Read Me First

Starfall Education Foundation
P.O. Box 359, Boulder, CO 80306
Mathematics... The Starfall Way!

Starfall Kindergarten Mathematics is a spiraled curriculum that aligns with the Common Core State Standards. The benefits of a spiraled curriculum include:

⭐ Learning is spread out over time and concepts are revisited repeatedly over months rather than concentrated in continuous blocks. For example, measurement is not taught as a unit. Rather, measurement is integrated throughout the curriculum across many units.

⭐ Spiraling is effective with all learners, including those who are struggling, since important concepts are often revisited.

⭐ Research documents that the “spacing” or “spiral” approach increases long-term learning.

⭐ Spiraling enables learners to develop connections over time, creating pathways for recalling information.

⭐ Multiple strategically-spaced and strategically-progressive experiences produce deeper, more conceptual learning.

Starfall.com

The Starfall.com website is at the heart of Starfall Mathematics. The online activities and games help introduce, practice, and review essential skills that will be taught throughout the year. Many of the activities will be used during instruction. Some teachers prefer to use a projector at these times so the whole class can participate.
Preparation and Classroom Setup

Prepare Math Bags for Each Child
Number the bags and assign a number to each child. Items will be added periodically throughout the year. Place similar objects in resealable plastic bags. Initially, include the following:

- One attribute block (or laminated construction paper) in each of the following shapes: circle, ellipse (oval), triangle, rectangle, and square
- Set of 20 connect cubes (10 of one color, 10 of another color)

Display the Number Wall Cards
Display the Classroom Number Wall Cards. These are used to reinforce place value (tens and ones).

Set up Starfall.com on your classroom computers
If you are beginning a new membership, you will need to choose an email address and password for your account. (For School Memberships, choose an address and password that you can share with other teachers.) This information will be used to authorize the computers at your location.

To get started, go to http://starfall.com. Next, if you:

Have a membership:
- Click the “Login / Authorize” link at the top of the screen.
- Under “Authorize Computer,” enter your administrator email address and password in the appropriate fields and click the “Authorize” button.

Have an Access Code:
- Click the “Login / Authorize” link at the top of the screen.
- Enter your code in the field under “Have an Access Code?”
- Follow the prompts to complete registration.

Wish to Purchase a Membership:
- Click the “How to Join” link at the top of the screen.
- Choose which method you would like to use to purchase your membership.
- Follow the on-screen prompts to complete your purchase.

We recommend headsets and headset splitters for each computer so that several children can use a single computer at one time. Splitters are available through electronics stores such as Radio Shack.

Set Up the Classroom Number Line
Display the Starfall Number Line. Cover all of the numbers greater than zero with sticky notes. Each day you will reveal a new number to indicate how many days the children have been in school. For humid states, we recommend using sticky notes with a strong adhesive to keep them in place. You will use this daily as part of the Number Line routine. (See page 6.)
Establish A Weather Chart
Create a chart using the Starfall Weather Cards. Allow space to place tally marks under each card. The children will use and interpret this graph based on the daily weather. You will use this chart during the daily Weather Routine. (See page 5.)

Prepare a Hundredth Day Chart
Create a chart with numbers 1-100 placed with the numbers hidden in a pocket chart. Each day you will reveal a new number to show how many days the children have been in school. You will use this chart during the daily Hundredth Day Chart Routine. (See page 6.)

Obtain manipulatives and other required materials
The following items are not included with Starfall Math, but are required for use throughout the year.

- Connect Cubes (20 per child) plus additional cubes for activities, games, and learning centers
- Regular size dice (for some activities and games)
- Labeled containers for ones, tens, hundreds
- Pocket chart for Hundredth Day Routine
- Individual whiteboards and markers for each child
- Money Graph and Toy Cash Register
- Plastic or wooden 2D and 3D Shapes
- Large color magnets to use with the Classroom Ten-Frame
- Month, day, and number cards
- Calendar chart
- Craft sticks and rubber bands
- Two-Color Counters
- Class Growth Chart
- Pan balance
- Dominoes
- Plastic 3D Math Nets (optional)
- Large Foam Dice (optional)
- Math Tiles (optional)

Beginning of the Year Checklist
(Prior to the first day of school)

☐ Prepare Math Bags
☐ Display Number Wall Cards
☐ Set up Starfall.com on classroom computers
☐ Set up the Classroom Number Line
☐ Establish a Weather Chart
☐ Prepare a Hundredth Day Chart
☐ Obtain manipulatives and other required materials
Daily Routines

Calendar

**Setup**
Begin with a blank classroom calendar. Open the calendar activity on Starfall.com. The children will use the calendar on Starfall to set up your classroom calendar.

**Extension**
At the end of each month the children will help disassemble the calendar to prepare for the new month.

Starting with Unit 6, you will begin using coins to demonstrate one-to-one correspondence to the number of days in the month.

Weather

**Setup**
Create a chart using the Starfall Weather Cards. Allow space to place tally marks under each card. The children will use and interpret this graph based on the daily weather.

**Comparing Data and Finding Patterns**
Prepare a monthly graph to indicate which weather card has the most/least/equal number of tally marks. Use the chart to show when seasons have changed.

**Probability and Chance**
Explore basic concepts and language related to probability and chance by asking questions such as:
- Is it **likely** that it will rain tomorrow? Why or why not?
- What type of weather are we **least likely** to have this afternoon? Why?
- Can we be **certain** that it will storm tomorrow? Why or why not?
- Is it **possible** that it will snow tomorrow? Why or why not?

**Collecting Data and Recording Temperature**
- Collect daily temperature data.
- Describe temperature using appropriate vocabulary.
- Discuss temperature trends.
- Use temperature data to discuss probability and chance.
**Number Line**

**Daily Routine**
- Begin with negative five.
- Count in sequence (days in school).
- Count by ones, fives, tens.
- Add “one more.”
- Skip count even/odd.
- Count backward from any given number.
- Count in sequence from any given number.
- Identify numbers that come before, after, between.

**Place Value**

**Setup**
Create a Classroom Bundles Station by labeling three containers to hold craft sticks. Label one container *Hundreds*, the second *Tens*, and the third *Ones*. Designate an additional container for sticks and rubber bands.

**Introduce Place Value**
Indicate the containers: *Hundreds*, *Tens*, and *Ones*. Each day of school a volunteer will add one stick to represent the day and place it in the ones container. Every tenth day of school, bundle the ten sticks and place them in the tens container.

**Extending the Number Line and Place Value Routine**
Use the “Place Value” activity in the Add & Subtract section of Starfall.com to reinforce the Place Value Routine that will continue throughout the year.

**Hundredth Day Chart**
Prepare a Hundredth Day Chart with the numbers face down. Starting with zero, each day a volunteer will reveal the next number up to the hundredth day of school.
Daily Routines

To Start the Day (5-7 minutes)
The daily routines (Calendar, Weather, Number Line, Place Value, and Hundredth Day Chart) are designed to be integrated into your morning routine. This takes place apart from the math lesson component. These routines will take slightly more time at the beginning of the year while you and the children become familiar with them. (See Daily Routine descriptions on pages 5 & 6.)

Math Block

Magic Math Moment (10 minutes)
Magic Math Moments are short exercises that serve as transitions to and warm-ups for the day’s activities.

Math Lesson (45 minutes)
Daily Math Lessons are spiraled and arranged sequentially in units. Suggested literature should be integrated where possible.

A lesson with related activities is presented to the whole group on Days 1, 2, 3, and 4. Each lesson contains a Formative Assessment.

Day 5 is Learning Center Day. Children rotate every 12-15 minutes through five center rotations:
• Activity 1: Computer component
• Activity 2: Varies by weekly theme
• Activity 3: Varies by weekly theme
• Activity 4: Teacher’s Choice (optional)
• Activity 5: Summative Assessment group with the teacher *

*During the Summative Assessment, the children will often complete a worksheet or other activity while the teacher performs individual assessments in the group. Information gathered from the Summative Assessments is used to help determine whether reteaching of concepts is necessary.
Classroom Materials

Teacher’s Guide

- Teacher’s Guide, Semesters 1 & 2
- Assessment Package
- 100th Day Supplement
- Blackline Masters
- Supplements

Classroom Number Line

The complete Classroom Number Line begins at -5 and continues to 180. Post this in the classroom. The children will use it daily, learning important number concepts.

Number Activity Mats

A set of sturdy, laminated mats for numbers 1 through 9. Children can practice number formation with play dough, dry erase markers, and other manipulatives.

Essential Questions Cards

Essential questions cards reflect key understandings children should have after each Unit.

Wall Cards for Numbers 0 through 30

These Wall Cards each include the numeral, the number word, and blocks which clearly illustrate place value.
Backpack Bear’s Math Games

This game set has 12 different board games, plus number and money Bingo cards, and a large ten-frame and five-frame! It also includes 6 different spinners and 6 playing pieces. Children will have hours of fun learning math while playing these games.

Backpack Bear’s Math Instructional Cards
743 cards plus dividers

- Dice
- Dominoes
- Ten-Frames
- Tally Marks
- Shapes
- Shape Photographs
- Money
- Pictures with Price Tags
- Measuring Tools
- People Who Measure
- Numeral Cards
- Weather Cards
- Thermometer Cards
- Temperature Scenes
- Addition Equations
- Subtraction Equations
Backpack Bear’s Math Big Book

*Backpack Bear’s Math Big Book* is a reference book that children will revisit throughout the year as they learn new mathematical concepts. It includes: Shapes, Money, Numbers, Position Words, Sorting, Measurement, Addition, Subtraction, and a Math Dictionary!

Where Oh Where Is Backpack Bear?

Backpack Bear is hiding. Where can he be? (a book about position words)

Estimate with Backpack Bear

Children practice making smart guesses.

Thermometers

Learn about many different kinds of thermometers

Starfall’s Selected Nursery Rhymes

Book and audio CD

Starfall Math Melodies

Audio CD and lyric book.

Media

Starfall.com is an interactive, visual, auditory, and kinesthetic technology that enables children to independently preview, explore, practice and review skills. For educators, the Parent-Teacher Center™ is stocked with practice page generators, resources, and supplementary materials. The lesson plans are also available for download.
Student Materials

**Backpack Bear’s Math Workbook 1**
- Numbers 1-20
- Patterns
- Measurement
- Shapes
- Subitizing and math bonds
  ... and more

**Backpack Bear’s Math Workbook 2**
- Number review
- Addition
- Subtraction
- Measurement
  ... and more

**My Starfall Math Mats**  
*(sold in sets of 10)*
These sturdy laminated mats help to create a math workspace for each child, and include a number line, ten frames, and numerals for reference. The reverse side is blank.

**Math Bag**
Each child is provided with a sturdy math bag in which to keep his or her math manipulatives.

**Backpack Bear**

**Plush Backpack Bear**
Backpack Bear brings a bit of magic to math lessons.
## Scope and Sequence

### Semester 1

<table>
<thead>
<tr>
<th>Unit</th>
<th>Focus</th>
</tr>
</thead>
</table>
| **Unit 1**  
**Let’s Get Started** | Introduce Daily Routines:  
- Calendar  
- Graphing weather  
- Number Line (including negative numbers)  
- Place value procedure  
- Hundredth Day chart |
| | Introduce lines and angles  
Measurement (length)  
Preview numbers 1-5  
Preview 2D shapes  
Introduce patterns |
| **Unit 2**  
**Numbers Everywhere** | Magic Math Moment  
Introduce Equations  
Introduce Learning Centers  
“How Many Days Have We Been in School?”  
Number Focus: 1-8  
Counting on from a given number  
Preview one-to-one correspondence |
| | What number is missing?  
Introduce ten-frames  
2D shape attributes  
One less/one more  
Greater than/Less than  
Creating patterns |
| **Unit 3**  
**Fun with Numbers** | Number focus: 9, 0, 10  
Sorting by attributes  
Extending patterns  
Polygons  
Measurement (length/height)  
Ordinal numbers |
| | Story problems  
One-to-one correspondence  
Place Value - Bundles of Ten  
Introduce Positive/Negative Numbers and the Meaning of Zero  
One more/one less |
| **Unit 4**  
**Shapes & Coins** | Introduce the penny, nickel, & dime  
Creating and combining shapes  
Positional words  
Graphing shapes and coin tosses  
Greater than/Less than |
| | Compare coins  
Working with five- and ten-frames  
Solving for missing numbers  
Equations |
| **Unit 5**  
**Troublesome Teens** | Number focus: 11-20  
Tens and ones  
Before and after  
Identifying numbers out of sequence |
| | Writing equations  
Money equivalency  
Story problems  
Estimation |
| **Unit 6**  
**2D & 3D Shapes** | Properties of 3D shapes: faces, vertices, edges  
Compare/contrast 2D and 3D shapes  
Review 2D shape properties  
Math Nets  
Graphing |
| | Composing numbers using ten-frames  
Roll, Stack, Slide experiments  
Measurement (height)  
Extend patterns  
Estimation |
| **Unit 7**  
**Subitizing and Number Bonds** | Subitizing  
Number bonds  
Odd and even numbers  
Commutative Property of Addition  
Counting on from a given number |
| | Number Representations 1 - 10  
Review penny, nickel, dime and their values  
Sorting  
Number combinations  
Arrays |
### Semester 2

<table>
<thead>
<tr>
<th>Unit</th>
<th>Focus</th>
</tr>
</thead>
</table>
| **Unit 8** Addition | Solving for x  
 Strategies for solving story problems  
 Writing addition equations  
 Story maps  
 Review money  
 Applying knowledge of money to addition (shopping)  
 Ordering numbers  
 Introduce operation |
| **Unit 9** Subtraction | Introduce Subtraction  
 Decomposing numbers in different ways  
 Subtraction equations  
 Story problems  
 Story maps  
 Subtraction strategies  
 Subtraction with coins |
| **Unit 10** Addition & Subtraction Review | Addition & subtraction strategies  
 Story problems  
 Equations  
 Adding & subtracting with money |
| **Unit 11** Basic Measurement | Measure length and height  
 Order by length  
 Inclines  
 Perimeter/Area  
 Capacity  
 Measuring tools  
 Introduce fractions  
 Estimation |
| **Unit 12** Place Value, Number Collections, Review 10-20 | Writing equations horizontally and vertically  
 Review place value using coins  
 Create collections of 2s, 5s, 10s  
 Place value to 100  
 Counting on  
 Story problems  
 Review coin values  
 Introduce the quarter  
 Create representations of a given number  
 Review and practice Tens and Ones  
 Estimation |
| **Unit 13** Measurement | Measurement review  
 Review length, height, & area  
 Probability  
 Estimation  
 Weight and Capacity  
 Time and Temperature:  
 • Introduce thermometers  
 • Effects of time on temperature (seasons, weather, etc)  
 • Telling time to the hour  
 • Relate time to events  
 • Sequence events |
| **Unit 14** Cumulative Review | Review "Our Math Dictionary"  
 Estimation  
 Composing and Decomposing Numbers 6-10  
 Addition Game Day  
 Position Words  
 Subtraction Ball Toss  
 Patterns  
 Money  
 Operations  
 More than / Less than  
 Shapes  
 Graphing |
| **Supplement** | Hundredth Day Plans |
## Standards & Benchmarks

### Starfall Standards

**Counting & Cardinality**
- **CC.1** Identify numerals out of sequence.
- **CC.2** Supply missing number in a sequence.
- **CC.3** Count backward from a given number.
- **CC.4** Count to 100 by twos and by fives.
- **CC.5** Identify ordinal numbers.
- **CC.6** Identify odd and even numbers.
- **CC.7** Compare two numbers between 1 and 10 presented as written numerals.

**Money**
- **M.1** Identify the value of coins.

### Operations & Algebraic Thinking
- **OA.1** Identify, describe, or extend simple patterns.

### Measurement & Data
- **MD.1** Identify and use time measurement tools.
- **MD.2** Use and interpret graphs.
- **MD.3** Measure using nonstandard units.

### Estimation
- **E.1** Understand the meaning of estimation.
- **E.2** Make predictions to determine reasonable answers.

## Common Core Standards

For your convenience, applicable learning outcomes are listed alongside each lesson in summary form.

### Counting & Cardinality

<table>
<thead>
<tr>
<th>Outcomes</th>
<th>Inline Summary Form</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A.1</strong> Count to 100 by ones and by tens.</td>
<td>Count to 100 by ones and by tens.</td>
</tr>
<tr>
<td><strong>A.2</strong> Count forward beginning from a given number within the known</td>
<td>Count forward from a given number.</td>
</tr>
<tr>
<td>sequence (instead of having to begin at 1).</td>
<td></td>
</tr>
<tr>
<td><strong>A.3</strong> Write numbers from 0 to 20. Represent a number of objects with</td>
<td>Write numbers from 0 to 20.</td>
</tr>
<tr>
<td>a written numeral 0-20 (with 0 representing a count of no objects).</td>
<td></td>
</tr>
<tr>
<td><strong>B.4</strong> Understand the relationship between numbers and quantities;</td>
<td>Understand the relationship between numbers and quantities.</td>
</tr>
<tr>
<td>connect counting to cardinality.</td>
<td></td>
</tr>
<tr>
<td><strong>B.4a</strong> When counting objects, say the number names in the standard</td>
<td>Say number names in order, pairing each object with one number.</td>
</tr>
<tr>
<td>order, pairing each object with one and only one number name and each</td>
<td></td>
</tr>
<tr>
<td>number name with one and only one object.</td>
<td></td>
</tr>
<tr>
<td><strong>B.4b</strong> Understand that the last number name said tells the number of</td>
<td>The last number counted tells the total number of objects.</td>
</tr>
<tr>
<td>objects counted. The number of objects is the same regardless of their</td>
<td></td>
</tr>
<tr>
<td>arrangement or the order in which they were counted.</td>
<td></td>
</tr>
<tr>
<td><strong>B.4c</strong> Understand that each successive number name refers to a</td>
<td>Each successive number refers to one more.</td>
</tr>
<tr>
<td>quantity that is one larger.</td>
<td></td>
</tr>
<tr>
<td><strong>B.5</strong> Count to answer “how many?” questions about as many as 20 things</td>
<td>Count to answer “how many?” questions</td>
</tr>
<tr>
<td>arranged in a line, a rectangular array, or a circle, or as many as 10</td>
<td></td>
</tr>
<tr>
<td>things in a scattered configuration; given a number from 1–20, count</td>
<td></td>
</tr>
<tr>
<td>out that many objects.</td>
<td></td>
</tr>
<tr>
<td><strong>C.6</strong> Identify whether the number of objects in one group is greater</td>
<td>Identify greater than, less than, and equal to.</td>
</tr>
<tr>
<td>than, less than, or equal to the number of objects in another group,</td>
<td></td>
</tr>
<tr>
<td>e.g., by using matching and counting strategies.</td>
<td></td>
</tr>
<tr>
<td><strong>C.7</strong> Compare two numbers between 1 and 10 presented as written</td>
<td>Compare two numbers as written numerals.</td>
</tr>
<tr>
<td>numerals.</td>
<td></td>
</tr>
</tbody>
</table>
### Common Core Standards (Continued)

<table>
<thead>
<tr>
<th>Operations &amp; Algebraic Thinking</th>
<th>Inline Summary Form</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A.1</strong> Represent addition and subtraction with objects, fingers, mental images, drawings, sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations.</td>
<td>Represent addition and subtraction in a variety of ways.</td>
</tr>
<tr>
<td><strong>A.2</strong> Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem.</td>
<td>Solve word problems with addition and subtraction within 10.</td>
</tr>
<tr>
<td><strong>A.3</strong> Decompose numbers less than or equal to 10 into pairs in more than one way, e.g., by using objects or drawings, and record each decomposition by a drawing or equation (e.g., $5 = 2 + 3$ and $5 = 4 + 1$).</td>
<td>Decompose numbers less than 11.</td>
</tr>
<tr>
<td><strong>A.4</strong> For any number from 1 to 9, find the number that makes 10 when added to the given number, e.g., by using objects or drawings, and record the answer with a drawing or equation.</td>
<td>For 1-9, find the number that makes 10.</td>
</tr>
<tr>
<td><strong>A.5</strong> Fluently add and subtract within 5.</td>
<td>Fluently add and subtract within 5.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Number &amp; Operations in Base Ten</th>
<th>Inline Summary Form</th>
</tr>
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<tbody>
<tr>
<td><strong>A.1</strong> Compose and decompose numbers from 11 to 19 into ten ones and some further ones, e.g., by using objects or drawings, and record each composition or decomposition by a drawing or equation (e.g., $18 = 10 + 8$); understand that these numbers are composed of ten ones and one, two, three, four, five, six, seven, eight, or nine ones.</td>
<td>Understand numbers 11-19 are ten ones plus more ones.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Measurement &amp; Data</th>
<th>Inline Summary Form</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A.1</strong> Describe measurable attributes of objects, such as length or weight. Describe several measurable attributes of a single object.</td>
<td>Describe measurable attributes of objects.</td>
</tr>
<tr>
<td><strong>A.2</strong> Directly compare two objects with a measurable attribute in common, to see which object has “more of”/“less of” the attribute, and describe the difference. For example, directly compare the heights of two children and describe one child as taller/shorter.</td>
<td>Compare two objects with a common measurable attribute.</td>
</tr>
<tr>
<td><strong>B.3</strong> Classify objects into given categories; count the numbers of objects in each category and sort the categories by count.</td>
<td>Classify, count, and sort objects.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Geometry</th>
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</tr>
</thead>
<tbody>
<tr>
<td><strong>A.1</strong> Describe objects in the environment using names of shapes, and describe the relative positions of these objects using terms such as above, below, beside, in front of, behind, and next to.</td>
<td>Describe objects using shapes and relative positions.</td>
</tr>
<tr>
<td><strong>A.2</strong> Correctly name shapes regardless of their orientations or overall size.</td>
<td>Correctly name shapes.</td>
</tr>
<tr>
<td><strong>A.3</strong> Identify shapes as two-dimensional (lying in a plane, “flat”) or three-dimensional (“solid”).</td>
<td>Identify shapes as two- or three-dimensional.</td>
</tr>
<tr>
<td><strong>B.4</strong> Analyze and compare two- and three-dimensional shapes, in different sizes and orientations, using informal language to describe their similarities, differences, parts (e.g., number of sides and vertices/“corners”) and other attributes (e.g., having sides of equal length).</td>
<td>Analyze and compare two-and three-dimensional shapes.</td>
</tr>
<tr>
<td><strong>B.5</strong> Model shapes in the world by building shapes from components (e.g., sticks and clay balls) and drawing shapes.</td>
<td>Build and/or draw shapes.</td>
</tr>
<tr>
<td><strong>B.6</strong> Compose simple shapes to form larger shapes. For example, “Can you join these two triangles with full sides touching to make a rectangle?”</td>
<td>Compose simple shapes to form larger shapes.</td>
</tr>
</tbody>
</table>
Frequently Asked Questions

What kind of program design does Starfall use?
Starfall Kindergarten Mathematics uses a spiral approach in which learning is spread out over time, rather than concentrated in short time periods. Material is revisited multiple times throughout the curriculum. This is a contrast to most traditional math programs in which skills are “massed” or “blocked,” and learning of specific concepts is concentrated.

Why is a spiral approach more effective than a massed approach?
Spiraling helps learners develop connections over time, which creates more robust pathways for recalling information. Using multiple strategically-spaced lessons produces deeper, more conceptual learning. Some feel that “massing” leads to higher performance, which may be true in the short term. However, this is not true if the goal is long-term learning.

Do you use the Common Core State Standards?
Yes, all of the Common Core State Standards are used, but not exclusively. Since there are some areas that Starfall feels are not represented adequately in the Common Core, we developed an additional set of Starfall standards and benchmarks to augment the existing standards.

Do you address Unit Planning?
Each unit begins with a unit summary. The summary includes a description of the unit, Essential Questions, Enduring Understandings, and a list of the standards addressed during the unit. Because Starfall Kindergarten Mathematics is spiraled in nature, the overviews differ slightly from traditional Unit Plans, where there is one focus and every plan centers around that main focus. Since many objectives are addressed during each unit, there is a core focus supplemented with a variety of different concepts.

Why did you divide your curriculum into Daily Routines and a Lesson?
The Daily Routines provide regular practice using numbers as they apply realistically in our everyday lives. Kindergarten teachers traditionally incorporate routines at the beginning of their day. Starfall has used this opportunity to build on such routines to practice skills the children are learning throughout the year. Additional routines such as attendance, lunch count, and birthday graphs are not highlighted in the program, but they also offer opportunities to practice math skills in a practical way.

- **Calendar Routine** — provides practice with ordering numbers, reading a graph, adding “one more,” practicing equivalent sets, ordinal numbers, and the list goes on!
- **Weather Routine** — provides an experience with a different way to graph numbers through the use of tally marks. The children learn and practice predicting, estimating, more than, less than, equal, and probability as they chart the daily weather.
- **The Number Line Routine** — establishes at an early age that numbers do not begin at zero but are infinite in both directions. The premise is that the children will use the number line as one way to chart how many days they have been in school. Its uses are unlimited: counting forward from a given number, counting backward from a given number, skip counting by 2s, 5s, 10s, 25s, 50s, ordering numbers, and adding one more.
- **Place Value Routine** — is linked to the Number Line routine. This is probably the single most important routine in which children learn, from a very young age, that our number system contains only 0-9 digits and then regrouping is necessary to form additional numerals. The children “bundle” every ten days which sets the stage for understanding place value.
- **Hundredth Day Chart** — also reinforces number order and intuitively sets up a visual for how numbers are organized by groups. It provides another experience of how to chart numbers.
As the year progresses, you will find additional skills linked to each of these routines to extend and expand upon its purpose.

The Daily Lesson provides a focus on a particular skill. Each lesson includes:

- Magic Math Moment
- Introduction to and/or review of the skill
- Practice using the skill
- Related activity often including cooperative learning strategies
- Formative Assessment

The Magic Math Moments are more than warm up activities. They are short activities that reinforce concepts and are not always related to the lesson, but put into practice the skills the children have learned or preview skills they will learn. Magic Math Moments are springboards for the children to interact with mathematics.

**Why does the first Unit look different from the other Units?**

Unit 1 contains lessons that will be conducted by day for the first ten days. These lessons provide an opportunity to establish the daily routines and link activities related to the number of days the children have been in school. It is a preview of numbers and shapes, both of which will be developed more fully throughout the curriculum.

The lesson format shows four days of instruction and one day of learning centers.

**Should learning centers always take place on a Friday?**

Not necessarily. The lessons are set up in week/day format for organizational purposes. After each set of four lessons there is a reinforcement and assessment day with Learning Centers. This may fall on any day of the week. The Learning Centers are designed to review and practice skills taught in the previous four sessions. They include two activities, plus a computer center, and a teacher-directed activity combined with a Summative Assessment. The children rotate approximately every 12-15 minutes. If you have flexibility in your schedule, consider allowing additional time on learning center days. Starfall does not supply math manipulatives, and the Learning Centers were created with this in mind. You may substitute your own materials in place of those suggested.

**How is technology integrated?**

*Starfall.com* is used throughout the program. The math activities provide practice and reinforcement for each of the concepts introduced. The Parent-Teacher Center™ on *teach.starfall.com* provides support materials for the program.

**Can I access Starfall.com on an iPad or Android device?**

To access *Starfall.com* on a mobile device, search for and download the Starfall FREE app from the App Store (Apple) or Google Play (Android). After downloading the app, activate it and enter the email address and password for your *Starfall.com* account.
How does Starfall address assessments?
Starfall Kindergarten Math includes three types of assessments:

- **Entry, Mid-year, and Exit Assessments**
  (The Entry Assessment should be administered individually during the first two weeks of school.)

- **Formative Assessments**
  (Formative Assessments are conducted at the conclusion of each daily lesson.)

- **Summative Assessments**
  (Summative Assessments are conducted weekly during each Learning Center session.)

Is literature incorporated in the Starfall Math program?
Literature for the Starfall Math program includes:

- *Where Oh Where Is Backpack Bear*
- *Starfall’s Selected Nursery Rhymes*
- *Backpack Bear’s Treasure Hunt*
- *Estimate with Backpack Bear*
- *I Can Count to…*
- *Thermometers*

A list of additional books that are suitable for a variety of mathematical concepts is provided in the introduction of each unit. Incorporating literature at ANY time is always encouraged.

Do you use Math Journals?
Starfall does not specifically address math journals in the lessons as this is something that we think should be left to the individual teacher’s discretion. However, we certainly encourage the use of math journals and do reference and give suggestions for their use in the second semester.

Does Starfall Math include everything needed for a successful Math program?
Starfall has created a framework and scope and sequence that ensure that children will encounter all of the kindergarten concepts needed to be successful mathematicians. The teacher is the critical component of the program. An effective math teacher is continually assessing the progress of the children. Some children will need more reinforcement than others. That’s where the teacher comes in. For example you might:

- Add a whole group session between two given sessions. Develop an activity, or introduce a specific game you want the children to learn to review skills as needed.

- Insert an extra session to provide mini instruction to a small group of children. Prepare activities for half the group to do independently. Provide a “mini” lesson for children who may need additional reinforcement based on formative and/or summative assessments. These groups will change depending on the concept. Flexibility is the key.

- Provide an Activity Day to practice skills while conducting individual assessments, or pair groups to reteach or reinforce a concept.

- Provide an “Enrichment Day” where you assign children to specific activities providing those children with “Developmental Activities” whereby children do not move from one activity to another but remain in the prescribed activity.

So you see, not all of the work is done for you! You, and only you, know the needs of the children in your class. It is as important to provide modification to the program to meet the needs of your students as it is to follow the outlined lessons.