</tr>
<tr>
<td>1.NBT.B.7</td>
<td>a multiple of 10 from another two-digit number; the solution</td>
<td>add, subtract; justify</td>
<td>apply</td>
<td>1</td>
</tr>
</tbody>
</table>

**Unit Vocabulary:**

<table>
<thead>
<tr>
<th>Academic Cross-Curricular Words</th>
<th>Content/Domain Specific</th>
</tr>
</thead>
<tbody>
<tr>
<td>justify</td>
<td>Add</td>
</tr>
<tr>
<td></td>
<td>Subtract</td>
</tr>
<tr>
<td></td>
<td>Multiple</td>
</tr>
<tr>
<td></td>
<td>Two-digit number</td>
</tr>
</tbody>
</table>

**Engaging Experience 1**

**Teaching Point:** Today I am going to teach you how to add 2 multiples of ten by using place value blocks.

**Suggested Length of Time:** 1 session

**Standards Addressed**

**Priority:** 1.NBT.B.7: Add or subtract a multiple of 10 from another two-digit number, and justify the solution.

**Detailed Description/Instructions:**
- **One way to do this** use lesson 10-1 to teach students that adding groups of 10 is similar to adding numbers less than 10.

**Bloom’s Levels:** understand

**Webb’s DOK:** 1

**Engaging Experience 2**

**Teaching Point:** Today I am going to teach you how to use mental math to add tens to two-digit numbers by using place value blocks.

**Suggested Length of Time:** 1 session

**Standards Addressed**

**Priority:** 1.NBT.B.7: Add or subtract a multiple of 10 from another two-digit number, and justify the solution.

**Detailed Description/Instructions:**
- **One way to do this** use 10-2 to teach students that when adding tens to a two-digit number, the tens digit changes. The ones digit remains unchanged.

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Bloom’s Levels: understand
Webb’s DOK: 1

Engaging Experience 3
Teaching Point: Today I am going to teach you how to add tens and ones by using a hundred chart.
Suggested Length of Time: 1 session
Standards Addressed
   Priority: 1.NBT.A.5: Add within 100.
Detailed Description/Instructions:
   • One way to do this use 10-3 to teach students that when a two-digit number is added to a one-digit number, the ones are added to the ones. When a two-digit number is added to a multiple of tens, the tens are added to the tens.
Bloom’s Levels: apply
Webb’s DOK: 2

Engaging Experience 4
Teaching Point: Today I am going to teach you how to solve addition problems by using a number line.
Suggested Length of Time: 1 session
Standards Addressed
   Priority: 1.NBT.B.7: Add or subtract a multiple of 10 from another two-digit number, and justify the solution.
   1.NBT.A.5: Add within 100.
Detailed Description/Instructions:
   • One way to do this use 10-4 to teach students that when a two-digit number is added to a one-digit number, the ones are added to the ones. When a two-digit number is added to a multiple of tens, the tens are added to the tens.
Bloom’s Levels: apply
Webb’s DOK: 2

Engaging Experience 5
Teaching Point: Today I am going to teach you how to solve addition problems by using blocks or drawings.
Suggested Length of Time: 1 session
Standards Addressed
   Priority: 1.NBT.B.7: Add or subtract a multiple of 10 from another two-digit number, and justify the solution.
   1.NBT.A.5: Add within 100.
Detailed Description/Instructions:
   • One way to do this use 10-5 to teach students that when a two-digit number is added to a one-digit number, the ones are added to the ones. When a two-digit number is added to a multiple of tens, the tens are added to the tens.
Bloom’s Levels: apply
Webb’s DOK: 2
Engaging Experience 6
Teaching Point: Today I am going to teach you to solve addition problems by making a ten.
Suggested Length of Time: 2 sessions
Standards Addressed
  Priority: 1.NBT.A.5: Add within 100.
Detailed Description/Instructions:
  ● One way to do this use place value blocks and a place value chart (teaching tool 24) to introduce making a ten when solving addition problems.
  ● Another way to do this use 10-6 to teach students when a two-digit number is added to a one-digit number, the ones are added to the ones and sometimes it is necessary to compose a ten.
Bloom’s Levels: apply
Webb’s DOK: 2

Engaging Experience 7
Teaching Point: Today I am going to teach you how to add two-digit numbers by drawing blocks or using an open number line.
Suggested Length of Time: 1 session
Standards Addressed
  Priority: 1.NBT.A.5: Add within 100.
Detailed Description/Instructions:
  ● One way to do this use 10-7 to teach students when a two-digit number is added to another two-digit number, the ones are added to the ones and sometimes it is necessary to compose a ten. The tens are added to the tens.
Bloom’s Levels: apply
Webb’s DOK: 2

Engaging Experience 8
Teaching Point: Today I am going to teach you how to solve addition problems by using different strategies.
Suggested Length of Time: 1 session
Standards Addressed
  Priority: 1.NBT.A.5: Add within 100.
Detailed Description/Instructions:
  ● One way to do this use 10-8 to teach students you can use different strategies to solve addition problems.
Bloom’s Levels: apply
Webb’s DOK: 2

Engaging Experience 9
Teaching Point: Today I am going to teach you how to model and solve problems by drawing a picture and writing an equation.
Suggested Length of Time: 1 session
Standards Addressed
  Priority: 1.NBT.A.5: Add within 100.
Detailed Description/Instructions:

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One way to do this use 10-9 to teach students that good math thinkers use math they know to show and solve problems.

Bloom’s Levels: apply
Webb’s DOK: 2

**Topic 11: Use Models and Strategies to Subtract 10**
Students use strategies based on place value and properties of operations to subtract multiples of 10 within 100.

**Essential Questions:**
- What are ways to subtract two-digit numbers?

**Enduring Understandings:**
- Subtracting groups of 10 is similar to subtracting numbers less than 10
- When subtracting tens from a two-digit number, only the tens digit changes.
- Addition and subtraction have an inverse relationship. Every subtraction equation has a related addition equation.

**Priority Standards for unit:**
- 1.NBT.B.7: Add or subtract a multiple of 10 from another two-digit number, and justify the solution.

**Supporting Standards for unit:**
- N/A

<table>
<thead>
<tr>
<th>Standard</th>
<th>Unwrapped Concepts (Students need to know)</th>
<th>Unwrapped Skills (Students need to be able to do)</th>
<th>Bloom’s Taxonomy Levels</th>
<th>Webb's DOK</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.NBT.B.7</td>
<td>a multiple of 10 from another two-digit number; the solution</td>
<td>add, subtract, justify</td>
<td>apply</td>
<td>1</td>
</tr>
</tbody>
</table>

**Unit Vocabulary:**

<table>
<thead>
<tr>
<th>Academic Cross-Curricular Words</th>
<th>Content/Domain Specific</th>
</tr>
</thead>
<tbody>
<tr>
<td>solution</td>
<td>Add</td>
</tr>
<tr>
<td></td>
<td>Subtract</td>
</tr>
<tr>
<td></td>
<td>justify</td>
</tr>
</tbody>
</table>

**Engaging Experience 1**

**Teaching Point:** Today I am going to teach you to use models to subtract tens by using place value blocks.

**Suggested Length of Time:** 1 session

**Standards Addressed**

**Priority:** 1.NBT.B.7: Add or subtract a multiple of 10 from another two-digit number, and justify the solution.

**Detailed Description/Instructions:**
- One way to do this use 11-1 to teach students that subtracting a multiple of 10 from another multiple of 10 is similar to subtracting numbers less than 10.

**Bloom’s Levels:** understand

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Engaging Experience 2
Teaching Point: Today I am going to teach you how to subtract a multiple of 10 from another multiple of 10 by using a hundred chart.
Suggested Length of Time: 1 session
Standards Addressed
Priority: 1.NBT.B.7: Add or subtract a multiple of 10 from another two-digit number, and justify the solution.
Detailed Description/Instructions:
● One way to do this use lesson 11-2 to teach students that subtracting multiples of 10 is like counting back by 10s.
Bloom’s Levels: understand
Webb’s DOK: 1

Engaging Experience 3
Teaching Point: Today I am going to teach you how to solve subtraction problems by using an open number line.
Suggested Length of Time: 1 session
Standards Addressed
Priority: 1.NBT.B.7: Add or subtract a multiple of 10 from another two-digit number, and justify the solution.
Detailed Description/Instructions:
● One way to do this use lesson 11-3 to teach students subtracting multiples of 10 is like counting back by 10s.
Bloom’s Levels: understand
Webb’s DOK: 1

Engaging Experience 4
Teaching Point: Today I am going to teach you how to use addition to subtract 10s by using an open number line.
Suggested Length of Time: 1 session
Standards Addressed
Priority: 1.NBT.B.7: Add or subtract a multiple of 10 from another two-digit number, and justify the solution.
Detailed Description/Instructions:
● One way to do this use lesson 11-4 to teach students addition and subtraction have an inverse relationship. This relationship can be used to solve subtraction equations; every subtraction equation has a related addition equation.
Bloom’s Levels: apply
Webb’s DOK: 2

Engaging Experience 5
Teaching Point: Today I am going to teach you to subtract 10 from a two-digit number by using mental math.
Suggested Length of Time: 1 session

BOE Approved June 20, 2019
Standards Addressed

Priority: 1.NBT.B.7: Add or subtract a multiple of 10 from another two-digit number, and justify the solution.

Detailed Description/Instructions:

- **One way to do this** use lesson 11-5 to teach students when subtracting 10 from a two-digit number, the tens digit changes. The ones digit remains the same.

Bloom’s Levels: understand
Webb’s DOK: 1

Engaging Scenario

3- ACT Math: So Many Colors
In the 3-Act Math for Topic 11, students draw on their conceptual understanding of addition and subtraction. They make use of representations and tools, such as

- Concrete models,
- Ten frames, and
- Counting tools

Engaging Experience 6
Teaching Point: Today I am going to teach you how to subtract by using different strategies.
Suggested Length of Time: 1 session
Standards Addressed

Priority: 1.NBT.B.7: Add or subtract a multiple of 10 from another two-digit number, and justify the solution.

Detailed Description/Instructions:

- **One way to do this** use lesson 11-6 to teach students that you can use different strategies to solve subtraction problems.

Bloom’s Levels: apply
Webb’s DOK: 2

Engaging Experience 7
Teaching Point: Today I am going to teach you how to solve problems by modeling thinking.
Suggested Length of Time: 1 session
Standards Addressed

Priority: 1.NBT.B.7: Add or subtract a multiple of 10 from another two-digit number, and justify the solution.

Detailed Description/Instructions:

- **One way to do this** use lesson 11-7 to teach students that good math thinkers use math they know to show and solve problems.

Bloom’s Levels: analyze
Webb’s DOK: 2

BOE Approved June 20, 2019
Unit 5: Geometry

Subject: Math
Grade: 1
Name of Unit: Operations and Algebra
Length of Unit: 20 days

Overview of Unit:
In Topic 14-15, students explore attributes 2- and 3-dimensional shapes. They divide shapes in 2 and 4 equal shares to build a conceptual foundation for fractions.

<table>
<thead>
<tr>
<th>Formative Assessment Options</th>
<th>Summative Assessment Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Administered before or during a unit, topic or lesson to guide instruction and give feedback to students.)</td>
<td>(Administered at the end of unit or topic to assess mastery of learning objectives.)</td>
</tr>
</tbody>
</table>
| ● Math Interview/ Conference  
● Quick Checks (Check marks within lesson)  
● Topic Pretest  
● Convince Me | ● Online version  
● Topic Assessment Practice  
● Topic Performance Task  
● Cumulative/ Benchmark Assessment (print or online) |

Math Review:
● Math Anytime
  ○ Daily Review
  ○ Today’s Challenge
  ○ Fluency
    ■ enVision 2020
● Topic Opener: Review What You Know
● Vocabulary Review

Daily Routines
Below are the Daily Routines suggested for this unit. Once established, some routines may be continued all year, while others can introduce new concepts that build on previous routines. While engaged in Daily Routines, be sure to pay particular attention to equitable participation, allowing all students to participate.

Counting Forward With a Known Start and Quantity
Frequency: 2-3 days per week
Objective: To develop the ability to count a given quantity.
Description: Tell the students to start on a specific number (for example 23) and count forward a specific quantity (for example 20 spaces). Before you count, ask the students which number they think they will land on Consider having a student or two keep track of the quantity with their fingers or a manipulative to help students know when to stop counting.
Resource: 1.0 Number Line Choral Counting Routines Teacher

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**Estimation**

**Frequency:** 1 day per week  
**Objective:** To develop skill in estimation  
**Description:** Remind the students of the estimates they made with 2 jars and ask them what they learned. Tell them that today, they are going to estimate the quantities in 3 jars.

Show the students three jars of different sizes with the same quantity of the same object in each. Ask students to estimate the number of objects in the jars. Ask students which jar has more and how they determined their estimates. Count the objects either as a small group activity or with the whole class. Repeat the process using the same jars with a different quantity and object. See if students start to recognize that the quantities are the same and the shape of the jar influences how they look.

**Number Routines:**

**Number Talk: Number Sentences Targeting Landmark and Friendly Numbers (page 118)**

Landmark or friendly numbers are numbers that are easy to use in mental computation. Fives, multiples of ten, as well as monetary amounts such as twenty-five and fifty are examples of numbers that fall into this category. Students may adjust one or all addends by adding or subtracting amounts to make a friendly number.

These number talks consist of three to five problems. The sequence of problems within a given number talk allows students to apply strategies from previous problems to subsequent problems. The following number sentences are designed to encourage students to adjust one or all of the addends by adding or subtracting amounts to make a friendly number.

![Number Talk Examples](image)

Reference your copy of *Number Talks: Whole Number Computation* by Sherry Parrish

**Additional Personalized Practice and Application Suggestions:**

<table>
<thead>
<tr>
<th>Intervention</th>
<th>On-level</th>
<th>Advanced</th>
</tr>
</thead>
<tbody>
<tr>
<td>● Reteach to Build Understanding</td>
<td>● Build Mathematical Fluency</td>
<td>● Enrichment</td>
</tr>
<tr>
<td>● Intervention Activity</td>
<td>● Additional Practice</td>
<td>● Pick a Project</td>
</tr>
<tr>
<td>● Additional Practice</td>
<td></td>
<td>● enVision STEM Activity</td>
</tr>
</tbody>
</table>

**Learning Station Bank**

Learning stations are an activity based structure that provides students with opportunities for student-led engagement with or extensions of previously taught concepts. Below are some learning stations suggested for this unit. Once established, some stations may be continued all year, while others can introduce new concepts that build on previous activities. You may choose which learning stations to use and for how long according to the needs of your students.

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<table>
<thead>
<tr>
<th>Learning Station Descriptions</th>
<th>Resources</th>
</tr>
</thead>
</table>
| **Title:** Journal Writing Prompts  
**Objective:** To provide students independent time to write about and reflect on mathematics.  
**Description:** Students date their math notebooks. Then they glue journal prompts into their math notebooks and answer the prompt. Provide opportunities for students to share their journal writing with the class.  
There are 10 cookies. Some are chocolate chip and some are sugar cookies. How many of each could there be?  
Show different ways to make 10. Use a number bond and draw pictures that match. | **Journal Prompts BLM**  
**Math Notebooks** |
| **Title:** Geoboard Shape Cards  
**Objective:** To provide students opportunities to explore the attributes of shapes.  
**Description:** Students re-create the shapes on [Geoboard Shape Cards](#).  
| **Geoboards with rubber bands**  
**Geoboard Shape Cards BLM** |
| **Title:** Origami Halves and Fourths (Use after Lesson Series 2, Day 1)  
**Objective:** To develop a deeper understanding of partitioning shapes. To develop spatial sense and geometric reasoning.  
**Description:** Students cut origami paper into halves and fourths and use the pieces to construct pictures. The BLM is a guide for students to use when cutting. Students can make patterns other than the ones shown and glue them on paper. | **Origami Halves and Fourths BLM**  
**Origami paper or paper squares**  
**Construction paper**  
**Glue** |
| **Title:** Build a Pattern  
**Objective:** To explore patterns with geometric shapes.  
**Description:**  
1. Student A uses pattern blocks to start a pattern. Student A must repeat the pattern at least two times.  
2. Student B continues the pattern at least two more times.  
3. Students change roles and repeat.  
**Variation:** Students make their own pattern, then have a partner describe it. | **Pattern blocks** |
| **Title:** Shape Hunt  
**Objective:** To identify 3-D shapes in 2-D representations of real life objects.  
**Directions:** As a class, students create 3-D shape posters by looking for objects that have a particular shape in magazines and advertisements. Create a poster for each shape studied. | **magazines**  
**advertisements**  
**11" x 17" paper** |
| **Title:** Guess My Sort  
**Objective:** To practice recognizing and sorting by attribute | **Variety of 3-D shapes** |

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Directions: Students start with a general pile of 8-10, 3-D shapes. Student A sorts the shapes into 2 or 3 piles using a rule (blue shapes/not blue shapes, round shapes, rectangular shapes, shapes with points etc.), but does not tell Student B what that rule is. Student B then tries to guess Student A’s rule, in 3 guesses or less. Once the rule has been revealed, it’s Student B’s turn to sort with a rule.

Topic 14: Reason With Shapes and Their Attributes
Students explore attributes of two-and three-dimensional shapes.

Essential Questions:
- How can shapes and solids be described, compared, and used to make other shapes?

Enduring Understandings:
- Plane shapes have many properties that make them different from one another.
- Plane shapes can be combined to make new plane shapes.
- Many solid figures are comprised of flat surfaces and vertices.
- Attributes can be used to sort solid figures. Many sets of solid figures can be sorted in more than one way.
- Solid figures can be combined to make other solid figures.

Priority Standards for unit:
- 1.GM.A.2: Compose and decompose two- and three-dimensional shapes to build an understanding of part-whole relationships and the properties of the original and composite shapes.

Supporting Standards for unit:
- 1.GM.A.1 Distinguish between defining attributes versus non-defining attributes; build and draw shapes that possess defining attributes.
- 1.GM.A.3 Recognize two- and three-dimensional shapes from different perspectives and orientations.

<table>
<thead>
<tr>
<th>Standard</th>
<th>Unwrapped Concepts (Students need to know)</th>
<th>Unwrapped Skills (Students need to be able to do)</th>
<th>Bloom’s Taxonomy Levels</th>
<th>Webb's DOK</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.GM.A.2</td>
<td>two- and three-dimensional shapes to build an understanding of part-whole relationships and the properties of the original and composite shapes</td>
<td>compose, decompose</td>
<td>understand</td>
<td>2</td>
</tr>
</tbody>
</table>

Unit Vocabulary:

<table>
<thead>
<tr>
<th>Academic Cross-Curricular Words</th>
<th>Content/Domain Specific</th>
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</thead>
<tbody>
<tr>
<td>Triangle, hexagon, 2-D shapes, attributes, sides, vertices, rectangle, square, Three-dimensional (3-D) shapes, flat surfaces, cylinder, cone, cube, rectangular prism, edges, faces, sphere</td>
<td></td>
</tr>
</tbody>
</table>
Engaging Experience 1
Teaching Point: Today I am going to teach you how to describe shapes by using attributes.
Suggested Length of Time: 1 session
Standards Addressed
  Priority: N/A
  Supporting: 1.GM.A.1 Distinguish between defining attributes versus non-defining attributes; build and draw shapes that possess defining attributes.
  1.GM.A.3 Recognize two- and three-dimensional shapes from different perspectives and orientations.
Detailed Description/Instructions:
  One way to do this Use lesson 14-1 to teach students two-dimensional shapes have attributes that define them and make them different from one another.
Bloom’s Levels: understand
Webb’s DOK: 1

Engaging Experience 2
Teaching Point: Today I am going to teach you how to define 2-D shapes by their attributes.
Suggested Length of Time: 1 session
Standards Addressed
  Priority: N/A
  Supporting: 1.GM.A.1 Distinguish between defining attributes versus non-defining attributes; build and draw shapes that possess defining attributes.
  1.GM.A.3 Recognize two- and three-dimensional shapes from different perspectives and orientations.
Detailed Description/Instructions:
  One way to do this Use lesson 14-2 to teach students that 2-dimensional shapes have attributes that define them and make them different from one another.
Bloom’s Levels: understand
Webb’s DOK: 1

Engaging Experience 3
Teaching Point: Today I am going to teach you how to make shapes by using a variety of materials in our classroom.
Suggested Length of Time: 1 session
Standards Addressed
  Priority: 1.GM.A.2: Compose and decompose two- and three-dimensional shapes to build an understanding of part-whole relationships and the properties of the original and composite shapes.
Detailed Description/Instructions:
  One way to do this Use lesson 14-3 to teach students 2-dimensional shapes have attributes that define them and make them different from one another. These properties can be used to create shapes.
Bloom’s Levels: apply
Webb’s DOK: 2
Engaging Experience 4
Teaching Point: Today I am going to teach you how to make a shape by using other shapes.
Suggested Length of Time: 1 session
Standards Addressed
  Priority: 1.GM.A.2: Compose and decompose two- and three-dimensional shapes to build an understanding of part-whole relationships and the properties of the original and composite shapes.
Detailed Description/Instructions:
  One way to do this Use lesson 14-4 to teach students 2-dimensional shapes can be combined to make new 2-dimensional shapes.
Bloom’s Levels: create
Webb’s DOK: 3

Engaging Experience 5
Teaching Point: Today I am going to teach you how to make shapes by using pattern blocks.
Suggested Length of Time: 1 session
Standards Addressed
  Priority: 1.GM.A.2: Compose and decompose two- and three-dimensional shapes to build an understanding of part-whole relationships and the properties of the original and composite shapes.
Detailed Description/Instructions:
  One way to do this Use lesson 14-5 to teach students 2-dimensional shapes can be combined to make new 2-dimensional shapes.
Bloom’s Levels: create
Webb’s DOK: 3

Engaging Experience 6
Teaching Point: Today I am going to teach you how to define 3-D shapes by their number of edges, vertices, and faces or flat surfaces.
Suggested Length of Time: 1 session
Standards Addressed
  Priority: N/A
  Supporting: 1.GM.A.1 Distinguish between defining attributes versus non-defining attributes; build and draw shapes that possess defining attributes.
  1.GM.A.3 Recognize two- and three-dimensional shapes from different perspectives and orientations.
Detailed Description/Instructions:
  One way to do this Use lesson 14-6 to teach students 3-dimensional shapes have attributes that define them and make them different from one another.
Bloom’s Levels: understand
Webb’s DOK: 1

Engaging Experience 7
Teaching Point: Today I am going to teach you how to describe 3-D shapes by defining their attributes.
Suggested Length of Time: 1 session

Standards Addressed

Priority: N/A

Supporting: 1.GM.A.1 Distinguish between defining attributes versus non-defining attributes; build and draw shapes that possess defining attributes.
1.GM.A.3 Recognize two- and three-dimensional shapes from different perspectives and orientations.

Detailed Description/Instructions:

**One way to do this** Use lesson 14-7 to teach students 3-dimensional shapes have attributes that define them and make them different from one another.

Bloom’s Levels: understand
Webb’s DOK: 1

Engaging Experience 8

Teaching Point: Today I am going to teach you how to create objects by using 3-D shapes.

Suggested Length of Time: 1 session

Standards Addressed

Priority: 1.GM.A.2: Compose and decompose two- and three-dimensional shapes to build an understanding of part-whole relationships and the properties of the original and composite shapes.

Detailed Description/Instructions:

**One way to do this** Use lesson 14-8 to teach students 3-dimensional shapes can be combined to form other 3-dimensional shapes or the shapes of common, everyday objects.

Bloom’s Levels: apply
Webb’s DOK: 2

Engaging Experience 9

Teaching Point: Today I am going to teach you how to find differences among various shapes by making sense of the problem and persevering.

Suggested Length of Time: 1 session

Standards Addressed

Priority: N/A

Supporting: 1.GM.A.1 Distinguish between defining attributes versus non-defining attributes; build and draw shapes that possess defining attributes.
1.GM.A.3 Recognize two- and three-dimensional shapes from different perspectives and orientations.

Detailed Description/Instructions:

**One way to do this** Use lesson 14-9 to teach students good math thinkers know what the problem is about, they have a plan to solve it, and they keep trying if they get stuck.

Bloom’s Levels: analyze
Webb’s DOK: 2
Topic 15: Equal Shares of Circles and Rectangles
Students divide shapes into two and four equal shares to build a conceptual foundation for fractions.

Essential Questions:
● How can fractions be used to name a part of a whole object?

Enduring Understandings:
● A region can be divided into equal-sized parts in different ways. Equal-sized parts of a region have the same area but not necessarily the same shape.

Priority Standards for unit:
● 1.GM.A.4 Partition circles and rectangles into two or four equal shares, and describe the shares and the wholes verbally

Supporting Standards for unit:
N/A

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<td>1.GM.A.4</td>
<td>Circles and rectangles into two or four equal shares; the shares and the wholes verbally</td>
<td>partition; describe</td>
<td>understand</td>
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<td>fourths</td>
<td></td>
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<tr>
<td>quarters</td>
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Engaging Experience 1
Teaching Point: Today I am going to teach you how to make equal shares by dividing shapes.
Suggested Length of Time: 1 session
Standards Addressed
Priority: 1.GM.A.4 Partition circles and rectangles into two or four equal shares, and describe the shares and the wholes verbally

Detailed Description/Instructions:
One way to do this use lesson 15-1 to teach students a shape can be divided into equal sized shares in different ways.

Bloom’s Levels: understand
Webb’s DOK: 1

Engaging Experience 2
Teaching Point: Today I am going to teach you how to make halves and fourths of rectangles

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and circles by dividing shapes and using words to describe those shares.

Suggested Length of Time: 1 session

Standards Addressed

Priority: 1.GM.A.4 Partition circles and rectangles into two or four equal shares, and describe the shares and the wholes verbally

Detailed Description/Instructions:

One way to do this use lesson 15-2 to teach students shapes can be divided into equal parts called halves and quarters, or fourths.

Bloom’s Levels: apply
Webb’s DOK: 2

Engaging Experience 3

Teaching Point: Today I am going to teach you how to understand parts of halves and fourths by comparing the shares.

Suggested Length of Time: 1 session

Standards Addressed

Priority: 1.GM.A.4 Partition circles and rectangles into two or four equal shares, and describe the shares and the wholes verbally

Detailed Description/Instructions:

One way to do this use lesson 15-3 to teach students when dividing the whole into equal pieces, the smaller the pieces, the greater the number of pieces; the larger the pieces, the fewer the number of pieces.

Bloom’s Levels: analyze
Webb’s DOK: 2

Engaging Scenario

3- ACT Math: Pieced Out

In the 3 Act- Math for Topic 15, students draw on their conceptual understanding of 2-D shapes and equal shares. They make use of representations and tools, such as

- Tiles (2-D shapes)
- Diagrams, and
- Drawings.

Engaging Experience 4

Teaching Point: Today I am going to teach you how to solve a problem about equal shares by making a drawing or diagram.

Suggested Length of Time: 1 session

Standards Addressed

Priority: 1.GM.A.4 Partition circles and rectangles into two or four equal shares, and describe the shares and the wholes verbally

Detailed Description/Instructions:

One way to do this use lesson 15-4 to teach students good math thinkers use math they know to show and solve problems.

Bloom’s Levels: apply
Webb’s DOK: 2

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