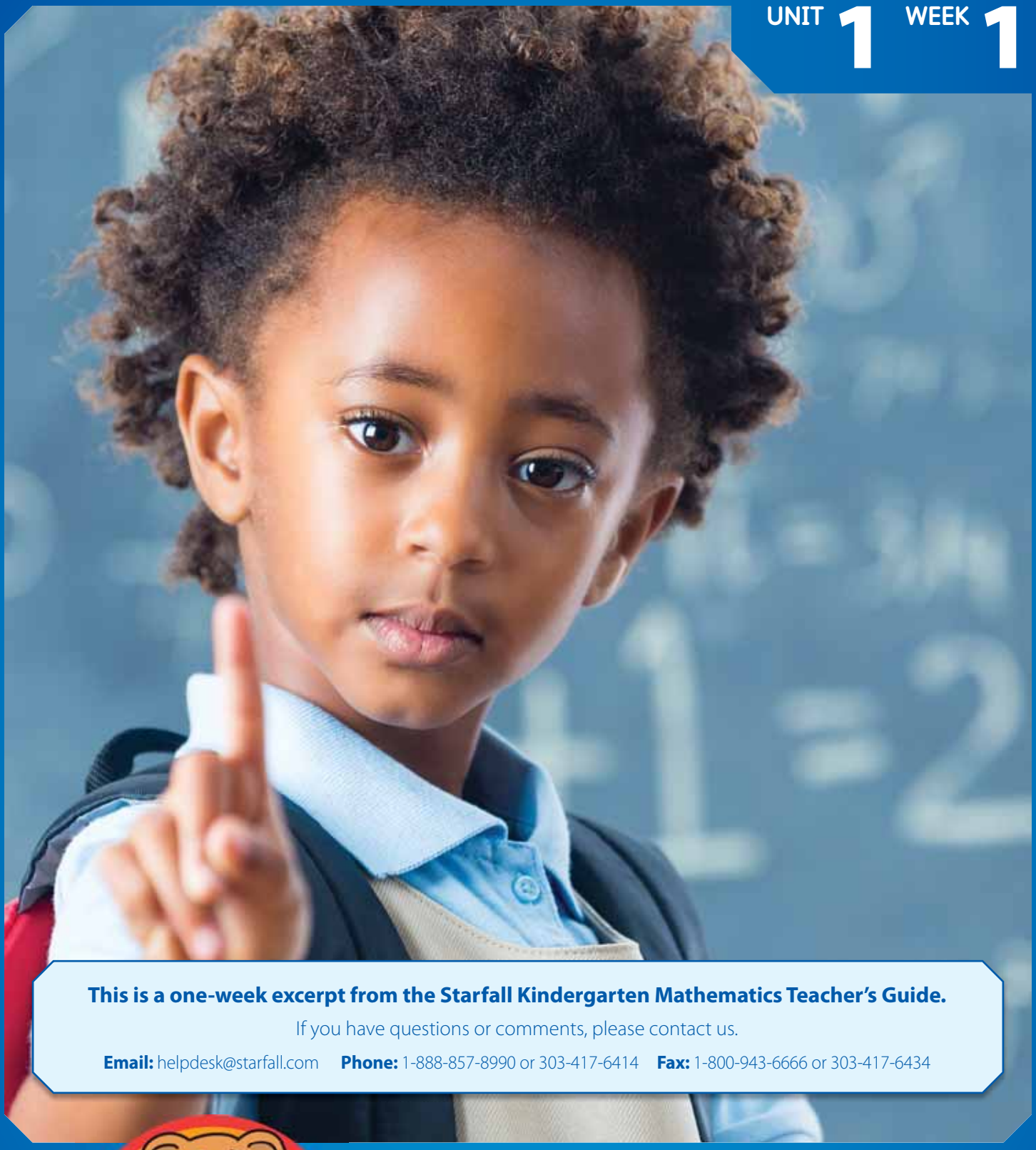
UNIT 1 WEEK 1



This is a one-week excerpt from the Starfall Kindergarten Mathematics Teacher's Guide.

If you have questions or comments, please contact us.

Email: helpdesk@starfall.com **Phone:** 1-888-857-8990 or 303-417-6414 **Fax:** 1-800-943-6666 or 303-417-6434

Starfall Kindergarten MATHEMATICS

Let's Get Started

Starfall Education Foundation
P.O. Box 359, Boulder, CO 80306

Starfall Education Foundation P.O. Box 359, Boulder, CO 80306 U.S.A.

Email: helpdesk@starfall.com **Phone:** 1-888-857-8990 or 303-417-6414 **Fax:** 1-800-943-6666 or 303-417-6434

Copyright © 2016 by Starfall Education and its licensors. All rights reserved. Starfall® is a registered trademark in the US, the European Union, and various other countries.

Let's Get Started

Week 1

Summary & Preparation 10
Introduce Daily Routines and Preview the Number One 15
Review One, Preview Two 18
Preview Three 21
Preview Four 24
Preview Five 27

Week 1 Summary

The children will become acquainted with the Gathering Routine, which incorporates the monthly calendar, weather prediction, number line, place value, and hundreds day chart. The Gathering Routine is a key component of the Starfall Math Program and will be used daily. This routine must begin on the first day of school. The children will also:

- Learn how to observe, predict, and chart the weather
- Be introduced to the concept of place value
- Practice counting using the number line
- Explore negative numbers and number concepts
- Learn about basic shapes and their attributes
- Measure using rectangular lengths
- Become familiar with cooperative learning activities

Classroom Preparation

Prepare a blank classroom calendar for the month and have the name of the month and days and the numerals 1 to 31 available. Do not assemble the calendar. The children will do this together.

Display the Weather Picture Cards attached to chart paper or on a whiteboard, arranged to allow a space to draw tally marks under each.

Mount the -5 to 180 Classroom Number Line around the classroom where it is easily observable. Cover each number above zero with a sticky note.

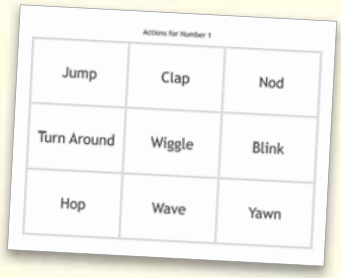
Prepare a hundreds day chart by placing numbered cards from 1 to 100 face down in the chart. The children will turn a card each day to gradually reveal all 100 numbers in sequence.

Have rubber bands and a container of sticks, stirrers, craft sticks, or straws available. Label three containers to create a ones container, a tens container, and a hundreds container.

Be prepared to introduce Backpack Bear to the children. He will be a member of the class for the year.

Please refer to the Math *Read Me First* for further information regarding classroom setup.

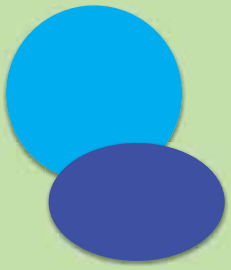
DAY 1



Actions for the Number One

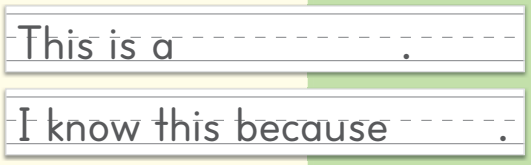
Duplicate a copy of the "Actions for the Number One" blackline. Cut the actions apart and place them in a paper bag.

DAY 2



Have a ruler and a large construction paper circle and ellipse available. You will use the circle throughout the week.

Prepare the two sentence strips pictured at right. You will use them on Day 2 and again on Day 3.



Familiarize yourself with the partner sharing strategy on page 19 of the lesson plans. You will use this strategy today and throughout the school year.

The children will listen to *Math Melodies* CD Track 3, "Circle Song."

DAY 3

Prepare a large construction paper triangle. You will use it throughout the week.

Distribute a math bag to each child. Each child will also need a circle and a triangle attribute block. When the lesson is finished, the children will place the attribute blocks in their math bags.

Familiarize yourself with the "Rocket Cheer." The children place both hands together near their waists with palms together and fingers pointed up. They wiggle their hands upward like a rocket taking off. When the children's hands reach over their heads, they separate them in a big circular movement, like bursting fireworks, while saying, "Ah!"

DAY 4

Prepare a large construction paper rectangle and square. You will use them with the circle, ellipse, and triangle prepared earlier in the week.

You will also need a square and a rectangle attribute block for each child. The children will add them to their math bags when the lesson is finished.

DAY 5

Prepare sets of six construction paper rectangles in varying lengths (all the same color). The six lengths should consist of three pairs of the same length to be used in a matching activity. Laminate them for future use. You will need one rectangle for each child.

You will need a large construction paper square, rectangle, rhombus, and pentagon for demonstration purposes.

UNIT 1

WEEK 1

	DAY 1	DAY 2
Daily Routines	***Introduce*** Calendar Weather Number Line	Calendar Weather Number Line
Math Concepts	Build a Calendar ***Introduce*** Tally marks Negative numbers Place value Hundreds Day Chart Preview the number one	The number one ***Introduce*** The circle, the ellipse, and their properties Preview the number two
Formative / Summative Assessment	Actions corresponding to numbers 1-5	***Introduce*** Partner sharing
Workbooks & Media		*Math Melodies* CD Track 3, "Circle Song"

DAY 3	DAY 4	DAY 5
Calendar Weather Number Line Place Value Hundreds Chart	Calendar Weather Number Line Place Value Hundreds Chart	Calendar Weather Number Line Place Value Hundreds Chart
Preview the number three 3 ***Introduce*** The triangle and its properties	Preview the number four 4 ***Introduce*** The rectangle, the square, and their properties 	Preview the number five Review rectangle/ square 5 ***Introduce*** The pentagon, the rhombus, and their properties Measuring length using rectangles Measuring (Matching Game)
Review circle and triangle Partners	Review shapes	Discuss measuring activity
Introduce The Rocket Cheer		

Daily Routines

Calendar

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

Ask: **Why do people use calendars?** Volunteers respond. **Yes, people use calendars for many reasons. Why might we use a calendar in our classroom?** Volunteers respond.

Say: **Let's build our own calendar.** Indicate the blank classroom calendar. **Who knows what's missing?**

On a classroom computer, access *Starfall.com:* Calendar. View the month (first screen) and the days of the week (second screen). Lead the children to notice these are missing from the classroom calendar, and then add them.

Ask: **What else is missing? Right, the numbers!**

Distribute numbers 1–31 (depending on the current month) to the children. The children place their numbers on the classroom calendar. Say: **(**current month**) has (**number of days**) days. Today is (**month, date**).**

Continue: **Let's turn over all of the number cards for the days in (**current month**) ahead. Now our calendar tells us today's date: (**day, month, date**).**

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.

Weather

Materials
- ☐ Weather Picture Cards (displayed)

- Indicate the Weather Picture Cards and help the children identify them.
- Introduce tally marks as a way to keep track of the number of objects.
- Demonstrate how to make a tally mark under "Today's Weather."

Number Line

Materials

- ☐ Whiteboard, marker
- ☐ Number line (mounted)
- ☐ Pointer

Review the numbers on the calendar. Call the children by name and direct them to form a "human number line" by standing shoulder-to-shoulder. Touch each child's head as you count them. Say: **We just made a number line!**

Indicate the Classroom Number Line on the wall. Say: **This is our number line. What do you notice?** (Some numbers are covered.) **Yesterday we were not in school. We had been in school *negative one* days.**

Indicate the negative numbers. Say: **Look at these numbers. These are negative numbers. That means these numbers come before zero. Yesterday was** (day of the week)**. We were not in school. We had been in school *negative one* days. The day before that was** (name the day)**. We were in school *negative two* days. The day before that we were in school *negative three* days.**

Say: **Let's look at zero again. What number comes after zero?** Remove the sticky note to reveal the number one. Continue: **Zero is a placeholder between the negative numbers and the positive numbers. Each day we are in school we will reveal a new positive number.**

The children are not expected to understand negative numbers at this time, but it is important for children to understand that our number system does not begin with zero. It is **infinite**. Briefly introducing negative numbers helps children begin to see this.

Introduce Daily Routines and Preview *One*

Materials

- ☐ Prepared "Actions for the Number One" strips in a paper bag
- ☐ Prepared Hundreds Chart
- ☐ Three containers (labeled 1s, 10s, 100s)
- ☐ Whiteboard, marker
- ☐ Container of craft sticks

1 Introduce Place Value Routine

Indicate the container of craft sticks and the *ones*, *tens*, and *hundreds* containers. Explain: **Each day we are in school we will place a stick in one of these containers.**

Indicate the *ones* container. Say: **This container is for individual sticks, but it can only hold nine sticks. On our tenth day of school we will bundle the ten sticks and place them in the next container.**

Indicate the Classroom Number Line and point to zero. Say: **Yesterday we had been in school *negative one* days. Look at this number.** Indicate negative one. **This is *negative one*. Say *negative one*.** Children repeat, *negative one*.

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.

Continue indicating negative numbers. Say: **This was the day before yesterday (**negative two**). This was the day before that (**negative three**).**

Ask: **Who can find the number that comes after zero?** (one) **This number tells us how many days we have been in school so far, so we will put *one* stick in the container to match the number of days we have been in school.**
A volunteer places the stick in the *ones* container.

2 Introduce the Hundreds Day Chart

Say: **Here is another way to count how many days we've been in school. It's our Hundreds Day Chart. We will turn one number each day.**
A volunteer turns the first number.

3 Preview the Number One

Write the numeral 1 on the whiteboard. Ask: **Who can find all the number *ones* in our classroom?** (calendar, number line, hundreds chart, clock, etc.)
Accept and affirm correct responses.

Say: **I can find another way to show *one*. There is *one* tally mark under today's Weather Card. Where else do you see a way to show *one*?**
(There is one stick in the ones container.)

Backpack Bear whispers that there is only ONE of him!

Actions for the Number One

Formative Assessment

Action Strips for the Number One

Indicate the paper bag containing the action strips for the number one. Choose a volunteer to draw a strip from the bag. Read the action (jump, clap, nod, turn around, wiggle, blink, smile, wink, hop, wave, yawn) and together the class performs it one time. Choose additional volunteers and repeat as time allows.

See the **Read Me First** to learn about Backpack Bear and how to incorporate him as a member of your class.

Daily Routines

Calendar

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

Say: **This is the calendar we built yesterday.** Indicate the month. **The name of the month is** (current month)**. Say,** (current month)**.**

Say: **Let's say the names of the days of the week together.** Indicate and name the days. **If yesterday was** (yesterday's name)**, what is the name of the day that comes after** (yesterday's name)**?**

Say: **Let's count how many days there have been in** (current month) **so far.** Point to and count from one to the present date. Explain: **Each day the calendar helper will reveal one more day.** The calendar helper turns the next number to reveal the next day. Say: **Today is** (day, month, date)**.**

Weather

Materials
- ☐ Weather Picture Cards (displayed)

Say: **Here are pictures of different kinds of weather. Yesterday was** (yesterday's weather)**. I wonder what kind of weather we will have today.**

The meteorologist goes to the window to look outside, and predicts the weather. He or she places a tally mark under the predicted weather.

Ask: **Why do you think this will be the weather today?**

Number Line

Materials
- ☐ Number line (mounted)
- ☐ Pointer

Say: **The number helper will have many jobs. First, look at the number line. Let's count from negative five to the number we revealed yesterday.** Indicate and count from negative five to one.

Say: **Today we will add one more number. Raise your hand if you know what one plus one more is.** The number helper chooses a volunteer to identify *two*. **Right, *one* plus *one* more is *two*.** Remove the sticky note to reveal the numeral 2. **We have been in school *two* days.**

Place Value

Materials
- ☐ Prepared *Ones* container
- ☐ Craft sticks

Indicate the *ones* container. Ask: **How many sticks are in the *ones* container?** (one) **Right, *one*. Today we get to add one more stick. This shows we have been in school for *two* days.**

The number helper adds a stick. Say: **Let's count how many sticks there are so far.** Count: *one, two*.

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.

Hundreds Chart

Materials
- ☐ Prepared Hundreds Chart

Say: **There is one more way to count how many days we have been in school. Let's look at the hundreds chart. This chart shows that we have been in school one day. Today we will turn the next number.** The number helper turns the number.

Ask: **The hundreds chart shows that we have been in school how many days?**

Review One, Preview Two

Materials
- ☐ Prepared Sentence Strips: *This is a* _____. *I know this because* _____.
- ☐ *Backpack Bear's Math Big Book*, page 4
- ☐ *Math Melodies CD*, Track 3
- ☐ Prepared circle and ellipse
- ☐ Backpack Bear
- ☐ Ruler

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.

Geometry

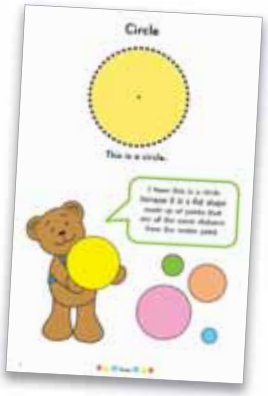
A.2 – Correctly name shapes.

1 Review 1

Write the numeral 1 on the whiteboard. Ask: **Who can find *ones* in our classroom?** (calendar, number line, hundreds chart)

Say: **I can find another way to show *one*. Let's look at the Alphabet Chart. What is the first letter of the alphabet?** (A volunteer identifies *Aa*.) **Right, *Aa* is the first letter of the alphabet. Can you find anything else in our classroom that shows *one*?**

2 Introduce Circle



Say: **Backpack Bear would like us to learn about two shapes that each have only one line.**

Indicate the prepared ellipse. Say: **This is an *ellipse*. *Ellipse* is the mathematical name for an oval. Say, *ellipse*. An ellipse is a flat shape that has one curved line around two points.**

Display *Backpack Bear's Math Big Book*, page 4.

Indicate the circle. Say: **This is a *circle*. A circle is a flat shape. It is made of points. All the points are the same distance from the center point. A circle is a special kind of ellipse. Both a circle and an ellipse have one curved line. How are they different?** Discuss.

Use a ruler to show that the center point to the curved line is the same all around the circumference of the circle.

3 Properties of a Circle

Indicate the sentence strip: *This is a* _____.

This is a _____.

Read: **This is a** (blank)**. I will put the circle shape in my sentence. Let's read the sentence together: *This is a circle.***

Indicate the sentence strip:
I know this because _____ .

I know this because .

Read: ***I know this because*** (blank)**. Let's read this sentence together: *I know this because.***

Ask: **How do we know this is a circle?** Volunteers respond. **Right, we know it is a circle because it is a flat shape made of points that are all the same distance from the center point. Let's finish our sentence.**

Remove the circle shape from the sentence.

Play *Math Melodies* Track 3. The children listen to the "Circle Song."

4 Preview 2

Write the numeral 2 on the whiteboard. Ask: **Who can find *twos* in the classroom?** (calendar, number line, hundreds chart)

Say: **I can find another way to show *two*. Let's look at the Alphabet Chart. What is the second letter of the alphabet?** Volunteers respond. **Right, *Aa* is the first letter and *Bb* is the second letter.**

Backpack Bear whispers to you, "I have 2 arms and 2 legs." Tell this to the children and ask: **What else do we all have 2 of?** (eyes, ears, hands, feet)

Formative Assessment

Introduce "Partner Sharing"

Choose two volunteers to come forward. Say: **Let's count how many children there are here.** Do this. **These two children will be partners. Say, *partners*.** Children repeat, *partners*. **We will do a lot of work this year as partners. These partners will work together to answer a question.**

Steps in partnering:

- The partners (volunteers) sit criss-cross, knee-to-knee, facing each other.
- Say: **First the partners greet each other. Let's try this. Greet each other.** (Hi, Sam; Hi, Suzy.) **Next the partners discuss the question or subject. Here's your subject: Discuss what you have two of on your bodies. Ready? Discuss.** Partners do this.
- Introduce a signal to end the discussion. 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 will be the signal to end the discussion.**
- Ask: **Who can share what you have two of on your body?** Partners share with the class. (eyes, ears, arms, hands, legs, feet, etc.)
- Continue: **The next step is to compliment your partner. Partners, compliment each other. Say, *good job*** (name)**.** Partners do this.
- Say: **The last thing you do is say goodbye to your partner.**

This sample Partner Sharing activity will give you a general sense of how to use this Formative Assessment Strategy. Partner Sharing occurs throughout the year.

Daily Routines

Calendar

Materials
- ☐ Classroom Calendar

Say: **This is the calendar we built the first day of school.** Indicate the month. **The name of the month is (**current month**). Say, (**current month**).**

Say: **Let's say the names of the days of the week together.** Indicate and name the days. **If yesterday was (**yesterday's name**), what is the name of the day that comes after (**yesterday's name**)?** The calendar helper chooses a volunteer to name the day.

Say: **Let's count how many days there have been in (**current month**) so far.** Point to and count from one to the present date. Explain: **Each day the calendar helper will reveal one more day.**

The calendar helper turns the next number to reveal the next day. Say: **Today is (**day, month, date**).**

Weather

Materials
- ☐ Weather Picture Cards (displayed)

Say: **Here are pictures of different kinds of weather. Yesterday was (**yesterday's weather**). I wonder what kind of weather we will have today.**

The meteorologist goes to the window to look outside, and predicts the weather. He or she places a tally mark under the predicted weather.

Ask: **Why do you think this will be the weather today?**

Number Line

Materials
- ☐ Number line
- ☐ Pointer

Say: **Remember the number helper will have many jobs. First, look at the number line. Let's count from *negative five* to the number we revealed yesterday.** Indicate and count from negative five to two.

Say: **Today we will add one more number. Raise your hand if you know what two plus one more is.** The number helper chooses a volunteer. **Right, two plus one more is *three*.** Remove the sticky note to reveal the numeral 3. **We have been in school *three* 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.

100 Place Value

Materials
- ☐ *Ones* container
- ☐ Craft sticks

Indicate the *ones* container. Ask: **How many sticks are in the *ones* container?** (two) **Right, two. Today we get to add one more stick. This shows we have been in school for three days.**

The number helper adds a stick. Say: **Let's count how many sticks we have so far.** Count: *one, two, three.*

Hundreds Chart

Materials
- ☐ Hundreds Chart

Say: **There is one more way to count how many days we have been in school. Who remembers what it is? Right, let's look at the hundreds chart. This chart shows that we have been in school two days. Today we will turn the next number.** The number helper turns the number.

Ask: **The hundreds chart shows that we have been in school how many days?**

Preview Three

Materials
- ☐ Circle and triangle attribute blocks for each child
- ☐ Prepared Sentence Strips: *This is a _____.* *I know this because _____.*
- ☐ *Backpack Bear's Math Big Book*, page 5
- ☐ *Math Melodies CD*, Track 33
- ☐ Prepared construction paper triangle
- ☐ Whiteboard, marker
- ☐ Math bags

1 Preview 3

Write the numeral 3 on the whiteboard. Say: **Let's see if we can find all the threes in the classroom.** (calendar, number line, hundreds chart, clock)

2 Introduce Triangle

Indicate *Backpack Bear's Math Big Book*, page 5.

Ask: **What shape would Backpack Bear like us to learn about today? Right, this flat shape is called a *triangle*.**

The children describe what they see on the triangle page. Point out that it doesn't matter how big or in what direction the triangle is as long as it has 3 lines and 3 angles.

Say: **This shape has three straight lines. Let's count them.** Do this. **It also has three corners.** Indicate and count the corners.

Continue: **Corners are called *angles* in math. Let's call these corners *angles*. Say, *angles*.** Children repeat, *angles*.

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.

3 Properties of a Triangle

Indicate the sentence strip: *This is a* _____ . Add the triangle. Say: **Let's read the new sentence: *This is a triangle.*** Children repeat, *This is a triangle.*

Indicate and read the sentence strip: *I know this because* _____ .
Ask: **How do we know this is a triangle?** (It has three straight lines and three angles.) **Let's finish this sentence: *I know this because it has three straight lines and three angles.***

Introduce *Math Melodies* CD Track 33, "Triangle Waltz."

Formative Assessment

Review Circle and Triangle

Distribute a circle and a triangle attribute block to each child. The children place them in their math bags. Say: **Each of you has a math bag with different shapes in it. Are the shapes all the same or are they different?** Volunteers respond.

- Say: **I will describe a shape. Listen carefully, then find the shape, take it out of your math bag, and hold it up.**
- Say: **I have one curved line. What shape am I? What is the name of this shape?** Volunteers respond. **Right, *circle*. How did you know it was a *circle*?** (It has one curved line.) The children place the circle back in their math bags.
- Say: **I have three straight lines and three angles. What shape am I? What is the name of this shape?** Volunteers respond. **Right, a *triangle*. How did you know it is a *triangle*? (**It has three straight lines and three angles.**)** The children place the triangle back in their math bags.
- Say: **Now let's partner. Everyone stand. Hold your math bag in one hand and raise your other hand up high in the air. Now, find someone who has his or her hand up, walk toward that person and connect hands.** The children do this. **Now sit criss-cross, knee-to-knee, facing your partner. This is called "Stand Up, Hand Up, Partner Up." Great job! Let's do a Rocket Cheer!**

Touch one child in each partner group and tell them they are partner number one. Continue: **Partner one, please raise your hand. Take a shape out of your math bag. Your partner will say: *I know this is a (blank) because (blank).* Then partner number two will have a turn to do the same thing. Ready? Begin.**

After partners are finished, remind the children to compliment their partners and say goodbye. Gather the children back into a group.

The Rocket Cheer

The children place both hands together near their waists with palms together and fingers pointed up. They wiggle their hands upward like a rocket taking off. When the children's hands reach over their heads, they separate them in a big circular movement, like bursting fireworks, while saying, "Ah!"

Daily Routines

Calendar

Materials
- ☐ Classroom Calendar

Ask: **Who knows the name of the month? Where on the calendar does it tell us the name?** The calendar helper chooses a volunteer to indicate the month.

Say: **Let's say the names of the days of the week together.** Indicate and name the days. **If yesterday was (**yesterday's name**), what is the name of the day that comes after (**yesterday's name**)?** The calendar helper chooses a volunteer to name the day.

Say: **Let's count how many days there have been in (**current month**) so far.** Point to and count from one to the present date. Ask: **What is (**current day number**) plus one more?** The calendar helper chooses a volunteer to answer.

Say: **Today is (**day, month, date**).** Children repeat.

Weather

Materials
- ☐ Weather Picture Cards (displayed)

Say: **Here are pictures of different kinds of weather. Yesterday was (**yesterday's weather**). I wonder what kind of weather we will have today.**

The meteorologist goes to the window to look outside, and predicts the weather. He or she places a tally mark under the predicted weather.

Ask: **Why do you think this will be the weather today?**

Number Line

Materials
- ☐ Number line
- ☐ Pointer

Say: **Look at the number line. Let's count from *negative five* to the number we revealed yesterday.** Indicate and count from negative five to three.

Say: **Today we will add one more number. Raise your hand if you know what three plus one more is.** The number helper chooses a volunteer. **Right, three plus one more is *four*.** Remove the sticky note to reveal the numeral 4. **We have been in school *four* days.**

Place Value

Materials
- ☐ *Ones* container
- ☐ Craft sticks

Indicate the *ones* container. Ask: **How many sticks are in the *ones* container?** (three) **Right, three. Today we get to add one more stick. This shows we have been in school for four days.**

The number helper adds a stick. Say: **Let's count how many sticks we have so far.** Count: *one, two, three, four.*

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.

Hundreds Chart

Materials
- ☐ Hundreds Chart

Say: **There is one more way to count how many days we have been in school. Who remembers what it is? Right, let's look at the hundreds chart. This chart shows how many days we have been in school. Today we will turn the next number.** The number helper turns the number.

Ask: **The hundreds chart shows that we have been in school how many days?**

Preview Four

Materials
- ☐ Prepared construction paper: circle, ellipse, triangle, rectangle, and square
- ☐ A rectangle and a square attribute block for each child
- ☐ *Backpack Bear's Math Big Book*, pages 6 and 7
- ☐ *Math Melodies* **CD**, Track 21
- ☐ Whiteboard, marker

Geometry

A.2 – Correctly name shapes.

A.3 – Identify shapes as two- or three-dimensional.

1 Preview 4

Write the numeral 4 on the whiteboard. Say: **Let's try to find all the fours in the classroom.** (calendar, number line, hundreds chart, clock)

2 Review Circle and Triangle

Indicate a circle. Say: **This is a *circle*. What do you remember about this shape?** Discuss. **A *circle* is a flat shape made of points that are all the same distance from the center point. Make a giant circle in the air with your finger.** The children do this.

Indicate a triangle. Say: **This is a *triangle*. What do you remember about this shape?** Discuss. **This shape has three straight lines. Let's count them. It also has three corners, or *angles*. Make a giant triangle in the air with your finger.** The children do this.

3 Introduce Rectangle

Display *Backpack Bear's Math Big Book*, page 6. Say: **This is a *rectangle*. Say, *rectangle*. It has four sides.** Indicate and count the sides.

Continue: **It also has four right angles.** Indicate and count the angles.

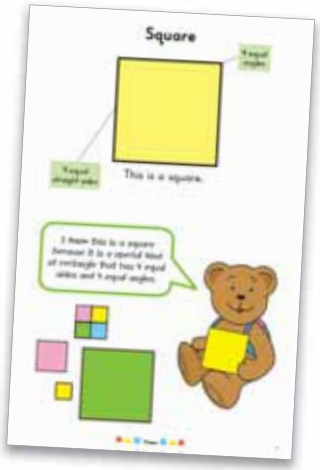
Ask: **What do you notice about the sides of this rectangle? Right, two sides are short and two sides are long.** Volunteers take turns pointing to the short and long lines.

Say: **Make a giant rectangle in the air with your finger.** The children do this.

4 Introduce Square

Turn to *Backpack Bear's Math Big Book*, page 7. Say: **This is a *square*. Say, *square*. It is a special kind of rectangle. What do you notice about a rectangle and a square that is the same?** (They each have four lines and four angles.)

Indicate pages 4 and 5. Say: **Look at this rectangle and square. What is different about them?** Volunteers respond.



5 Properties of a Square

Say: **A *square* has four equal sides and four right angles. All the sides are the same size. It doesn't matter how you turn the square. It always looks the same.**

Introduce *Math Melodies* CD Track 21, "Rectangle Boogie."

Formative Assessment

Review Shapes

Distribute a square and a rectangle attribute block to each child. The children place them in their math bags. Say: **I will describe a shape. Listen carefully and then take the shape out of your bag and hold it up.**

- Say: **I am a flat shape made of points that are all the same distance from the center point. What shape am I?** (circle) **Right, a circle.** The children place the circles back in their math bags.
- Say: **I have four straight lines and four right angles. Two of my lines are longer and two are shorter. What shape am I?** (rectangle) **Right, a rectangle.** The children place the rectangles back in their math bags.
- Say: **I am a special kind of rectangle. I have four straight lines and four right angles. My lines and angles are exactly the same. What shape am I?** (square) **Right, a square.** The children place the squares back in their math bags.
- Say: **I have three straight lines and three angles. What shape am I?** (triangle) **Right, a triangle.** The children place the triangles back in their math bags.
- Say: **I am a flat shape that is not in your math bag! I am made of one curved line around two points but my points are not the same distance from the center. What shape am I?** (ellipse)

It is not important that children understand the term "right angle" at this time. The purpose of this lesson is to prepare children to recognize shapes with angles that are not right angles and familiarize them with proper geometric terms.

Daily Routines

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.

Calendar

Materials
- ☐ Classroom Calendar

Ask: **Who knows the name of the month? Where on the calendar does it tell us the name?** The calendar helper chooses a volunteer to indicate the month.

Say: **Let's say the names of the days of the week together.** Indicate and name the days. **If yesterday was** (yesterday's name)**, what is the name of the day that comes after** (yesterday's name)**?** The calendar helper chooses a volunteer to name the day.

Say: **Let's count how many days there have been in** (current month) **so far.** Point to and count from one to the present date.

Ask: **What is** (current day number) **plus one more?** The calendar helper chooses a volunteer to answer.

Say: **Today is** (day, month, date)**.** Children repeat.

Weather

Materials
- ☐ Weather Picture Cards (displayed)

Say: **Here are pictures of different kinds of weather. Yesterday was** (yesterday's weather)**. I wonder what kind of weather we will have today.**

The meteorologist goes to the window to look outside, and predicts the weather. He or she places a tally mark under the predicted weather.

Ask: **Why do you think this will be the weather today?**

Say: **Let's look at the weather graph. A *graph* is a picture that gives information. Which Weather Picture Card has the most tally marks? What does that mean?**

The children should understand that the Weather Picture Card with the most tally marks indicates the weather that has occurred most frequently.

Number Line

Materials
- ☐ Number line
- ☐ Pointer

Say: **Look at the number line. Let's count from negative five to the number we revealed yesterday.** Indicate and count from negative five to four.

Say: **Today we will add one more number. Raise your hand if you know what four plus one more is.** The number helper chooses a volunteer. **Right, four plus one more is *five*.**

Remove the sticky note to reveal the numeral 5. Say: **We have been in school *five* days.**

Place Value

Materials
- ☐ *Ones* container
- ☐ Craft sticks

Indicate the *ones* container. Ask: **How many sticks are in the *ones* container?** (four) **Right, four. Today we get to add one more stick. This shows we have been in school for five days.** The number helper adds a stick. **Let's count how many sticks we have so far.** Count: *one, two, three, four, five.*

Hundreds Chart

Materials
- ☐ Hundreds Chart

Say: **Remember, there is one more way to count how many days we have been in school. Let's look at the hundreds chart. This chart also shows how many days we have been in school. Today we will turn the next number.**

The number helper turns the number. Ask: **The hundreds chart shows that we have been in school how many days?**

Preview Five

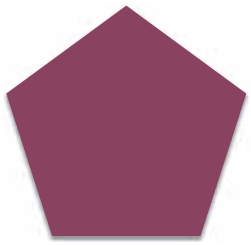
Materials
- ☐ Prepared construction paper pentagon, rectangle, square, and rhombus
- ☐ Prepared sets of rectangular lengths

1 Preview Five, Introduce Pentagon and Rhombus

Write the numeral 5 on the whiteboard. Say: **Let's see if we can find fives in the classroom.** (calendar, number line, hundreds chart, clock)

Indicate the pentagon shape. Say: **This is a *pentagon*. Say, *pentagon*.** (The children repeat, *pentagon*.) **Let's count the sides on the pentagon.**

Display the shape and the children count the sides. Say: **A pentagon has five sides.**



Measurement & Data

A.2 – Compare two objects with a common measurable attribute.

2 Review Rectangle and Square

Indicate the rectangle. Say: **This is a rectangle. How many sides does a rectangle have? Let's count.** (Do this.) **What do you notice about the sides? Are they all the same size? How many corners or angles does a rectangle have? Let's count.**

Indicate the square. Say: **This is a square. It is a special kind of rectangle. It has four sides and four right angles that are all the same. What do you notice about the sides of the square? Right, they are all the same size, or equal.**

3 Introduce Rhombus

Indicate the rhombus. Say: **This is a *rhombus*. Say, *rhombus*. Look at the other shapes. Which shape does the rhombus look most like? Right, the square. A rhombus has four equal sides, but look at the corners!** Point out that two of the angles are wider.

Display the square and the rhombus next to each other. Indicate the square and say: **Square.** Indicate the rhombus and say: **Rhombus.**

Say: **I will touch one of these shapes. When I touch the shape you say its name. Ready?** Touch each shape randomly several times until the children are familiar with their names.

4 Introduce Measuring with Rectangles

Indicate two rectangular lengths that are the same length. Say: **Here are two rectangles. They are the same length.** Demonstrate how to compare the lengths by lining up the ends.

Indicate two rectangular lengths that are different lengths. Say: **Here are two rectangles. One is longer and one is shorter. Let's line them up end to end to check.** Do this.

Formative Assessment

Match Lengths

Say: **Today we will play a matching game. I have a rectangle for each of you.**

Distribute the rectangles. Say: **Find a partner who has a rectangle that is exactly the same length as yours. When you find a partner who has a rectangle that is the same length, sit down together and hold up your rectangles.**
The children do this.

Say: **If you don't find a partner who is still standing with a rectangle that matches yours, look at the partners who are sitting. If your rectangle matches theirs, sit with them.**

Formative Assessment

Compare Rectangles

Once all of the children are sitting in groups, the children in each group stand together in turn to display their rectangles. The class confirms whether or not the rectangles are the same length.

If time allows, collect the rectangle shapes, mix them up, redistribute them, and repeat the activity.