

# Common Core Grade 1 Assessment Tasks

# Common Core Assessment Tasks First Grade Benchmark 1

**1.OA.1** Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.

## **What's in the Bag? (Change Unknown)**

Place one to ten objects in a paper bag. The student reaches in and takes some counters out. Ask "How many are left in the bag? How did you figure out your answer?"

Example: Pulled 3 out and 7 remain in the bag.  $3 + \underline{\quad} = 10$   
or  $10 - 3 = \underline{\quad}$ . (The algorithm is **not** the focus with this activity in benchmark 1.)

## **What's in the Bag? (Result Unknown)**

Gather ten objects. Ask the student to choose an amount of objects to put in a paper bag,

naming the number. The teacher does the same from the remaining amount, naming the number. The student determines how many objects are in the bag. Ask: What did you do to figure out the answer? (The total number of objects should not exceed ten for benchmark 1.)

### **What's in the Bag? (Start Unknown)**

Gather ten objects. The teacher places some of the objects in a bag without the child's knowledge (use a partition, close your eyes). The student places some more objects from the objects remaining in the bag, naming the number. Remove any remaining objects to eliminate confusion. The student empties the bag and counts of all the objects. A teacher asks "How many objects were in the bag to start with? What did you do to figure out your answer?"

**1.OA.2** Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.

### **Ice Cream Treats**

Use ten frames, number line, or hundreds chart to solve problems. Students may also draw a picture to solve problem. (For benchmark 1 students are expected to add 2 numbers with a sum less than or equal to 10.)

Example: 2 children eat chocolate ice cream. 4 children eat vanilla ice cream. Ask: How many children are eating ice cream? How did you figure out your answer? Show me. (Provide a variety of materials for child choose which to use.)

**1.OA.3** Apply properties of operations as strategies to add and subtract. Examples: If  $8 + 3 = 11$  is known, then  $3 + 8 = 11$  is also known. (Commutative property of addition.) To add  $2 + 6 + 4$ , the second two numbers can be added to make a ten, so  $2 + 6 + 4 = 2 + 10 = 12$ . (Associative property of addition.)

**Missing Cubes**

$$\underline{\hspace{2cm}} + \hspace{2cm} = \hspace{2cm} + \hspace{2cm}$$

Student should complete this task with pictures or objects. Ask: How many cubes are needed to make the sets equal? (For benchmark 1, sets should not be greater than 10.)

**1.OA.4** Understand subtraction as an unknown addend problem.

**Picking Apples**

Jan picked three apples from the tree. Jan needs 10 apples in all. How many more apples does Jan need to pick? (Use storyboards, ten frames or other objects to demonstrate. For benchmark 1 the total number of objects used should be less than or equal to 10.)

**1.OA.5** Relate counting to addition and subtraction (e.g., by counting on 2 to add 2).

**Counting All**

**Instructional Task 1 (Counting all)**

Provide the child with two dot dice. Roll the dot dice and count all to obtain the total value of the two dice.

(For benchmark 1 the total number used should be less than or equal to 12.)

**1.OA.6** Add and subtract within 20, demonstrating

fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g.,  $8 + 6 = 8 + 2 + 4 = 10 + 4 = 14$ ); decomposing a number leading to a ten (e.g.,  $13 - 4 = 13 - 3 - 1 = 10 - 1 = 9$ ); using the relationship between addition and subtraction (e.g., knowing that  $8 + 4 = 12$ , one knows  $12 - 8 = 4$ ); and creating equivalent but easier or known sums (e.g., adding  $6 + 7$  by creating the known equivalent  $6 + 6 + 1 = 13$ ).

### Figuring Fun

Provide a student with an addition or subtraction problem and ask them to explain how they solved the number sentence. For benchmark 1 students work with problems involving numbers within 10 only adding and subtracting 0 or 1. Students should be able to figure out the sum/difference within 5 seconds. Ask students to explain their thinking process to figure out the answer. No manipulatives should be used. Students should demonstrate one of the following strategies; counting on or counting back, 1 more, 1 less, using an addition fact to solve subtraction or vice versa, etc...)

**1.OA.7** Understand the meaning of the equal sign, and determine if equations involving addition and subtraction are true or false. For example, which of the following equations are true and which are false?  $6 = 6$ ,  $7 = 8 - 1$ ,  $5 + 2 = 2 + 5$ ,  $4 + 1 = 5 + 2$ .

### True or Not?

For benchmark 1 use objects/pictures to demonstrate the following (do not show equations):

Determine which of the following examples are true and explain:

$$2 + 7 = 9$$

$$10 = 9 + 1$$

$$4 + 3 = 1 + 8$$

$$1 + 3 = 13$$

**1.NBT.1** Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral.

**What Comes Next?**

Rote count from a number less than 30 up to 30.

**Name That Number**

Give a number 0 – 30, students represent that number with objects, tally marks, picture sets, etc...

**1.NBT.2** Understand that the two digits of a two-digit number represent amounts of tens and ones. Understand the following as special cases: a. 10 can be thought of as a bundle of ten ones — called a “ten”.

**Making Tens**

(2a) Given a set of objects less than or equal to 30, (e.g. 24 cubes), how many groups of 10 did you make? (For benchmark 1 students do not have to count leftovers on this task. Students should only recognize they made 1, 2 or 3 groups of ten and the leftovers are not a group of ten. Students are also not required to tell the total amount of objects, only count the number of groups of ten.)

**1.MD.1** Order three objects by length; compare the lengths of two objects indirectly by using a third object.

**Measuring Around the Room**

Given three objects of different size/lengths, student should be able to organize them in order from smallest to largest.

**1.MD.4** Organize, represent and interpret data with up to three categories; ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in another.

**Air, Land, and Sea**

Prompt students to look at several pictures of living things (see examples).

What question can you ask that will allow you to sort the pictures into groups? Sort the pictures based on your question/categories. Prompt student to record his/her data on a chart. A chart example is provided.

Sea	Land	Air

# Common Core Assessment Tasks First Grade Benchmark 2

**1.OA.1** Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.

### What's in the Bag? (Change Unknown)

Place one to ten objects in a paper bag. The student reaches in and takes some counters out. Ask "How many are left in the bag? How did you figure out your answer?"

Example: Pulled 3 out and 7 remain in the bag.  $3 + \underline{\quad} = 10$

or  $10 - 3 = \underline{\quad}$ . Write a number sentence to show what you did to figure out the answer.

### **What's in the Bag? ( Result Unknown)**

Gather ten objects. Ask the student to choose an amount of objects to put in a paper bag, naming the number. The teacher does the same from the remaining amount, naming the number. The student determines how many objects are in the bag. Ask: What did you do to figure out the answer? Write a number sentence to show what you did to figure out the answer. (The total number of objects should not exceed ten for benchmark 2.)

### **What's in the Bag? (Start Unknown)**

Gather ten objects. The teacher places some of the objects in a bag without the child's knowledge (use a partition, close your eyes). The student places some more objects from the objects remaining in the bag, naming the number. Remove any remaining objects to eliminate confusion. The student empties the bag and counts of all the objects. A teacher asks "How many objects were in the bag to start with? What did you do to figure out your answer? Write a number sentence to show what you did to figure out the answer." (The total number of objects should not exceed ten for benchmark 2.)

**1.OA.2** Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.

### **Ice Cream Treats**

Use ten frames, number line, or hundreds chart to solve problems. Students may also draw a picture to solve problem. (For benchmark 2 students are expected to add 3 numbers with a sum less than or equal to 10.)

Example: 2 children eat chocolate ice cream. 4 children eat vanilla ice cream. 1 child eats strawberry ice cream. Ask: How many children are eating ice cream? How did you figure out your answer? Show me. (Provide a variety of materials for child choose which to use.)

**1.OA.3** Apply properties of operations as strategies to add and subtract. Examples: If  $8 + 3 = 11$  is known, then  $3 + 8 = 11$  is also known. (Commutative property of addition.) To add  $2 + 6 + 4$ , the second two numbers can be added to make a ten, so  $2 + 6 + 4 = 2 + 10 = 12$ . (Associative property of addition.)

**Missing Numbers**

$$3 + 4 = 4 + \underline{\quad}$$

$$6 + \underline{\quad} = 2 + 6$$

Student should complete this task using an equation and/or symbols. Ask: What number is needed to make the sets equal? (For benchmark 2, sets should not be greater than 10.)

**1.OA.4** Understand subtraction as an unknown addend problem.

**Picking Apples**

Jan picked three apples from the tree. Jan needs 10 apples in all. How many more apples does Jan need to pick? (Use storyboards, ten frames or other objects to demonstrate. Write an addition and subtraction number sentence to match your story. (For benchmark 2 the total number of objects used should be less than or equal to 10.)

## **1.OA.5** Relate counting to addition and subtraction (e.g., by counting on 2 to add 2).

### **Count On and Count Back**

#### **Instructional Task 1 (Counting on)**

Provide the child with a numeral die and a dot die. Roll the numeral die first. Then roll the dot die and count on to obtain the total value of the two dice.

#### **Instructional Task 2 (Counting back)**

Provide the students with a numeral card or a spinner with numbers 5 to 10. The student should also have a spinner with dots representing numbers 0 - 5. Students will count back the value of the dots from the numeral on the card or original spinner.

#### **Instructional Task 3 (Counting on and back)**

Given a group of 6 counters, ask students to make the pile contain 10. Observe how student changes the pile. To meet standard, the student should count on from 6 to get 10, ...7 8 9 10. Then ask the student to make the pile contain 7 counters. The student should count back from 10 to 7. Observe the child and ask them to orally explain how they are changing the pile of counters.

(These tasks are progressive in nature. By the end of benchmark 2, students should be able to complete task 3. For benchmark 2 the total number used should be less than or equal to 12.)

**1.OA.6** Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g.,  $8 + 6 = 8 + 2 + 4 = 10 + 4 = 14$ ); decomposing a number leading to a ten (e.g.,  $13 - 4 = 13 - 3 - 1 = 10 - 1 = 9$ ); using the relationship between addition and subtraction (e.g., knowing that  $8 + 4 = 12$ , one knows  $12 - 8 = 4$ ); and creating equivalent but easier or known sums (e.g., adding  $6 + 7$  by creating the known equivalent  $6 + 6 + 1 = 13$ ).

#### Figuring Fun

Provide a student with an addition or subtraction problem and ask them to explain how they solved the number sentence. For benchmark 2 students work with problems involving numbers within 10. Students should be able to figure out the sum/difference within 5 seconds. Ask students to explain their thinking process to figure out the answer. No manipulatives should be used. Students should demonstrate one of the following strategies; making 10, decomposing, counting on or counting back, doubles, 1 more, 1 less, using an addition fact to solve subtraction or vice versa, etc...)

**1.OA.7** Understand the meaning of the equal sign, and determine if equations involving addition and subtraction are true or false. For example, which of the following equations are true and which are false?  $6 = 6$ ,  $7 = 8 - 1$ ,  $5$

$$+ 2 = 2 + 5, 4 + 1 = 5 + 2.$$

### True or Not?

For benchmark 2 use objects/pictures/equations to demonstrate the following (the focus for benchmark 2 is understanding the equations):

Determine which of the following examples are true and explain:

$$2 + 7 = 9$$

$$10 = 9 + 1$$

$$4 + 3 = 1 + 8$$

$$1 + 3 = 13$$

**1.OA.8** Determine the unknown whole number in an addition or subtraction equation relating three whole numbers.

### All in the Family

Given a fact family ( $4 + 3 = 7$ ), students will be able to supply any unknown number to make the equation true.

$$(7 = \_ + 4, 7 - \_ = 4, \_ = 4 + 3)$$

Sample instructional strategies or tools might include fact triangles, number-bond cards, part-whole cards, dominoes)

(For benchmark 2, students should work with sums within 10.)

**1.NBT.1** Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral.

**What Comes Next?**

Rote count from a number less than 50 up to 50.

**Name That Number**

Give a number 0 – 50, students represent that number with objects, tally marks, picture sets, etc...

**1.NBT.2** Understand that the two digits of a two-digit number represent amounts of tens and ones. Understand the following as special cases: a. 10 can be thought of as a bundle of ten ones — called a “ten”.

### **Making Tens**

(2b) For the numbers 11-19, how many groups of 10 can you make? Would you have any leftovers? If so, how many leftovers would you have? What would the number be?

(2c) Given a set of 50 or less objects (decades only, no leftovers), have the students put the objects into groups of 10. How many groups of 10 do you have? How many total objects do you have?

**1.MD.1** Order three objects by length; compare the lengths of two objects indirectly by using a third object.

### **Measuring Around the Room**

Give student stick that is about 4 inches long. Ask student to find an object in the room that is shorter than and longer than the measuring tool. Student is asked to determine which object is longer/shorter and explain reasoning. Observe: Can student relate reasoning to the original measuring tool?

**1.MD.2** Express lengths of an object as a whole number of length units, by laying multiple copies of a shorter object end to end; understand that the length measurement of an object is the number of same-size length units that span it with no gaps or overlaps.

**Measuring Lengths**

Provide a bag with assorted units of different sizes (Cuisenaire rod or paper clips)

Prompt student to use the materials in the box to measure the length of a given object

Observe:

- o Does the student understand that all units must be the same size?
- o If student uses different lengths, ask how the student would describe his/her measurement

## **1.MD.3** Tell and write time in hours and half-hours using analog and digital clocks.

### **Broken Clock**

Show student an image of a clock with the minute hand missing.

Ask the student to predict the position of the minute hand and the corresponding time. Explain reasoning.

Repeat assessment with another example where hour hand is between two numbers.

Observe:

- o Does the student understand what happens to the minute hand when the hour hand is pointing directly to a number
- o Does the student can approximate time based on the location of the hour hand
- o When the time is at the half-hour, does the student know that the hour is the number that is located before the hour hand.

## **1.MD.4** Organize, represent and interpret data with up to three categories; ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in another.

### **What's the Weather?**

Prompt students to look at a calendar with the weather shown for each day.

Ask: "How would you sort the weather displayed on this calendar? Could you use numbers or symbols (tally marks) to show me how you could organize this information?"

# Common Core Assessment Tasks First Grade Benchmark 3

**1.OA.1** Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.

### What's in the Bag? (Change Unknown)

Place ten to twenty objects in a paper bag. The student reaches in and takes some counters out. Ask "How many are left in the bag? How did you figure out your answer?"

Example: Pulled 3 out and 7 remain in the bag.  $3 + \underline{\quad} = 10$   
or  $10 - 3 = \underline{\quad}$ . Write a number sentence to show what you did to figure out the answer.

### **What's in the Bag? ( Result Unknown)**

Gather ten to twenty objects. Ask the student to choose an amount of objects to put in a paper bag, naming the number. The teacher does the same from the remaining amount, naming the number. The student determines how many objects are in the bag. Ask: What did you do to figure out the answer? Write a number sentence to show what you did to figure out the answer. (The total number of objects should not exceed 20 for benchmark 3.)

### **What's in the Bag? (Start Unknown)**

Gather ten to twenty objects. The teacher places some of the objects in a bag without the child's knowledge (use a partition, close your eyes). The student places some more objects from the objects remaining in the bag, naming the number. Remove any remaining objects to eliminate confusion. The student empties the bag and counts of all the objects. A teacher asks "How many objects where in the bag to start with? What did you to figure out your answer? Write a number sentence to show what you did to figure out the answer." (The total number of objects should not exceed 20 for benchmark 3.)

**1.OA.2** Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.

### **Ice Cream Treats**

Use ten frames, number line, or hundreds chart to solve problems. Students may also draw a picture to solve problem. (For benchmark 3 students are expected to add 2 numbers with a sum less than or equal to 20.)

Example: 5 children eat chocolate ice cream. 9 children eat vanilla ice cream. Ask: How many children are eating ice cream? How did you figure out your answer? Show me. (Provide a variety of materials for child choose which to use.)

**1.OA.3** Apply properties of operations as strategies to add and subtract.

Examples: If  $8 + 3 = 11$  is known, then  $3 + 8 = 11$  is also known.

(Commutative property of addition.) To add  $2 + 6 + 4$ , the second two numbers can be added to make a ten, so  $2 + 6 + 4 = 2 + 10 = 12$ .

(Associative property of addition.)

**Mixed Up Numbers**

Say: "Susie solved the following problem:  $6 + 2 + 4 = 12$  First she added  $6 + 2$  and got eight. Then she counted up 4 more and got an answer of 12. Is there a different way to solve this problem?"

Observe

- Does the child realize that 6 and 4 can be grouped first into 10 and then add the leftover 2?

Student should complete this task using objects, drawings, equations and symbols. (For benchmark 3, sets should not be greater than 20.)

**1.OA.4** Understand subtraction as an unknown addend problem.

**Picking Apples**

Jan picked three apples from the tree. Jan needs 10 apples in all. How many more apples does Jan need to pick? (Use storyboards, ten frames or other objects to demonstrate.) Write an addition and subtraction number sentence to match your story. (For benchmark 3 the total number of objects used should be less than or equal to 20.)

## **1.OA.5** Relate counting to addition and subtraction (e.g., by counting on 2 to add 2).

### **Count On and Count Back**

#### **Instructional Task 1 (Counting on)**

Provide the child with a numeral die and a dot die. Roll the numeral die first. Then roll the dot die and count on to obtain the total value of the two dice.

#### **Instructional Task 2 (Counting back)**

Provide the students with a numeral card or a spinner with numbers 5 to 10. The student should also have a spinner with dots representing numbers 0 - 5. Students will count back the value of the dots from the numeral on the card or original spinner.

#### **Instructional Task 3 (Counting on and back)**

Given a group of 6 counters, ask students to make the pile contain 10. Observe how student changes the pile. To meet standard, the student should count on from 6 to get 10, ...7 8 9 10. Then ask the student to make the pile contain 7 counters. The student should count back from 10 to 7. Observe the child and ask them to orally explain how they are changing the pile of counters.

(For benchmark 3 the total number used should be less than or equal to 20.)

**1.OA.6** Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g.,  $8 + 6 = 8 + 2 + 4 = 10 + 4 = 14$ ); decomposing a number leading to a ten (e.g.,  $13 - 4 = 13 - 3 - 1 = 10 - 1 = 9$ ); using the relationship between addition and subtraction (e.g., knowing that  $8 + 4 = 12$ , one knows  $12 - 8 = 4$ ); and creating equivalent but easier or known sums (e.g., adding  $6 + 7$  by creating the known equivalent  $6 + 6 + 1 = 13$ ).

#### Figuring Fun

Provide a student with an addition or subtraction problem and ask them to explain how they solved the number sentence. For benchmark 3 students work with problems involving numbers within 20. Students should be able to figure out the sum/difference within 5 seconds. Ask students to explain their thinking process to figure out the answer. No manipulatives should be used. Students should demonstrate one of the following strategies; making 10, decomposing, counting on or counting back, doubles, 1 more, 1 less, using an addition fact to solve subtraction or vice versa, etc...)

**1.OA.7** Understand the meaning of the equal sign, and determine if equations involving addition and subtraction are true or false. For example, which of the following equations are true and which are false?  $6 = 6$ ,  $7 = 8 - 1$ ,  $5 + 2 = 2 + 5$ ,  $4 + 1 = 5 + 2$ .

### **True or Not?**

For benchmark 3 use equations only to demonstrate the following:

Determine which of the following examples are true and explain:

$$2 + 7 = 9$$

$$10 = 9 + 1$$

$$4 + 3 = 1 + 8$$

$$1 + 3 = 13$$

**1.NBT.1** Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral.

### **What Comes Next?**

Rote count from a number less than 100 up to 100.

### **Name That Number**

Give a number 0 – 100, students represent that number with objects, tally marks, picture sets, etc...

**1.NBT.3** Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols  $>$ ,  $=$ ,  $<$ .

**What's your Sign?**

Use the symbols to make the number sentence true. Draw a picture (base 10 blocks, 10 frames, number lines) and explain your reasoning.

$$\begin{array}{l} 42 \_ 45 \\ 76 \_ 51 \\ 22 \_ 22 \end{array}$$

**1.NBT.4** Add within 100, including adding a two-digit number and a one-digit number, and adding a two-digit number and a multiple of ten, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain reasoning used. Understand that in adding

two-digit numbers, one adds tens and tens and ones and ones; and sometimes it is necessary to compose a ten.

### All About Kids

#### Task 1

There are 25 jump ropes in the gym and 8 basketballs. How many total jump ropes and basketball do we have altogether? Explain your answer through pictures, numbers or words.

#### Task 2

There are 16 students sitting at a table in the cafeteria. There are 20 students sitting at the next table. How many total students are sitting at the tables in the cafeteria? Explain how you solved the problem using pictures, numbers or words.

**1.NBT.5** Given a two-digit number, mentally find 10 more or less than the number, without having to count; explain the reasoning used.

### Take It or Leave It

Given a set of objects 0- 90, (e.g. 34 cubes), how many groups of 10 can you make? Are there any leftovers? How many will there be if we add 10 more? What if we take 10 away?

\*can be done in combination with assessment 1.NBT.2

**1.MD.4** Organize, represent and interpret data with up to three categories; ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in another.

**Air, Land, and Sea**

Prompt students to look at several pictures of living things (see examples).

What question can you ask that will allow you to sort the pictures into groups? Sort the pictures based on your question/categories. Prompt student to record his/her data on a chart. A chart example is provided.

Student provide at least three relevant statements to interpret data.

Teacher observation:

Does the student use specific vocabulary (ex: more/less than, most/least)

Sample Chart  
 Where do these animals live?  
 Air (numbers or tallies)  
 Land (numbers or tallies)  
 Water (numbers or tallies)

Sea	Land	Air

**1.G.1** Distinguish between defining attributes versus non-defining attributes; build and draw shapes to possess defining attributes.

**Hide 'n Seek**

Student reaches into a bag and feels the hidden shape

Student describes the hidden shape using defining attributes

Teacher should listen for use of specific vocabulary

- o Do children use formal or informal language?
- o Do children use defining or non-defining attributes (“The shape has three corners.” vs “The shape feels like a witch’s hat.”)

**1.G.2** Compose two-dimensional shapes or three-dimensional shapes to create a composite shape, and compose new shapes from the composite shape.

**Cover Up**

Give student a simple pattern block or tangram puzzle

Ask student, “How many different ways can you cover the puzzle?”

Observe student:

- o Does student strategically manipulate shapes to fit puzzle?
- o Does student flip and rotate shapes to make them fit?
- o Does student pay attention to boundaries?

# Common Core Assessment Tasks First Grade Benchmark 4

**1.OA.1** Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.

### What's in the Bag? (Change Unknown)

Place ten to twenty objects in a paper bag. The student reaches in and takes some counters out. Ask "How many are left in the bag? How did you figure out your answer?"

Example: Pulled 3 out and 7 remain in the bag.  $3 + \underline{\quad} = 10$   
or  $10 - 3 = \underline{\quad}$ . Write a number sentence to show what you did to figure out the answer.

### **What's in the Bag? ( Result Unknown)**

Gather ten to twenty objects. Ask the student to choose an amount of objects to put in a paper bag, naming the number. The teacher does the same from the remaining amount, naming the number. The student determines how many objects are in the bag. Ask: What did you do to figure out the answer? Write a number sentence to show what you did to figure out the answer. (The total number of objects should not exceed 20 for benchmark 4.)

### **What's in the Bag? (Start Unknown)**

Gather ten to twenty objects. The teacher places some of the objects in a bag without the child's knowledge (use a partition, close your eyes). The student places some more objects from the objects remaining in the bag, naming the number. Remove any remaining objects to eliminate confusion. The student empties the bag and counts of all the objects. A teacher asks "How many objects were in the bag to start with? What did you do to figure out your answer? Write a number sentence to show what you did to figure out the answer." (The total number of objects should not exceed 20 for benchmark 4.)

**1.OA.2** Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.

### **Ice Cream Treats**

Use ten frames, number line, or hundreds chart to solve problems. Students may also draw a picture to solve problem. (For benchmark 4 students are expected to add 3 numbers with a sum less than or equal to 20.)

Example: 5 children eat chocolate ice cream. 9 children eat vanilla ice cream. 3 children eat strawberry ice cream. Ask: How many children are eating ice cream? How did you figure out your answer? Show me. (Provide a variety of materials for child choose which to use.)

**1.OA.3** Apply properties of operations as strategies to add and subtract.

Examples: If  $8 + 3 = 11$  is known, then  $3 + 8 = 11$  is also known.

(Commutative property of addition.) To add  $2 + 6 + 4$ , the second two numbers can be added to make a ten, so  $2 + 6 + 4 = 2 + 10 = 12$ .

(Associative property of addition.)

**Mixed Up Numbers**

Say: "Susie solved the following problem:  $6 + 2 + 4 = 12$ . First she added  $6 + 2$  and got eight. Then she counted up 4 more and got an answer of 12. Is there a different way to solve this problem?"

Observe

- Does the child realize that 6 and 4 can be grouped first into 10 and then add the leftover 2?

Student should complete this task using objects, drawings, equations and symbols. (For benchmark 4, sets should not be greater than 20.)

**1.OA.4** Understand subtraction as an unknown addend problem.

**Picking Apples**

Jan picked three apples from the tree. Jan needs 10 apples in all. How many more apples does Jan need to pick? (Use storyboards, ten frames or other objects to demonstrate.) Write an addition and subtraction number sentence to match your story. (For benchmark 4 the total number of objects used should be less than or equal to 20.)

## **1.OA.5** Relate counting to addition and subtraction (e.g., by counting on 2 to add 2).

### **Count On and Count Back**

#### **Instructional Task 1 (Counting on)**

Provide the child with a numeral die and a dot die. Roll the numeral die first. Then roll the dot die and count on to obtain the total value of the two dice.

#### **Instructional Task 2 (Counting back)**

Provide the students with a numeral card or a spinner with numbers 5 to 10. The student should also have a spinner with dots representing numbers 0 - 5. Students will count back the value of the dots from the numeral on the card or original spinner.

#### **Instructional Task 3 (Counting on and back)**

Given a group of 6 counters, ask students to make the pile contain 10. Observe how student changes the pile. To meet standard, the student should count on from 6 to get 10, ...7 8 9 10. Then ask the student to make the pile contain 7 counters. The student should count back from 10 to 7. Observe the child and ask them to orally explain how they are changing the pile of counters.

(For benchmark 4 the total number used should be less than or equal to 20.)

**1.OA.6** Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g.,  $8 + 6 = 8 + 2 + 4 = 10 + 4 = 14$ ); decomposing a number leading to a ten (e.g.,  $13 - 4 = 13 - 3 - 1 = 10 - 1 = 9$ ); using the relationship between addition and subtraction (e.g., knowing that  $8 + 4 = 12$ , one knows  $12 - 8 = 4$ ); and creating equivalent but easier or known sums (e.g., adding  $6 + 7$  by creating the known equivalent  $6 + 6 + 1 = 13$ ).

#### Figuring Fun

Provide a student with an addition or subtraction problem and ask them to explain how they solved the number sentence. For benchmark 4 students work with problems involving numbers within 20. Students should be able to figure out the sum/difference within 5 seconds. Ask students to explain their thinking process to figure out the answer. No manipulatives should be used. Students should demonstrate one of the following strategies; making 10, decomposing, counting on or counting back, doubles, 1 more, 1 less, using an addition fact to solve subtraction or vice versa, etc...)

**1.OA.7** Understand the meaning of the equal sign, and determine if equations involving addition and subtraction are true or false. For example, which of the following equations are true and which are false?  $6 = 6$ ,  $7 = 8 - 1$ ,  $5 + 2 = 2 + 5$ ,  $4 + 1 = 5 + 2$ .

### True or Not?

For benchmark 4 use equations only to demonstrate the following:

Determine which of the following examples are true and explain:

$$2 + 7 = 9$$

$$10 = 9 + 1$$

$$4 + 3 = 1 + 8$$

$$1 + 3 = 13$$

**1.OA.8** Determine the unknown whole number in an addition or subtraction equation relating three whole numbers.

### All in the Family

Given a fact family ( $4 + 3 = 7$ ), students will be able to supply any unknown number to make the equation true.

$$(7 = \_ + 4, 7 - \_ = 4, \_ = 4 + 3)$$

Sample instructional strategies or tools might include fact triangles, number-bond cards, part-whole cards, dominoes.

(For benchmark 4, students should work with sums within 20.)

**1.NBT.1** Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral.

**What Comes Next?**

Rote count from a number less than 120 up to 120.

**Name That Number**

Give a number 0 – 120, students represent that number with objects, tally marks, picture sets, etc...

**1.NBT.4** Add within 100, including adding a two-digit number and a one-digit number, and adding a two-digit number and a multiple of ten, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method

and explain reasoning used. Understand that in adding two-digit numbers, one adds tens and tens and ones and ones; and sometimes it is necessary to compose a ten.

### All About Kids

Room 1 read 24 books in October. Room 4 read 37 books in October. How many books did both rooms read? Explain your answer through pictures, numbers or words. (Student may use hundred grids, base ten blocks, etc... to demonstrate answer.)

**1.NBT.6** Subtract multiples of 10 in the range 10-90 from multiples of 10 in the range 10-90 (positive or zero differences) using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain reasoning used.

### Decades of Fun

There are 40 children on the bus. At the first bus stop, 20 children get off. How many students are left on the bus? Explain and show your answer using models (hundreds chart, 10 frames, number line).

**1.MD.4** Organize, represent and interpret data with up to three categories; ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in another.

**What's the Weather?**

Prompt students to look at a calendar with the weather shown for each day.

Ask: "How would you sort the weather displayed on this calendar? Could you use numbers or symbols (tally marks) to show me how you could organize this information?"

4                      17

9

Student provide at least three relevant statements to interpret data.

Teacher observation:

Does the student use specific vocabulary (ex: more/less than, most/least)

What can you tell me about the weather for this month?

Sunny            (numbers or tallies)

Cloudy          (numbers or tallies)

Rainy            (numbers or tallies)

**1.G.3** Partition circles and rectangles into two and four equal shares, describe the shares using the words halves, fourths, and quarters, and use the phrases half of, fourth of, and quarter of. Describe the whole as two of or four of the shares. Understand for these examples that decomposing into four or more equal shares creates

smaller shares.

**Sharing Brownies**

Joey and his three friends want to share a pan of brownies equally.  
Have student identify which pans are correctly partitioned into fourths.  
Ask student to explain reasoning.

\*Provide various representations