

UNIT

2



# Numbers Everywhere

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# Numbers Everywhere

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# Frequently Asked Questions

## ***Why does Starfall Math include patterns in its curriculum? Patterns are not a Common Core Standard.***

Patterns serve as the cornerstone of algebraic thinking. Children watch the sun setting every day. They listen to stories, songs, and verses that follow patterns. They notice how a kitten alternates between play and sleep. They jump rope to patterned chants, and skip over sidewalk bricks laid in patterns. Recognizing, describing, extending, and translating patterns encourages children to think in terms of algebraic problem solving. Working with patterns requires young children to identify relationships and form generalizations.

By comparing objects to one another and understanding the relationship between pairs of objects, children demonstrate the ability for transitive thinking. (Example: If Lucas is taller than Olivia, and Olivia is taller than Emma, then Lucas is also taller than Emma.)

Children's understanding of mathematical relationships develops over time. By describing and working with patterns in the world around them, they are using ideas that are foundational to algebraic thinking.

## ***Why does Starfall include so many lessons dealing with more than and less than?***

Children learn to count by rote. Educators (and others) often mistakenly assume that because children can count to 20 easily that they understand the sequence of numbers. Throughout the curriculum Starfall provides opportunities for children to practice the meaning of counting and to recognize the quantity the numbers represent.

The fact that children are usually more successful at determining which number is "one more" than which number is "one less" is an indication that they do not fully comprehend the meaning of numbers. Therefore, Starfall integrates opportunities throughout the math curriculum for children to demonstrate understanding of the number system by requiring them to determine which number is one less than another. These opportunities occur primarily during the Magic Math Moments.

# Unit 2 Research

Developing an understanding of numbers and how to represent them is a major mathematical task for kindergarten children. Numbers are abstractions that apply to a broad range of situations (Example: five children, five fingers, five years old, five apples, five o'clock). It is necessary for children to memorize the number sequence in order to count objects. Children in Starfall Math classrooms have many opportunities to count in unison by ones, fives, and tens, to sing counting songs and nursery rhymes, to count items in a set, and to count on from a given number.

In learning about numbers, the key connection children must make is the one-to-one correspondence between numbers and the number of objects in a set.<sup>(1)</sup> Children begin to understand and create sets in relation to more than, less than, and equal to. They gradually develop strategies for matching the objects in sets to determine which has leftover objects, or they count both sets and use their understanding of more/less than to compare the sets.

Engaging kindergarten children in number activities and simple games (such as board games) that emphasize one-to-one correspondence, counting, and moving along a number path are important for strengthening foundations and building conventional number knowledge.<sup>(2)</sup> Many activities on Starfall.com directly reinforce classroom math lessons.

Another crucial mathematical process is pattern. (Recognizing and using patterns is a valuable problem solving and mathematical thinking skill for young children. They need to experience patterns visually, auditorily, and physically.)<sup>(3)</sup> Starfall Math's pattern activities focus on repeated patterns such as *abab*, *aabbaabb*, and *abcabc* using colors, sounds, and body movement. Children learn to analyze, duplicate, extend, and describe many different patterns.

Patterns are not taught as a unit, but integrated throughout the Starfall curriculum across many units.

(1) Committee on Early Childhood Mathematics (2009). *Mathematics Learning in Early Childhood: Paths toward Excellence and Equity*. Washington, D.C.: National Academies Press.

(2) Klibanoff, R.S., Levine, S.C., Huttenlocher, J., Visilyeva, M., and Hedges, L.V. (2006). Preschool children's mathematical knowledge: The effect of teacher "Math Talk". *Developmental Psychology*, 42(1), 59-69.

(3) Clements, D.H., and Sarama, J. (2007). Early childhood mathematics learning. In F.K. Lester, Jr. (ed.), *Second Handbook of Research on Mathematics Teaching and Learning* (pp. 461-555). New York: Information Age.

# Unit 2 Summary

**Time Frame:** 10 days

In Unit 2 the children will begin to identify the meaning of numbers and notice ways in which they are represented in their everyday lives. They will interpret weather graphs, practice counting, and continue their study of patterns and geometric shapes.

The focus of Unit 2 is the numbers 1 through 8, counting, two-dimensional geometric shapes, patterns, and place value.

## Essential Questions

**(K.CC.A.2)** How can we count on from a given number?

**(K.CC.A.3)** How can we use a numeral to show how many objects there are?

**(K.CC.C.6)** How can we tell if one group has more than, less than, or the same amount as another group?

**(K.G.A.2)** How are two-dimensional shapes the same and how are they different?

**(Starfall.MD.2)** How can we use a graph to understand information and answer questions?

## Enduring Understandings

Counting is a purposeful skill that assigns a number name to an object or a set of objects.

Understanding place value can lead to number sense and efficient strategies for computing with numbers.

Using strategies helps to solve problems.

Graphs help you to visualize data, answer questions, and make predictions.

## Vocabulary

The children will be introduced to these vocabulary words. Mastery is not expected at this time.

Between

Fewest

Plus

Bundle

Next to

Rhombus

Equal

One-to-one

Strategy

Equation

correspondence

Ten-frame

## Recommended Literature

*Every Buddy Counts* by Stuart J. Murphy

*Ten Black Dots* by Donald Crews

*The Greedy Triangle* by Marilyn Burns and Gordon Silveria

# Standards & Benchmarks

Progress on the following standards and benchmarks will be made through the course of this unit. For your convenience, applicable learning outcomes are listed alongside each lesson in summary form.

## Starfall Standards

### Counting & Cardinality

**CC.2** Supply missing number in a sequence.

## Common Core Standards

Counting & Cardinality		Inline Summary Form
<b>A.2</b>	Count forward beginning from a given number within the known sequence (instead of having to begin at 1).	Count forward from a given number.
<b>A.3</b>	Write numbers from 0 to 20. Represent a number of objects with a written numeral 0-20 (with 0 representing a count of no objects).	Write numbers from 0 to 20.
<b>B.4</b>	Understand the relationship between numbers and quantities; connect counting to cardinality.	Understand the relationship between numbers and quantities.
<b>B.4a</b>	When counting objects, say the number names in the standard order, pairing each object with one and only one number name and each number name with one and only one object.	Say number names in order, pairing each object with one number.
<b>B.4b</b>	Understand that the last number name said tells the number of objects counted. The number of objects is the same regardless of their arrangement or the order in which they were counted.	The last number counted tells the total number of objects.
<b>B.4c</b>	Understand that each successive number name refers to a quantity that is one larger.	Each successive number refers to one more.
<b>C.6</b>	Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group, e.g., by using matching and counting strategies.	Identify greater than, less than, and equal to.
Operations & Algebraic Thinking		Inline Summary Form
<b>A.1</b>	Represent addition and subtraction with objects, fingers, mental images, drawings, sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations.	Represent addition and subtraction in a variety of ways.
Geometry		Inline Summary Form
<b>A.2</b>	Correctly name shapes regardless of their orientations or overall size.	A.2 – Correctly name shapes.

# Week 3 Summary

The children will be introduced to the Magic Math Moment, a brief math activity that will occur before the Math Lesson each day. The Magic Math Moment serves not only as an additional opportunity to practice math skills, but also as a perfect transition into each day's Math Lesson. The children will begin to identify the meaning of numbers, and discuss ways they are represented in our everyday lives. The children will also:

- Experience math learning centers
- Focus on the numbers 1 through 4
- Learn to use a ten-frame
- Review geometric shapes and their attributes
- Be introduced to Essential Questions

## Preparation

Display the Essential Questions Cards (pictured) for **Unit 2** on a bulletin board.

As you see the essential questions in the Lesson Plans, read them to the children. Explain that essential questions are very important, and that you will work to answer them together over the course of several days. Review the unit's essential questions often, especially at the end of each week.

If you haven't already done so, use a marker to write each child's name on the front of his or her *Backpack Bear's Math Workbook #1*.

**Day 5** of each week will include a rotation of five Learning Centers. The activities will change each week, but the centers will routinely consist of a Computer Center in which the children will navigate and explore activities on *Starfall.com*, three Activity Centers, and a Summative Assessment Center in which you will administer a weekly assessment.

One Activity Center each week will be Teacher's Choice. Choose an activity that will provide the children with the opportunity to practice one of the skills in the unit or review a skill that was introduced previously.

Familiarize yourself with this week's Learning Centers and decide how you will accommodate them in your classroom. Divide the class into five groups and instruct the children to stay with their assigned groups. Explain how you will signal them when it is time to change centers. Decide when to change the groups based on the dynamics of the children. Groups may remain consistent for several Learning Center rotations (weeks), or you may change them often.

### **End-Of-Month Calendar Routine:**

At the end of each month, the children should assist in removing the number cards, beginning with the last day. Lead them in counting backward as they remove each number. Place the next month's name in the calendar. Explain that each month has a certain number of days. (e.g. August had 31 days; September has 30 days.)





## DAY 1

Prepare or have available the calendar heading for the month you begin school.

The children will use their workbooks for the first time today. The workbook includes blank journal pages for you to use at your discretion.

**Familiarize yourself with the “How Many Days Have We Been In School?” song, a short variation to “Mulberry Bush” you will sing each day.**

## DAY 2

Navigate a classroom computer to *Starfall.com*: Numbers, “2.”

## DAY 3

Navigate a classroom computer to *Starfall.com*: Numbers, “3.”

## DAY 4

Navigate a classroom computer to *Starfall.com*: Numbers, “4.”

You will need a set of Shape Cards (*circle, ellipse/oval, rectangle, rhombus, square, and triangle*).

## DAY 5

*Activity Center 1* — Navigate classroom computers to *Starfall.com*.

*Activity Center 2* — Have Number Activity Mats 1-5 available at this center, and supply enough play dough for each child to form the numerals.

*Activity Center 3* — Duplicate a copy of the Gingerbread Boy blackline for each child. The children will also use crayons and scissors. They will draw shapes to represent Gingerbread Boy’s eyes, nose and buttons, and color and cut out their Gingerbread Boy.

*Activity Center 4* — Prepare materials for this week’s Teacher’s Choice Activity.

*Summative Assessment* — The children will complete page 6 of *Backpack Bear’s Math Workbook #1*. Prior to learning center time duplicate page 6 and color the shapes in the color key for the children to use as a reference.

You will use a set of Shape Cards (*circle, ellipse/oval, rectangle, square, and triangle*) to perform this week’s summative assessment.

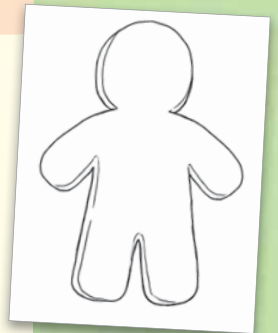
Duplicate a Shape Summative Assessment Class Checklist for **Unit 2, Week 3** on which you will record skill mastery.

### How Many Days Have We Been In School?

(Tune: “Here We Go Round the Mulberry Bush”)

How many days have we been in school, been in school, been in school?

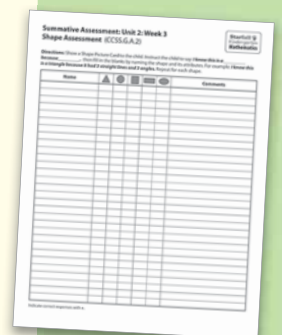
How many days have we been in school, who can tell me please?



Gingerbread Boy blackline



Backpack Bear's Math Workbook #1, Page 6



Summative Assessment Unit 2 - Week 3

DAY 1

DAY 2

Daily Routines

- Calendar
- Weather
- Number Line
- Place Value
- Hundreds Chart
- Add** ▶ “How Many Days Have We Been In School?”

Magic Math Moment

Numbers on a clock

Introduce equations

Math Concepts

Introduce

Workbook

Essential questions

The number one

Discriminate ones

Relationship between number and quantity

Write the numeral one



The number two

Discriminate twos

Relationship between number and quantity

Write the numeral two



Formative / Summative Assessment

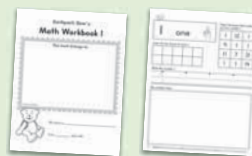
The number one

The number two

Workbooks & Media

“Hickory, Dickory, Dock”

Workbook p. 1-2



Starfall.com: “Numbers”

Workbook p. 3



DAY 3

DAY 4

DAY 5

- Calendar
- Weather
- Number Line
- Place Value
- Hundreds Chart
- "How Many Days Have We Been In School?"

Learning Centers

ABC Patterns

Introduce ten-frames

Starfall.com:

- Monthly Calendar
- Numbers: 1 – 5
- Numbers: "Count Cookies"
- Math Songs: "Five Little Bears"

The number three  
Discriminate threes  
Relationship between number and quantity

3

Review shapes and their properties  
Introduce rhombus  
The number four  
Discriminate fours  
Relationship between number and quantity

4

Number Activity Mats

Shape Concentration

The number three

The number four

Teacher's Choice

Math Melodies CD  
Starfall.com: "Numbers"  
"Three Little Kittens"  
Workbook p. 4  
Nursery Rhymes



Starfall.com: "Numbers"  
Workbook p. 5



Discriminate Shapes (Workbook p. 6)





## Calendar

- A volunteer tells the name of the month.
- The children name the days of the week.
- The calendar helper turns the next number.
- Say: **Today is** (name of day and date).

**NEW** ▶ Name an action such as jump, hop, clap, squat, or jumping jack, and the children do the action the number of times that correspond to the date.

**Materials**

- Computer navigated to *Starfall.com*: Calendar
- Classroom Calendar
- Name of month and days, numbers 1-31

**Counting & Cardinality**

A.2 - Count forward from a given number.

B.4 - Understand the relationship between numbers and quantities.

B.4a - Say number names in order, pairing each object with one number.

B.4b - The last number counted tells the total number of objects.

B.4c - Each successive number refers to one more.



## Weather

- Review yesterday's weather.
- The meteorologist goes to the window to look outside, predicts the weather, and places a tally mark under his or her prediction.
- Add a tally mark next to today's weather on the Weather Graph.

**Materials**

- Weather Picture Cards (displayed)



## Number Line

- Point to and count the days the children have been in school.
- Remove the sticky note to reveal the next number.  
Say: **We have been in school** (number of days) **days**.

**NEW** ▶ Sing "How Many Days Have We Been In School?"

A volunteer identifies the name of the number last revealed on the Classroom Number Line. Say: **Today we will add one more number. Raise your hand if you know what (today's number) plus one more is.** The number helper chooses a volunteer to answer.

**Materials**

- Dry erase board, marker
- Number line (mounted)
- Pointer

**How Many Days Have We Been In School?**

(Tune: "Here We Go Round the Mulberry Bush")

*How many days have we been in school, been in school, been in school?  
How many days have we been in school, who can tell me please?*



## Place Value

**NEW** ▶ Indicate the *Tens* container. Say: **Here is the Tens container. How many bundles of ten are in the Tens container?** (one) **Right, one bundle. How many sticks are in a bundle?** (ten) **Remember, we need ten sticks before we can make a bundle.**

Indicate the *Ones* container. Ask: **How many sticks are in the Ones container?** (zero) **Right, zero, or none. Today we get to add one stick to our Ones container.**

**Materials**

- Prepared *Ones* and *Tens* containers
- Craft sticks

Choose two volunteers to come forward. The first child holds the *Tens* container and the second child holds the *Ones* container. Say: (first child's name) **is holding the *Tens* container. How many bundles of ten do we have?** Write the numeral 1 on the board.

Say: (second child's name) **is holding the *Ones* container. How many sticks are in the *Ones* container?** Write the numeral 1 next to the 1 on the board.

Say: **When we have one set of ten and one more, we have *eleven*.**



## Hundreds Chart

- Say: **Today we will turn the next number.** The number helper does this.
- Ask: **The hundreds chart shows we have been in school how many days?**

### Materials

- Prepared Hundreds Chart

## Magic Math Moment

### "Hickory, Dickory, Dock"

Display page 17 of *Starfall's Selected Nursery Rhymes* and read "Hickory, Dickory, Dock."

Ask: **What do you see on the clock?** (Volunteers respond.) **Right, you see many numbers. What time did the mouse run down the clock?** (Repeat the rhyme if needed.) **The mouse ran down at one o'clock.**

Repeat the rhyme and the children say it with you.

### Materials

- Starfall's Selected Nursery Rhymes*, page 17

Explain that each day before the math lesson there will be a Magic Math Moment.

## Introduce Essential Questions and the Number One

### 1 Introduce Essential Questions

Indicate the Essential Question Cards. Say: **Here are some essential questions. Essential means they are very important. We will work to answer these questions over the next several lessons.** Read the questions as you attach them to a bulletin board.

### Materials

- Essential Question Cards
- Backpack Bear's Math Big Book*, page 18
- Backpack Bear's Math Workbook #1*, pages 1 and 2
- Pencils, crayons

### Counting & Cardinality

A.3 - Write numbers from 0 to 20.

B.4 - Understand the relationship between numbers and quantities.

CC.2 - Supply missing number in a sequence.





## 2 Introduce the Number One

Write the numeral 1 on the board. Say: **This is the numeral 1. The numeral 1 stands for one.** Indicate and count one classroom object, such as a book, a pencil, a cube, etc. to demonstrate one.

Indicate *Backpack Bear's Math Big Book*, page 18. Say: **Can you find some pictures on this page that show one? Let's make a list on the whiteboard.**

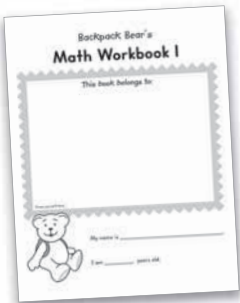
(a clock, a calendar, *Aa* is the first letter of the alphabet, we each have one body, a circle is made of one line, an ellipse is made of one line)

As the children name items, draw pictures of them on the whiteboard.

## 3 Introduce Backpack Bear's Math Workbook #1

Distribute *Backpack Bear's Math Workbook #1* to each child and instruct the children to turn to the first page. Say: **Put your finger on the line next to Backpack Bear.** (Check to see that the children have found the line.) **Write your name on the line.** (The children do this.) **Now find the smaller line and write the number that tells how old you are.** Circulate to see that the children have done this correctly.

Ask: **Where do you see the number 1?** (Volunteers respond.) **There is only one of you! Draw yourself in the big empty space.**



## 4 Discriminate the Numeral One

Instruct the children to turn to page 2. (Check to see that they have found the correct page.) Say: **Look at the top of the page. What do you see?**

Continue: **Now, put your finger on the boxes with numerals in them. Color only the boxes with the numeral 1 and place an X on the other numerals.** Address each numeral.

Ask: **Why did you put an X on 12? 14?**



## 5 Show One

Say: **I see a special box called a ten-frame. Say, ten-frame. It is called a ten-frame because it has ten sections. Let's count them.** Do this.

Continue: **Since we are learning about the number 1, how many sections should we color? Right, one!**

The children color one section of the ten-frame.

## 6 Write the Numeral One

Say: **Now practice printing the numeral one. Put your pencil on the start dot to begin each numeral.** Check to see if the children are doing this.

The purpose of this lesson is to help the children begin to identify the meaning of numbers and ways they are represented in everyday life, rather than simply using them to count by rote.



# Formative Assessment

## Draw Representations of the Number One

Display *Backpack Bear's Math Big Book*. Say: **Put your finger on the empty box. This is a special number box. Before we draw anything in the number box, let's review the Number 1 page and your ideas for the number one.**

Explain that the children should draw representations of one in the number box, such as a sun, one tally mark, a penny, a circle, one dot on a die, or other examples.

Complete the activity together step-by-step so all of the children are drawing the same object at the same time.

Volunteers may decide which objects from the book or list they would like to draw.

**Optional:** Project the workbook page for demonstration.



*While drawing one balloon or one flower is acceptable, encourage the children to think of instances where there is only one of something, such as one Earth.*



## Calendar

- A volunteer tells the name of the month.
- The children name the days of the week.
- The calendar helper turns the next number.
- Say: **Today is** (name of day and date).
- Name an action such as jump, hop, clap, squat, or jumping jack, and the children do the action the number of times that correspond to the date.



## Weather

- Review yesterday's weather.
- The meteorologist goes to the window to look outside, predicts the weather, and places a tally mark under his or her prediction.
- Add a tally mark next to today's weather on the Weather Graph.



## Number Line

- Point to and count the days the children have been in school.
- Remove the sticky note to reveal the next number. Say: **We have been in school** (number of days) **days.**
- Sing "How Many Days Have We Been In School?"
- A volunteer identifies the name of the number last revealed on the Classroom Number Line. Say: **Today we will add one more number. Raise your hand if you know what (today's number) plus one more is.** The number helper chooses a volunteer to answer.

**How Many Days Have We Been In School?**

(Tune: "Here We Go Round the Mulberry Bush")

*How many days have we been in school,  
been in school, been in school?  
How many days have we been in  
school, who can tell me please?*



## Place Value

Indicate the *Tens* container. Say: **Here is the Tens container. How many bundles of ten are in the Tens container?** (one) **Right, one bundle. How many sticks are in a bundle?** (ten) **Remember, we need ten sticks before we can make a bundle.**

Indicate the *Ones* container. Ask: **How many sticks are in the Ones container?** (one) **Right, one. Today we get to add one stick to our Ones container.** Do this.

Choose two volunteers to come forward. The first child holds the *Tens* container and the second child holds the *Ones* container. Say: (first child's name) **is holding the Tens container. How many bundles of ten do we have?**

Write the numeral 1 on the board.

**Counting & Cardinality**

A.2 - Count forward from a given number.

B.4 - Understand the relationship between numbers and quantities.

B.4a - Say number names in order, pairing each object with one number.

B.4b - The last number counted tells the total number of objects.

B.4c - Each successive number refers to one more.



Say: (second child's name) **is holding the Ones container. How many sticks are in the Ones container?** Write the numeral 2 next to the 1 on the board.  
 Say: **When we have one set of ten and two more, we have twelve.**



## Hundreds Chart

- Say: **Today we will turn the next number.** The number helper does this.
- Ask: **The hundreds chart shows we have been in school how many days?**

## Magic Math Moment

### Equations

#### Materials

None

Choose a volunteer to stand in the front of the classroom. Ask: **How many children are in the front of the classroom? If we add one more child, how many children will there be?**

Add one more child. Continue: **Let's write an equation on the board to show what we just did.** Write  $1 + 1 = 2$ . Read the equation as you indicate each numeral and symbol. The children repeat after you.

## The Number Two

#### Materials

- Backpack Bear's Math Workbook #1, page 3
- Backpack Bear's Math Big Book, page 19
- Starfall.com: Numbers

### 1 Introduce the Number Two

Write the numeral 2 on the board. Say: **This is the numeral 2. The numeral 2 stands for two.** Indicate and count two classroom objects to demonstrate two.

Indicate *Backpack Bear's Math Big Book*, page 19. Say: **Can you find some pictures on this page that show two?** The children do this.

Ask: **Did we miss any twos? Where else can you see the number two or two of something? Let's make a list on the whiteboard.** (partners, 2 cents, pair of socks, twins, eyes, ears, etc.)

As children name items, draw pictures of them on the whiteboard.

### 2 Starfall.com

Project *Starfall.com: Numbers, "2."* The children watch carefully to find other examples of two.



#### Counting & Cardinality

A.3 - Write numbers from 0 to 20.

B.4 - Understand the relationship between numbers and quantities.

#### Operations & Algebraic Thinking

A.1 - Represent addition and subtraction in a variety of ways.

### 3 Discriminate the Numeral Two

Distribute *Backpack Bear's Math Workbook #1* to each child. Instruct the children to turn to page 3. Check to see that they do so. Complete the workbook page together step-by-step with the children.



**Optional:** Project the worksheet for demonstration.

Say: **Look at the top of the page. What do you see?**

Continue: **Yes, these are all examples of two. Now, put your finger on the boxes with numerals. Color only the boxes with the numeral two, and place an X on the other numerals.** Address each numeral.

Ask: **Why did we put an X on 20? 21?**

### 4 Show Two

Say: **Put your finger on the ten-frame. How many boxes should we color to show two? Right, two!**

### 5 Write the Numeral Two

Say: **Let's practice writing the numeral two. Put your pencil on the start dot to begin each numeral.**



## Formative Assessment

### Draw Representations of the Number Two

Indicate *Backpack Bear's Math Big Book*, page 19.

Say: **Put your finger on the large empty box. This is a special number box. Let's review the Number 2 page and discuss your ideas for two.** Do this.

Explain that the children should draw representations of two in the number box in their workbooks, such as two tally marks, 2 on a clock, a pair of shoes, twins, pigtails, etc.

Daily  Routines

DAY

3

CALENDAR  
31

## Calendar

- A volunteer tells the name of the month.
- The children name the days of the week.
- The calendar helper turns the next number.
- Say: **Today is** (name of day and date).
- Name an action such as jump, hop, clap, squat, or jumping jack, and the children do the action the number of times that correspond to the date.



## Weather

- Review yesterday's weather.
- The meteorologist goes to the window to look outside, predicts the weather, and places a tally mark under his or her prediction.
- Add a tally mark next to today's weather on the Weather Graph.



## Number Line

- Point to and count the days the children have been in school.
- Remove the sticky note to reveal the next number. Say: **We have been in school** (number of days) **days.**
- Sing "How Many Days Have We Been In School?"
- A volunteer identifies the name of the number last revealed on the Classroom Number Line. Say: **Today we will add one more number. Raise your hand if you know what (today's number) plus one more is.** The number helper chooses a volunteer to answer.

**How Many Days Have We Been In School?**

(Tune: "Here We Go Round the Mulberry Bush")

How many days have we been in school,  
been in school, been in school?  
How many days have we been in  
school, who can tell me please?

100

## Place Value

Indicate the *Tens* container. Say: **Here is the *Tens* container. How many bundles of ten are in the *Tens* container?** (one) **Right, one bundle. How many sticks are in a bundle?** (ten) **Remember, we need ten sticks before we can make a bundle.**

Indicate the *Ones* container. Ask: **How many sticks are in the *Ones* container?** (two) **Right, two. Today we get to add one stick to our *Ones* container.**

Choose two volunteers to come forward. The first child holds the *Tens* container and the second child holds the *Ones* container. Say: (first child's name) **is holding the *Tens* container. How many bundles of ten do we have?** Write the numeral 1 on the board.

**Counting & Cardinality**

B.4 - Understand the relationship between numbers and quantities.

B.4a - Say number names in order, pairing each object with one number.

B.4b - The last number counted tells the total number of objects.

B.4c - Each successive number refers to one more.

Say: (second child's name) is holding the **Ones** container. How many sticks are in the **Ones** container? Write the numeral 3 next to the 1 on the board.  
Say: **When we have one set of ten and three more, we have thirteen.**



## Hundreds Chart

- Say: **Today we will turn the next number.** The number helper does this.
- Ask: **The hundreds chart shows we have been in school how many days?**

## Magic Math Moment

### ABC Patterns

#### Materials

None

Say: **Listen to this pattern. If the rule is ABC, what would come next?**

- **Circle, square, triangle; circle, square, triangle; circle, square, \_\_\_\_ ?**
- **Red, blue, yellow; red, blue, yellow; red, blue, \_\_\_\_ ?**
- **Up, down, over; up, down, over; up, down, \_\_\_\_ ?**

Ask: **Who can create another ABC pattern?** Volunteers share their patterns. The class may affirm or make corrections accordingly.

#### Counting & Cardinality

A.3 - Write numbers from 0 to 20.

B.4 - Understand the relationship between numbers and quantities.

#### Operations & Algebraic Thinking

A.1 - Represent addition and subtraction in a variety of ways.

## The Number Three

### 1 Math Bag Objects

Distribute math bags and instruct the children to open them. Say: **I will say a number and you take that many objects from your math bag and hold them up for us to see. Ready?**

- **Two connect cubes**
- **A shape with only 1 curved line**
- **Two different shapes**

Continue naming objects and combinations of objects from the Math Bags as time allows.

#### Materials

- Backpack Bear's Math Workbook #1, page 4
- Backpack Bear's Math Big Book, page 20
- Math Bags
- Math Melodies CD, Track 31
- Nursery Rhymes, page 44
- Starfall.com: Numbers, "3"
- Pencils, crayons

## 2 Introduce the Number Three

Indicate *Nursery Rhymes* page 44, and play *Math Melodies* CD, Track 31, "Three Little Kittens."

Read the rhyme and ask: **How many kittens lost their mittens? Right, three!**

## 3 Find Threes

Write the numeral 3 on the board. Say: **This is the numeral 3. The numeral 3 stands for three.** Indicate and count three classroom objects to demonstrate three.

Continue: **Find a shape in your math bag that has three sides and three angles and hold it up.** The children do this.

Ask: **Who knows the name of this shape?** Volunteers respond.

Indicate *Backpack Bear's Math Big Book*, page 20. Ask: **Can you find some pictures on this page that show three?**

Ask: **Did we miss any threes? Where else can you see the number three or three of something? Let's make a list on the whiteboard.** (a triangle, triplets, on a clock, etc.)



## 4 Starfall.com

Project *Starfall.com*: Numbers, "3." The children watch carefully, looking for other examples of three.

# Formative Assessment

## Draw Representations of the Number Three

Distribute *Backpack Bear's Math Workbook #1* to each child. Instruct them to turn to page 4. Complete the page together as with previous workbook pages.





## Calendar

- A volunteer tells the name of the month.
- The children name the days of the week.
- The calendar helper turns the next number.
- Say: **Today is** (name of day and date).
- Name an action such as jump, hop, clap, squat, or jumping jack, and the children do the action the number of times that correspond to the date.



## Weather

- Review yesterday's weather.
- The meteorologist goes to the window to look outside, predicts the weather, and places a tally mark under his or her prediction.
- Add a tally mark next to today's weather on the Weather Graph.



## Number Line

- Point to and count the days the children have been in school.
- Remove the sticky note to reveal the next number. Say: **We have been in school** (number of days) **days.**
- Sing "How Many Days Have We Been In School?"
- A volunteer identifies the name of the number last revealed on the Classroom Number Line. Say: **Today we will add one more number. Raise your hand if you know what (today's number) plus one more is.** The number helper chooses a volunteer to answer.

**How Many Days Have We Been In School?**

(Tune: "Here We Go Round the Mulberry Bush")

*How many days have we been in school,  
been in school, been in school?  
How many days have we been in  
school, who can tell me please?*



## Place Value

Indicate the *Tens* container. Say: **Here is the *Tens* container. How many bundles of ten are in the *Tens* container?** (one) **Right, one bundle. How many sticks are in a bundle?** (ten) **Remember, we need ten sticks before we can make a bundle.**

Indicate the *Ones* container. Ask: **How many sticks are in the *Ones* container?** (two) **Right, two. Today we get to add one stick to our *Ones* container.**

Choose two volunteers to come forward. The first child holds the *Tens* container and the second child holds the *Ones* container. Say: (first child's name) **is holding the *Tens* container. How many bundles of ten do we have?** Write the numeral 1 on the board.

**Counting & Cardinality**

A.2 - Count forward from a given number.

B.4 - Understand the relationship between numbers and quantities.

B.4a - Say number names in order, pairing each object with one number.

B.4b - The last number counted tells the total number of objects.

B.4c - Each successive number refers to one more.

Say: (second child's name) is holding the **Ones** container. How many sticks are in the **Ones** container? Write the numeral 4 next to the 1 on the board.  
Say: **When we have one set of ten and four more, we have fourteen.**



## Hundreds Chart

- Say: **Today we will turn the next number.** The number helper does this.
- Ask: **The hundreds chart shows we have been in school how many days?**

## Magic Math Moment

### Ten-Frames

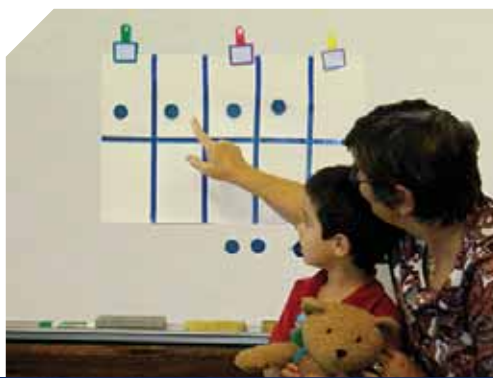
Display the Classroom Ten-frame on the board. Say: **Here is a ten-frame. Do you remember why it is called a ten-frame? Right, it's called a ten-frame because it has ten boxes. I will put six magnets in the ten-frame.** Begin with the top left box and place a dot in six of the sections.

Say: **Let's count to see if I am correct. Count the magnets. Did you notice that I started in the first box and placed the magnets in the order of the boxes?**

Remove the magnets. Say: **Now you try.** Volunteers take turns to announce a number from 0 to 10 and place the corresponding number of magnets in the ten-frame.

#### Materials

- Whiteboard, markers
- Classroom Ten-frame
- Magnets (to fit ten-frame)



#### Counting & Cardinality

B.4 - Understand the relationship between numbers and quantities.

B.4a - Say number names in order, pairing each object with one number.

B.4b - The last number counted tells the total number of objects.

B.4c - Each successive number refers to one more.

#### Geometry

A.2 - Correctly name shapes.

## The Number Four

**Essential Question:** How are two-dimensional shapes the same and how are they different?

### 1 Review Shapes

Place the *triangle, circle, rectangle, ellipse, square, and rhombus* Picture Cards in a pocket chart.

Say: **Here are some shapes we have learned.** Indicate and name each shape.

#### Materials

- Shape Cards: circle, ellipse, rectangle, rhombus, square, and triangle
- Starfall.com: Numbers, "4"
- Backpack Bear's Math Big Book, page 21
- Backpack Bear's Math Workbook #1, page 5
- Pencils, crayons
- Pocket chart



Continue: **Raise your hand if you can find a shape with one curved line that is the same distance from the center point.** A volunteer removes the circle from the pocket chart, identifies it, and holds it in front of the class.

Continue:

- **Find the shape that has three straight lines and three right angles.** (triangle)
- **Find the shape that has one curved line that is NOT the same distance from the center point, and that looks like an egg.** (ellipse/oval)
- **Find the shape that has four equal lines and four equal angles.** (square)
- **Find the shape that has four straight lines and four angles. Two of the lines are longer than the other two.** (rectangle)

Place the Shape Cards back in the pocket chart. The volunteers return to their seats.

## 2 Introduce the Number Four

Write the numeral 4 on the board. Say: **This is a four. The numeral 4 stands for four.** Indicate and count four classroom objects to demonstrate four.

Ask: **Which shapes in the pocket chart have four straight lines?** (square, rectangle, rhombus)

## 3 Find Fours

Indicate *Backpack Bear's Math Big Book*, page 21. Ask: **Can you find some pictures on this page that show four?** The children do this.

Ask: **Where else can you see the number four or four of something?** (quadruplets, four-legged animals, four tires on a car, etc.)

## 4 Starfall.com

Project *Starfall.com*: Numbers, "4." The children watch carefully, looking for other examples of four.



## Formative Assessment

### Draw Representations of the Number Four

Distribute *Backpack Bear's Math Workbook #1* to each child. The children turn to page 5. Complete the page together as with previous workbook pages.





## Learning Centers

DAY

5

## 1 Computer

The children explore:

- Monthly calendar
- Numbers: 1-5
- Numbers: "Count Cookies"
- Math Songs: "Five Little Bears"
- Holidays: "Gingerbread Boy"

The children may navigate to other *Starfall.com* math activities after they have explored those suggested above.

**Materials**

- Computers navigated to *Starfall.com*

**Counting & Cardinality**

A.2 - Count forward from a given number.

A.3 - Write numbers from 0 to 20.

B.4 - Understand the relationship between numbers and quantities.

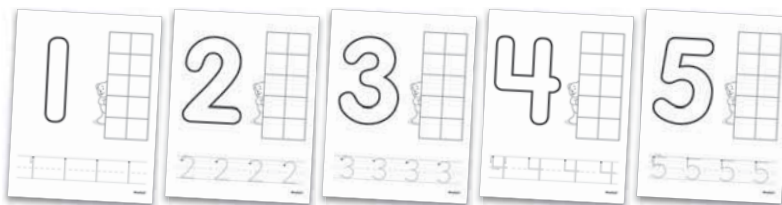
**Geometry**

A.2 - Correctly name shapes.

## 2 Number Activity Mats

Each child selects a Number Activity Mat. The children roll play dough into a "snake" and use it to form the number on their mats. They then form small balls of play dough to cover the corresponding number of sections on the ten-frame.

The children remove the play dough and exchange Number Activity Mats with each other. They repeat as time allows.

**Materials**

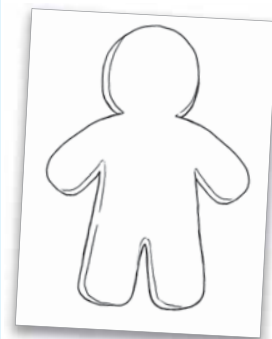
- Number Activity Mats 1-5
- Play dough

## 3 Gingerbread Boy Shape Activity

The children use crayons to draw shapes on Gingerbread Boy to represent his eyes, nose, and buttons. Then they cut out Gingerbread Boy. They may use the Shape Cards for ideas.

**Materials**

- Shape Cards: circle, ellipse/oval, rectangle, square, and triangle (4 sets)
- Gingerbread Boy worksheet for each child
- Scissors, crayons



Remember to continue the Daily Routines in addition to the Learning Centers on Day 5 of each week!

## 4 Teacher's Choice

Prepare an activity that will provide the children with an opportunity to practice a skill from this unit.

## 5 Summative Assessment

The children turn to page 6 of *Backpack Bear's Math Workbook #1*. Explain the color key at the top of the page and display the copy of the color key that you colored as an example. The children color the color key shapes.

Instruct the children to look for all the triangles and color them red. They then find all of the circles and color them yellow. They continue for the remainder of the shapes and colors. Check for understanding as the children complete the page.

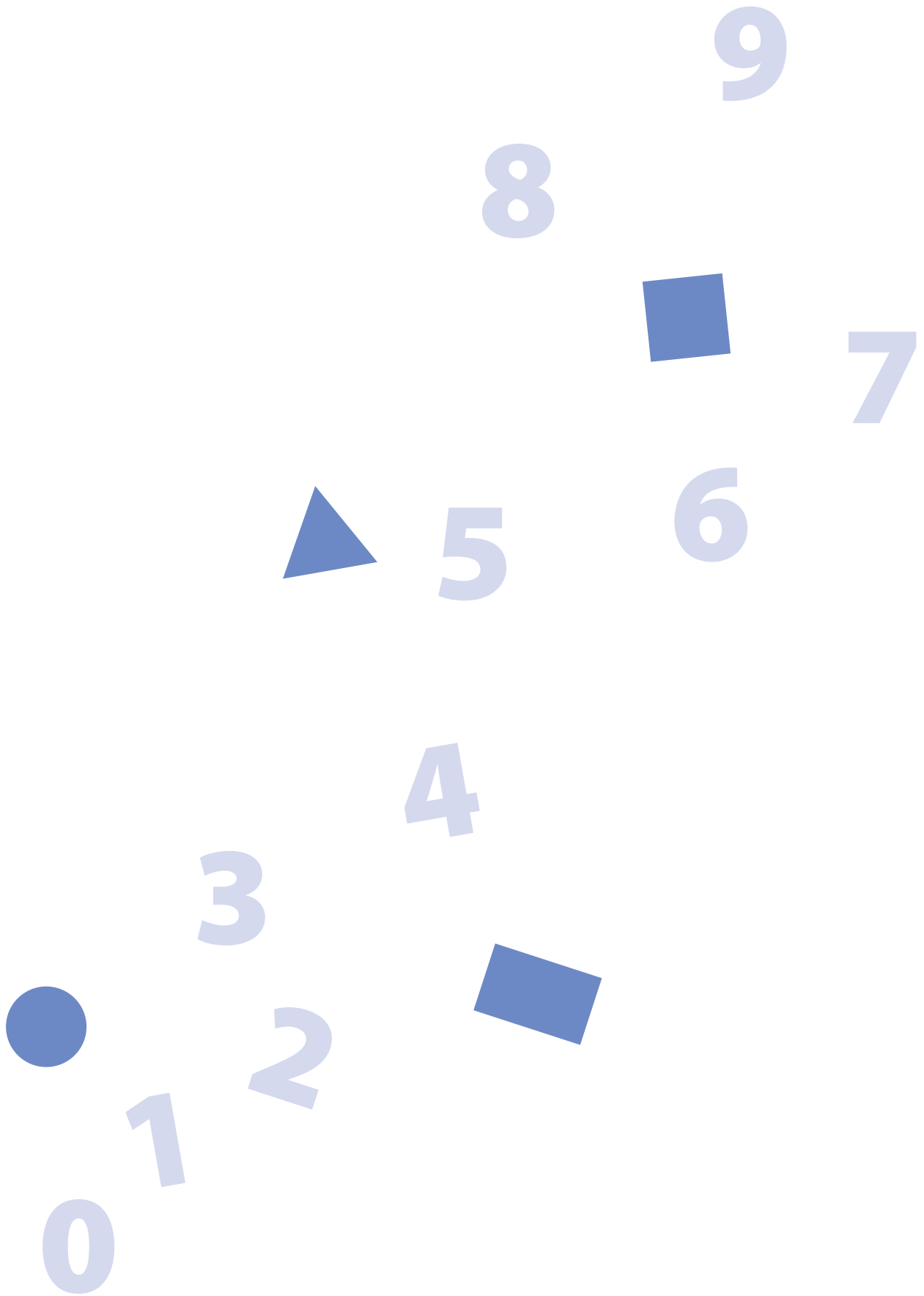
To perform this week's summative assessment, choose one of the children and show him or her the Shape Cards one at a time. He or she completes the sentence, *I know this is a* (blank) *because* (blank). Repeat with each child in the group.

Record each child's mastery on the Shape Assessment Class Checklist (Unit 2, Week 3).

### Materials

- Shape Assessment Class Checklist (Unit 2, Week 3)
- Shape Cards: *circle, ellipse, oval, rectangle, square, and triangle*
- Backpack Bear's Math Workbook #1*, page 6
- Prepared color key
- Crayons





# Week 4 Summary

In Week 4 the children will continue learning to identify the meaning of numbers, and discussing ways they are represented in their everyday lives. They will discuss math strategies and explore one-to-one correspondence. The children will also:

- Learn to play “Backpack Bear Says”
- Use cooperative learning techniques
- Compare objects in groups to determine which has the greater/lesser number
- Review AB patterns
- Supply missing numbers in a series

## Preparation

### DAY 1

No additional preparation is needed.

### DAY 2

The children will use their math bags which should contain a ten-frame and several connect cubes.

You will use a set of Shape Cards (*square, rhombus, triangle, pentagon, hexagon*).

### DAY 3

The children will use their math bags.

### DAY 4

Have the “A Walk in the Park” game available for demonstration if time permits.



**DAY 5**

*Activity Center 1* — Navigate classroom computers to *Starfall.com*.

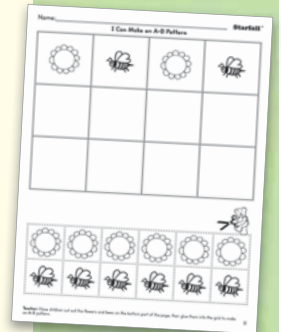
*Activity Center 2* — The children will need 1 or 2 “A Walk in the Park” Game board(s), playing pieces and 1 or 2 game spinners numbered 1-5.

*Activity Center 3* — The children will use math mats and a game spinner numbered 1-5. Create a set of Number Representation Cards for 1-5 by combining the 1-5 Number, Dice, Tally Marks, Domino, and Ten-Frame Cards.

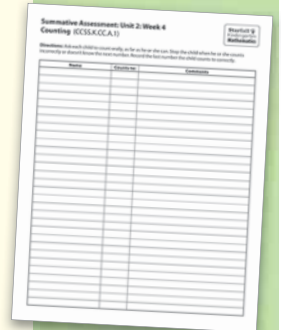
*Activity Center 4* — Prepare materials for this week’s Teacher’s Choice Activity.

*Summative Assessment* — The children will need *Backpack Bear’s Math Workbook #1*, pencils, scissors, and glue sticks to complete page 11 as you individually administer the Summative Assessment to each child.

Duplicate a Summative Assessment Checklist for Unit 2, Week 4 on which you will record the results of the Unit 2 counting assessment.



Backpack Bear’s Math Workbook #1, Page 11



Summative Assessment Unit 2 - Week 4

DAY 1

DAY 2

*Daily Routines*

- Calendar
- Weather
- Number Line
- Place Value
- Hundreds Chart
- “How Many Days Have We Been In School?”

*Magic Math Moment*

Count to five

“Backpack Bear Says” (Numbers)

*Math Concepts*

The number five

5

Relationship between number and quantity

Partner sharing

The number six

6

Discriminate fives

Discriminate hexagons

Relationship between number and quantity

Discriminate sixes

*Formative / Summative Assessment*

The number five

The number six

*Workbooks & Media*

Math Melodies CD Track 17, “One Little Elephant Went Out to Play”

Workbook page 8

Workbook page 7



DAY 3

DAY 4

DAY 5

- Calendar
- Weather
- Number Line
- Place Value
- Hundreds Chart
- "How Many Days Have We Been In School?"

Learning Centers

Using math strategies

What number comes between?

Starfall.com:

- Monthly Calendar
- Numbers: "5-8"
- Numbers: "Feed the Animals"
- Math Songs: "Five Little Bears"

1

The number seven  
Relationship between number and quantity  
Discriminate sevens

7

Identify the number that comes before another number

The number eight  
Review octagon

8

Discriminate eights  
Relationship between number and quantity

"A Walk in the Park"

2

Ways to Represent Numbers

3

The number seven

The number eight

Teacher's Choice

4

Starfall.com: "Numbers"

Workbook page 9



Workbook page 10



Summative Assessment: Counting (Workbook p. 11)

5



**Calendar**

- A volunteer tells the name of the month.
- The children name the days of the week.
- The calendar helper turns the next number.
- Say: **Today is** (name of day and date).
- Name an action such as jump, hop, clap, squat, or jumping jack, and the children do the action the number of times that correspond to the date.

**Weather**

- Review yesterday's weather.
- The meteorologist goes to the window to look outside, predicts the weather, and places a tally mark under his or her prediction.
- Add a tally mark next to today's weather on the Weather Graph.

**Number Line**

- Point to and count the days the children have been in school.
- Sing "How Many Days Have We Been In School?"
- Remove the sticky note to reveal the next number. Say: **We have been in school** (number of days) **days**.

**How Many Days Have We Been In School?**

(Tune: "Here We Go Round the Mulberry Bush")

*How many days have we been in school,  
been in school, been in school?  
How many days have we been in  
school, who can tell me please?*

**Place Value**

Indicate the *Ones* container. Ask: **How many sticks are in the Ones container?** (five) **Right, five. Today we get to add one stick to our Ones container.** Do this.

Choose two volunteers to come forward and hold the *Ones* and *Tens* containers. Count the sticks with the children and write the new total on the board. Say: **When we have one set of ten and six more, we have sixteen.**

**Hundreds Chart**

- Say: **Today we will turn the next number.** The number helper does this.
- Ask: **The hundreds chart shows we have been in school how many days?**

**Counting & Cardinality**

A.2 - Count forward from a given number.

B.4 - Understand the relationship between numbers and quantities.

B.4a - Say number names in order, pairing each object with one number.

B.4b - The last number counted tells the total number of objects.

B.4c - Each successive number refers to one more.



# Magic Math Moment

## "Count to Five"

Play the *Math Melodies* CD Track 17, "One Little Elephant Went Out to Play." The children listen and then sing along.

### Materials

- Math Melodies* CD, Track 17

### "One Little Elephant Went Out to Play"

One little elephant went out to play  
Upon a spider's web one day;  
She had such enormous fun,  
She asked another little elephant to come!

Two little elephants...  
Three little elephants...  
Four little elephants...

Five little elephants went out to play  
Upon a spider's web one day;  
They had such enormous fun,  
They didn't ask another little elephant to come!

## The Number Five

**Essential Question:** How can we use a numeral to show how many objects there are?

### Materials

- Backpack Bear's Math Big Book*, page 22
- Backpack Bear's Math Workbook #1*, page 7
- Pencils, crayons

### Counting & Cardinality

A.3 - Write numbers from 0 to 20.

B.4 - Understand the relationship between numbers and quantities.

## 1 Introduce the Number Five

Write the numeral 5 on the board. Say: **This is a five. The numeral 5 stands for five.** Indicate and count five classroom objects to demonstrate five.

Indicate *Backpack Bear's Math Big Book*, page 22. Ask: **Can you find some pictures on this page that show five?** The children do this.

Say: **Today we will partner share to help us think of other places we see 5 that Backpack Bear may have missed.**

## 2 Review Partner Sharing and Finding Fives

Review the procedure for "Stand Up, Hand Up, Partner Up." Explain that the children will use this procedure today.

- The children stand and raise one hand.
- They partner by touching their hands to a partner's hand.
- Partners sit criss-cross, knee-to-knee.
- The children greet their partners.
- Partners discuss the question: **Where can you see the number five or five of something?**



The children will have an opportunity to view five on Starfall.com during Learning Centers.

After a short time, say: **Clap once if you can hear me.** (The children do this.) **Clap twice if you can hear me.** (The children do this.) Explain: **This is the signal to end the partner discussion.**

Ask: **Where can you see the number five or five of something?** (Volunteers respond.) **The next step is to compliment your partner.** **Partners, compliment each other, say good job (name).** Partners do this.



## Formative Assessment

### Backpack Bear's Math Workbook, Page 7

Distribute *Backpack Bear's Math Workbook #1*. The children turn to page 7. Complete the page together as with previous workbook pages.



Daily  Routines

DAY

2

CALENDAR  
31

## Calendar

- A volunteer tells the name of the month.
- The children name the days of the week.
- The calendar helper turns the next number.
- Say: **Today is** (name of day and date).
- Name an action such as jump, hop, clap, squat, or jumping jack, and the children do the action the number of times that correspond to the date.



## Weather

- Review yesterday's weather.
- The meteorologist goes to the window to look outside, predicts the weather, and places a tally mark under his or her prediction.
- Add a tally mark next to today's weather on the Weather Graph.



## Number Line

- Point to and count the days the children have been in school.
- Sing "How Many Days Have We Been In School?"
- Remove the sticky note to reveal the next number. Say: **We have been in school** (number of days) **days**.

**How Many Days Have We Been In School?***(Tune: "Here We Go Round the Mulberry Bush")*

*How many days have we been in school,  
been in school, been in school?  
How many days have we been in  
school, who can tell me please?*

100

## Place Value

Indicate the *Ones* container. Ask: **How many sticks are in the Ones container?** (six) **Right, six. Today we get to add one stick to our Ones container.** Do this.

Choose two volunteers to come forward and hold the *Ones* and *Tens* containers. Count the sticks with the children and write the new total on the board. Say: **When we have one set of ten and seven more, we have seventeen.**



## Hundreds Chart

- Say: **Today we will turn the next number.** The number helper does this.
- Ask: **The hundreds chart shows we have been in school how many days?**

**Counting & Cardinality**

*A.2 - Count forward from a given number.*

*B.4 - Understand the relationship between numbers and quantities.*

*B.4a - Say number names in order, pairing each object with one number.*

*B.4b - The last number counted tells the total number of objects.*

*B.4c - Each successive number refers to one more.*

# Magic Math Moment

## "Backpack Bear Says"

### Materials

None

Play "Backpack Bear Says" (a variation of "Simon Says").  
Suggestions:

- Tap your nose five times.
- Hop six times.
- Nod your head three times.
- Turn around two times.
- Touch your nose one time.

### Counting & Cardinality

A.3 - Write numbers from 0 to 20.

B.4 - Understand the relationship between numbers and quantities.

### Geometry

A.2 - Correctly name shapes.

## The Number Six

### Materials

- Shape Cards: hexagon, pentagon, rhombus, square, and triangle
- Math bags containing ten-frames and connect cubes
- Backpack Bear's Math Big Book, page 23
- Backpack Bear's Math Workbook #1, page 8
- Pencils, crayons
- Pocket chart

### 1 Introduce the Number Six

Instruct the children to take the connect cubes and ten-frames from their math bags.

Say: **Look at the ten-frame. Put your finger on the first section. I will write a number on the board. Begin with the first section and place enough cubes to match the number in the ten-frame.** Write

5 on the board. Check for accuracy as children place their cubes.

Ask: **What if you add one more cube to your ten-frame? How many cubes would you have?**

Continue: **Let's check. Add one more cube. Now, count your cubes. Raise your hand if you have six cubes altogether.**

Write the numeral 6 on the board. Say: **This is a six. The numeral 6 stands for six.** Indicate and count six classroom objects to demonstrate six.

The children put their connect cubes and ten-frames back into their math bags.

### 2 Play "Find the Hexagon"

Place the Shape Cards *square, rhombus, triangle, pentagon, and hexagon* face down in a pocket chart.

Say: **We learned about a shape with six sides called a hexagon. A hexagon is hidden somewhere in our cards. Let's play a game. A volunteer will turn over a card and identify the shape. The volunteer will choose someone to tell how many sides that shape has. We'll do this until we find the six-sided hexagon shape!**

Play "Find the Hexagon."



### 3 Find Sixes

Indicate *Backpack Bear's Math Big Book*, page 23. Ask: **Can you find some pictures on this page that show six?**

Ask: **Where else can you see the number six or six of something?** (six dots on a domino, six on the number line, three plus three equals six)



## Formative Assessment

### Backpack Bear's Math Workbook, Page 8

Distribute *Backpack Bear's Math Workbook #1* to each child. The children turn to page 8. Complete the page together as with previous workbook pages.





## Calendar

- A volunteer tells the name of the month.
- The children name the days of the week.
- The calendar helper turns the next number.
- Say: **Today is** (name of day and date).
- Name an action such as jump, hop, clap, squat, or jumping jack, and the children do the action the number of times that correspond to the date.



## Weather

- Review yesterday's weather.
- The meteorologist goes to the window to look outside, predicts the weather, and places a tally mark under his or her prediction.
- Add a tally mark next to today's weather on the Weather Graph.



## Number Line

- Point to and count the days the children have been in school.
- Sing "How Many Days Have We Been In School?"
- Remove the sticky note to reveal the next number. Say: **We have been in school** (number of days) **days**.

**How Many Days Have We Been In School?**

(Tune: "Here We Go Round the Mulberry Bush")

*How many days have we been in school,  
been in school, been in school?  
How many days have we been in  
school, who can tell me please?*



## Place Value

Indicate the *Ones* container. Ask: **How many sticks are in the Ones container?** (seven) **Right, seven. Today we get to add one stick to our Ones container.**

Choose two volunteers to come forward and hold the *Ones* and *Tens* containers. Count the sticks with the children and write the new total on the board. Say: **When we have one set of ten and eight more, we have eighteen.**



## Hundreds Chart

- Say: **Today we will turn the next number.** The number helper does this.
- Ask: **The hundreds chart shows we have been in school how many days?**

**Counting & Cardinality**

A.2 - Count forward from a given number.

B.4 - Understand the relationship between numbers and quantities.

B.4a - Say number names in order, pairing each object with one number.

B.4b - The last number counted tells the total number of objects.

B.4c - Each successive number refers to one more.

# Magic Math Moment

## Using Math Strategies

### Materials

None

Say: **A strategy is a way of finding an answer. If we want to know how many girls there are in our class today, what strategy could we use to find the answer?** Accept responses.

Continue: **Let's use the strategy of having the girls stand in the front of the room and we'll count them together. We will pass Backpack Bear to each girl as we count. This is called one-to-one correspondence. That means we say one number for each girl.** Do this.

Ask: **How many girls are here today? Let's use the same strategy to count how many boys there are in school today.**

Repeat the procedure for the boys. Ask:

- **How many girls are here today?** (Write the numeral on the board.)
- **How many boys are here today?** (Write the numeral on the board.)
- **Which number is larger, or bigger?**
- **Are there more boys or more girls here today?**

### Counting & Cardinality

A.3 - Write numbers from 0 to 20.

B.4 - Understand the relationship between numbers and quantities.

B.4a - Say number names in order, pairing each object with one number.

C.6 - Identify greater than, less than, and equal to.

## The Number Seven

**Essential Question:** Why do we need to count each object to find out how many we have?

### Materials

- Math bags
- Backpack Bear's Math Big Book, page 24
- Backpack Bear's Math Workbook #1, page 9
- Starfall.com: Numbers
- Pencils, crayons

### 1 Introduce the Number Seven

Write the numeral 7 on the board. Say: **This is seven. The numeral 7 stands for seven.** Indicate and count seven classroom objects to demonstrate seven.

### 2 Seven Hunt

Say: **Today let's go on a seven hunt! Look in your math bag and find seven objects. They can be all the same or they can be seven different things. Place the seven objects in front of you.**

The children do this.

Continue: **Now, turn to your neighbor and take turns counting each other's objects.**



### 3 Find Sevens

Indicate *Backpack Bear's Math Big Book*, page 24. Ask: **Can you find some pictures on this page that show seven?**

Ask: **Where else can you see the number seven or seven of something?** (seven days in a week, seven on the calendar, six plus one equals seven)



### 4 Starfall.com

Project *Starfall.com*: Numbers, "7." The children watch carefully for examples of seven. Add additional suggestions to your list.



## Formative Assessment

### Backpack Bear's Math Workbook, Page 9

Distribute *Backpack Bear's Math Workbook #1* to each child. The children turn to page 9. Complete the page together as with previous workbook pages.





# Daily Routines

DAY

4


 CALENDAR  
31

## Calendar

- A volunteer tells the name of the month.
- The children name the days of the week.
- The calendar helper turns the next number.
- Say: **Today is** (name of day and date).
- Name an action such as jump, hop, clap, squat, or jumping jack, and the children do the action the number of times that correspond to the date.



## Weather

- Review yesterday's weather.
- The meteorologist goes to the window to look outside, predicts the weather, and places a tally mark under his or her prediction.
- Add a tally mark next to today's weather on the Weather Graph.



## Number Line

- Point to and count the days the children have been in school.
- Sing "How Many Days Have We Been In School?"
- Remove the sticky note to reveal the next number. Say: **We have been in school** (number of days) **days**.

### How Many Days Have We Been In School?

(Tune: "Here We Go Round the Mulberry Bush")

How many days have we been in school,  
been in school, been in school?  
How many days have we been in  
school, who can tell me please?

100

## Place Value

Indicate the *Ones* container. Ask: **How many sticks are in the Ones container?** (eight) **Right, eight. Today we get to add one stick to our Ones container.**

Choose two volunteers to come forward and hold the *Ones* and *Tens* containers. Count the sticks with the children and write the new total on the board. Say: **When we have one set of ten and nine more, we have nineteen.**



## Hundreds Chart

- Say: **Today we will turn the next number.** The number helper does this.
- Ask: **The hundreds chart shows we have been in school how many days?**

### Counting & Cardinality

A.2 - Count forward from a given number.

B.4 - Understand the relationship between numbers and quantities.

B.4a - Say number names in order, pairing each object with one number.

B.4b - The last number counted tells the total number of objects.

B.4c - Each successive number refers to one more.

# Magic Math Moment

## What Number Comes Between?

### Materials

- Backpack Bear
- Number Cards 1 through 10

Choose two volunteers to stand next to each other. Say: **These children are standing next to each other. Say, next to.**

Continue: **If Backpack Bear wants to stand between them, where would he stand? Raise your hand if you can stand with Backpack Bear between (name volunteers).** A volunteer does this. **Say, between.**

Select 10 children to hold Number Cards 1 through 10 in numerical order. The remaining children practice identifying the child holding the number between two other numbers (Example 3 and 5) and identify the number. Practice with several examples. Change volunteers to give all of the children a turn to hold Number Cards and identify the number that comes between.

### Counting & Cardinality

A.3 - Write numbers from 0 to 20.

B.4 - Understand the relationship between numbers and quantities.

CC.2 - Supply missing number in a sequence.

### Operations & Algebraic Thinking

OA.1 - Identify, describe, or extend simple patterns.

### Geometry

A.1 - Describe objects using shapes and relative positions.

## The Number Eight

### Materials

- "A Walk in the Park"
- Backpack Bear's Math Big Book, page 25
- Backpack Bear's Math Workbook #1, page 10
- Pencils, crayons
- Backpack Bear

### 1 Introduce the Number Eight

Write the numeral 8 on the board. Say: **This is an eight. The numeral 8 stands for eight.** Indicate and count eight classroom objects to demonstrate eight.

Choose four girls and four boys to come to the front of the classroom. Say: **Let's count how many boys and girls are standing together.** Do this.

Ask: **What pattern could we make using these girls and boys? Let's use the AB rule.** Assist the children to understand the pattern could be girl/boy, girl/boy, or boy/girl, boy/girl.

### 2 Find Eights

Indicate *Backpack Bear's Math Big Book*, page 25. Ask: **Can you find some pictures on this page that show eight?** The children do this.

Say: **Backpack Bear remembers that an octagon has eight sides. He remembers this shape because it is the shape of a stop sign! Who can find the stop sign in Backpack Bear's picture?** A volunteer does this.

Ask: **Where else can you see the number eight or eight of something?** (an octopus has eight legs, there are eight crayons in a box, eight on a clock or calendar)





# Formative Assessment

## Backpack Bear's Math Workbook, Page 10

Distribute *Backpack Bear's Math Workbook #1* to each child. The children turn to page 10. Complete the page together as with previous workbook pages.

If time permits, preview "A Walk in the Park."



## 1 Computer

The children explore:

- Monthly calendar
- Numbers: 5-8
- Numbers: "Feed the Animals"
- Geometry and Measurement: "Geometry Terms"

The children may navigate to other *Starfall.com* math activities after they have explored those suggested above.

**Materials**

- Computers navigated to *Starfall.com*

## 2 A Walk in the Park

The children place their playing pieces on the start. They take turns to spin then move the corresponding number of spaces.

If a player lands on a +2 or +1, he or she moves that number of additional spaces.

If the player lands on -3, the player moves back 3 spaces. The first player to reach the end wins (or the children may play until all players reach the end).

**Materials**

- 1 or 2 "A Walk in the Park" game board(s)
- Game spinner(s) numbered 1 to 5
- Playing piece for each child

## 3 Ways to Represent Numbers

The children mix the sets of Representation Cards together and lay them face up on the floor or a table.

The first child spins the spinner. He or she finds all the cards that represent the number rolled and places the cards on his or her math mat.

The next child spins until he or she spins a different number, finds all the cards that represent that number, and places the cards on his or her math mat. The children continue until they have all had a turn.

If time allows, the children place all the Representation Cards back on the floor or table and repeat as above.

**Materials**

- Representation Cards for numbers 1 through 5
- Game spinner numbered 1-5
- Math mats

**Counting & Cardinality**

A.2 - Count forward from a given number.

A.3 - Write numbers from 0 to 20.

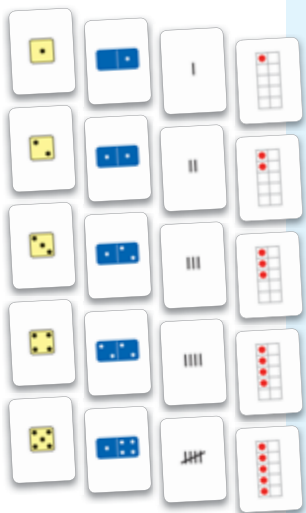
B.4 - Understand the relationship between numbers and quantities.

**Operations & Algebraic Thinking**

OA.1 - Identify, describe, or extend simple patterns.

**Geometry**

A.2 - Correctly name shapes.



## 4 Teacher's Choice

Prepare an activity that will provide the children with an opportunity to practice a skill from this unit.

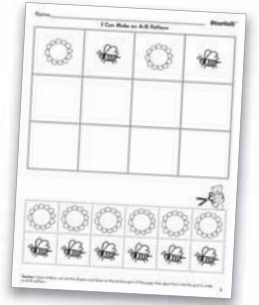
## 5 Summative Assessment

Distribute *Backpack Bear's Math Workbook #1*. Instruct the children to turn to page 11. Explain how to complete the page. The children will work to complete their pattern workbook page as you individually assess them.

To perform this week's Summative Assessment, you will listen to each child count individually as far as he or she can. Choose a child to begin and ask him or her to begin counting orally. Listen until the child either counts incorrectly or says he or she doesn't know what number comes next. Record the last number the child counts to correctly on the Summative Assessment Checklist for Unit 2, Week 4. Repeat with each of the other children in the group.

### Materials

- Backpack Bear's Math Workbook #1*, page 11
- Summative Assessment Checklist (Unit 2, Week 4)
- Pencils, scissors, glue sticks





0

1

2

3

4



5

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7

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9

