

Section 1: Family Letter

NAME

DATE

Dear Families,

Welcome to *Kindergarten Everyday Mathematics*, a curriculum created by the University of Chicago School Mathematics Project. This program is based on research and experience that shows that Kindergartners are capable of far more mathematics learning than was previously believed, provided that the content is presented and explored in age-appropriate ways.

Research also shows that children have more success with written and symbolic mathematics in later grades if they have a Kindergarten curriculum rooted in concrete experience and understanding. Over the course of the year, your child will engage in many hands-on activities related to a range of mathematical topics, including counting, numeration, operations (addition and subtraction), geometry, and measurement. The engaging, playful mathematics activities that children are immersed in throughout *Kindergarten Everyday Mathematics* are designed to help them build a solid foundational understanding of mathematical skills and concepts.

As children participate in *Kindergarten Everyday Mathematics* lessons, they will experience mathematics as useful, enjoyable, and understandable. You can reinforce these experiences at home. Your ongoing involvement with your child around the mathematics that comes up in everyday life will help him or her develop lasting excitement, confidence, and competence in math. You will also periodically receive "Home Links" with activities to do at home that link to those we have done at school.

Ongoing Daily Mathematics Routines

Routines are an important part of daily life in Kindergarten. They provide children with security and predictability, help build classroom community and collaboration, and make aspects of classroom life run more smoothly. They also provide meaningful opportunities to integrate mathematics and other subject areas into everyday activities. We will implement the following classroom routines to provide children with ongoing, real-life opportunities to develop mathematical skills and become mathematical thinkers.

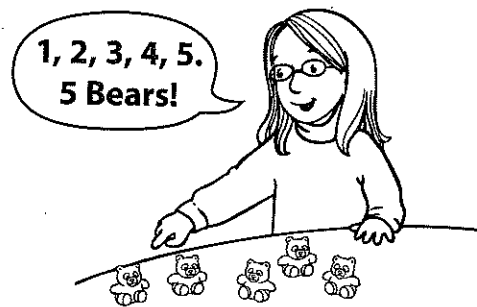
Routine	Children will ...
Number of the Day	count the days of school and add a new number each day to the Growing Number Line.
Attendance	count the number of children present and absent each day.
Monthly Calendar and Daily Schedule	track the sequence of daily events on a class schedule and track days, weeks, months, and other events on a monthly calendar.
Weather and Temperature	collect, record, graph, and analyze weather observations and temperature measurements.
Survey	collect, record, and graph responses to a "question of the day."

Introduction to Section 1

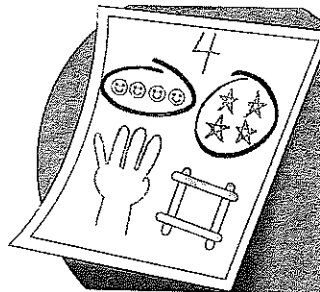
Kindergarten Everyday Mathematics is organized into 9 sections, each with 13 lessons. Below is information about the main concepts explored in Section 1.

Counting Children will practice the order of number words through counting games, songs, rhymes, and as they do the Daily Routines. They will also count and count out sets of objects. In order to count sets accurately, children must understand the following:

- They say one (and only one) number name for each object, and they cannot skip any objects or count any object twice.
- The last number they count tells the total number of objects in the group.
- The count stays the same regardless of the size, color, shape, or arrangement of the objects or the order in which they were counted.

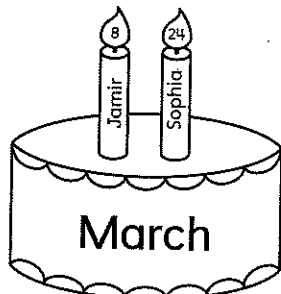


Developing Number Sense Throughout Section 1, children will be encouraged to notice numbers all around them and to discover the many ways numbers are used. They will also work to represent numbers in many ways.



A poster showing the number 4 in several different ways

Graphing In Section 1, children will also organize data and create class displays to show information about their birthdays and ages.



Display of children's birthdays

How Old Are You?					
5 years old					
6 years old					

Graph showing children's ages

Section 2: Family Letter

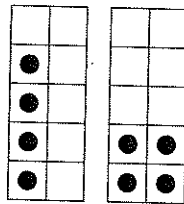
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Dear Families,

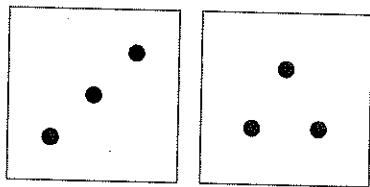
We are beginning Section 2 in *Kindergarten Everyday Mathematics*. Below is information about the main topics we will learn about during Section 2. We will also continue to explore and practice the concepts and skills we began in Section 1.

Counting and Comparing Sets In Section 2, children will extend early counting experiences to count sets of objects in different arrangements. They will also be introduced to a tool called a *ten frame*. They will use ten frames to see and show numbers in a variety of ways.

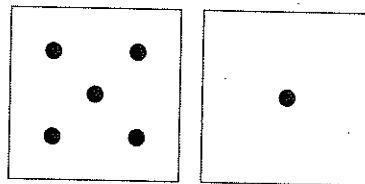


The number 4 is shown on a ten frame in two ways.

In *Kindergarten Everyday Mathematics*, children play games frequently to reinforce skills and concepts and develop problem-solving strategies. In Section 2, children will practice counting, matching, and comparing sets of dots by playing *Match Up with Dot Cards* and *Top-It with Dot Cards*.



Children find matching sets in *Match Up*.



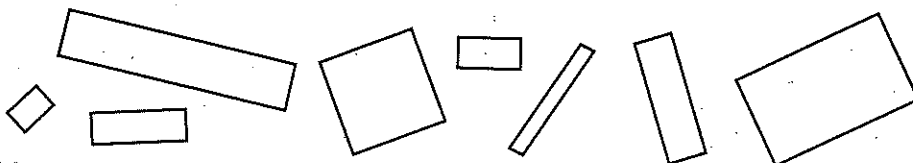
Children compare sets to see which is greater and which is less in *Top-It*.

Number Stories A "number story" is another name for a word problem or story problem. Early in the year, children solve number stories in a variety of ways, including acting them out and using objects, fingers, and drawings.



"I have 3 red apples and 2 green apples. How many apples do I have in all?"

Shapes Children will make shape collages and explore and describe real-world examples of shapes to help them learn the properties of triangles, circles, and rectangles. They will also learn to recognize the same shape in different sizes and orientations.



Although the shapes above look different from one another, children learn that all these shapes are rectangles. They also learn that a square is a special type of rectangle!

Section 3: Family Letter

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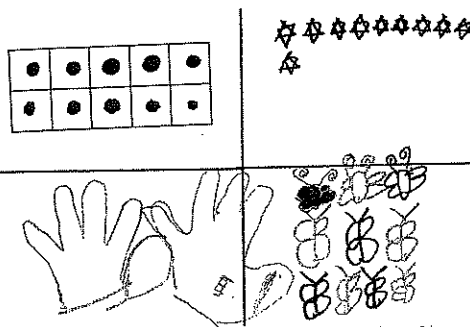
Dear Families,

We are beginning Section 3 in *Kindergarten Everyday Mathematics*. Below is information about the main topics we will learn about during the next few weeks.

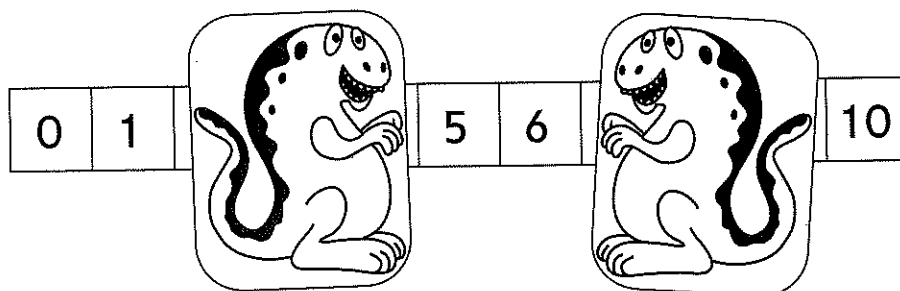
Numerals Throughout Section 3, children will make connections between written numbers and what they stand for. For example, the numeral 10 may represent ten fingers, ten stars, or ten spaces on a gameboard. Children will practice writing and interpreting numerals as they create number books and show numbers in many ways.

They will also build on their understanding of the number sequence by putting numerals in order, and observing and discussing that each number is exactly one more than the number before it in the counting sequence.

Children will continue playing games to deepen their understanding of numerals. In *Spin a Number* and *Monster Squeeze*, they will practice recognizing and comparing numerals.

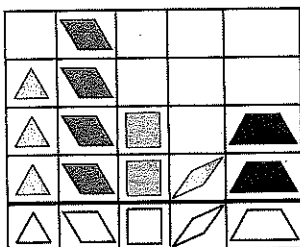


Children show the number 10 in four different ways.



In *Monster Squeeze*, children use number relationships (greater/less) to find a mystery number.

Graphing Earlier in Kindergarten, children collected and organized data to create a class birthday display and a graph showing their ages. In Section 3, they will sort pattern blocks to create a graph. (Pattern blocks are used throughout *Kindergarten Everyday Mathematics* to explore shapes and shape combinations.)



Children sort pattern blocks by shape and create a graph. They count and compare totals of each type of shape.

Section 4: Family Letter

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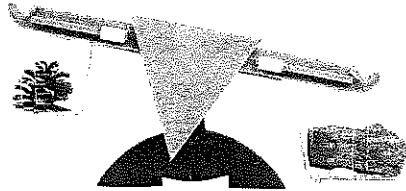
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Dear Families,

We are beginning Section 4 in *Kindergarten Everyday Mathematics*. Below is information about the main topics we will learn about during the next few weeks.

Counting by 10s and Counting On Children will expand their oral counting skills in Section 4. In addition to counting by 1s through 100, they will count by 10s (10, 20, 30 . . .) and “count on” starting from numbers other than 1.

Exploring Weight and Capacity In previous sections, children practiced describing and comparing *lengths* of objects. In this section, they will explore two other measurable attributes: *capacity* (how much a container can hold) and *weight*.

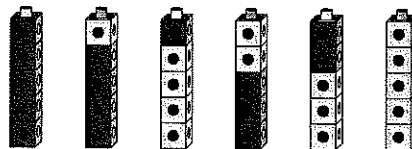


Children compare the weights of natural objects using a pan balance.

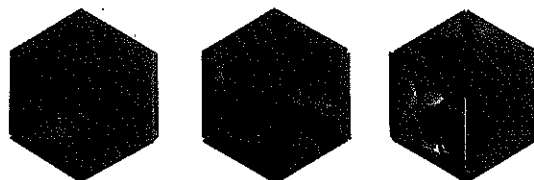


Children fill containers of different shapes and sizes and compare their capacities.

Composing and Decomposing Numbers Children will use sets of objects to explore how numbers can be broken down into combinations of smaller numbers. For example, they may show 5 as a group of 1 blue cube and 4 red cubes, or 2 blue cubes and 3 red cubes, and so on.



Combining Shapes Children will use and expand their knowledge of shape names and attributes as they combine smaller shapes to make larger ones. They will be challenged to create hexagons using different combinations of triangles, trapezoids, and rhombuses.



Section 5: Family Letter

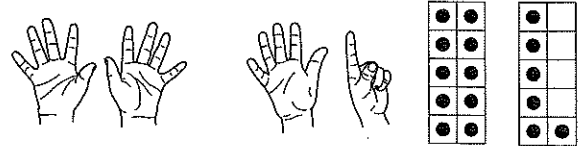
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Dear Families,

We are beginning Section 5 in *Kindergarten Everyday Mathematics*. Below is information about the main topics we will learn about during the next few weeks.

Teen Numbers In Sections 1–4, children have worked extensively with numbers 0–10. In Section 5, they will begin to build an understanding of place value by exploring the numbers 11–19. They will use fingers and counters to show that these numbers are made up of a group of ten and some additional ones.



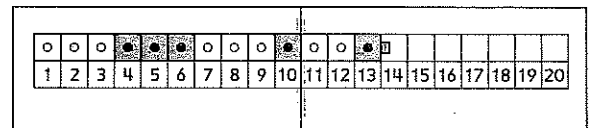
The number 16 is represented as “ten and some more ones” with fingers and with counters on a double ten frame.

100th Day of School We have been tracking the number of days we have been in school. On the 100th day, children will count and share their own collections of 100 objects. We will also celebrate with fun math activities such as counting games and 100-themed art, movement, and snack activities.



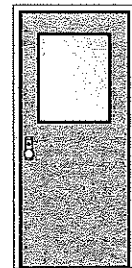
A collection of 100 stickers

Introduction to Symbols During Section 5, children will be introduced to the equal (=) and addition (+) symbols. They will relate the equal symbol to earlier experiences of showing the same number in many ways. They will use the addition symbol as they act out addition situations with counters. Children will practice using these symbols in games such as *Growing Train*, in which they roll a die labeled + 1, + 2, and + 3 to add to connecting-cube “trains.”



Children become familiar with the addition (+) symbol while playing *Growing Train*.

Shapes Children will continue to explore 2-dimensional shapes by going on a “shape walk” to look for shapes in their environment and by playing *I Spy*. They will draw the shapes they see and practice using positional words to describe them.



“I spy something that is round next to the door.”

Section 6: Family Letter

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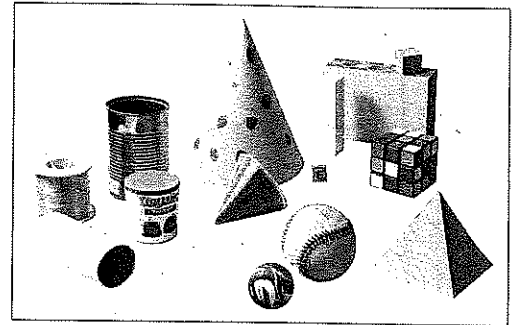
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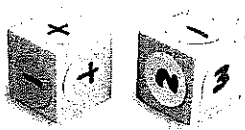
We are beginning Section 6 in *Kindergarten Everyday Mathematics*. Below is information about the main topics we will learn about during the next few weeks.

Length Measurement Children will use strings to compare their heights to the heights of classroom objects. They will also order objects from shortest to longest. Finally children will explore quantifying length by measuring themselves with stick-on note "units" to see if they are tall enough to go on an imaginary amusement park ride.

2- and 3-Dimensional Shapes Children will learn to describe and name many 3-dimensional shapes, such as cubes, spheres, cylinders, and cones. They will also compare 3-dimensional shapes to one another and to 2-dimensional shapes. In the process, children will notice the many 2-dimensional shapes that form the faces of 3-dimensional shapes and objects.



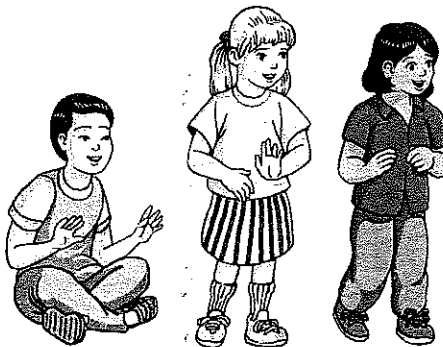
Addition and Subtraction Situations and Symbols Children learned to use the addition and equal symbols in Section 5. In Section 6, they will use the subtraction symbol to represent "taking away" or "taking apart" situations. Children will make sense of the relationship and differences between addition and subtraction as they solve a variety of number stories and play *Growing and Disappearing Train*.



1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
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Children use operations symbols and numbers to add and subtract cubes as they play *Growing and Disappearing Train*.

Sorting Children will create and apply rules to sort people or objects into different categories, and they will try to figure out others' sorting rules. For example, while playing *What's My Rule?* Fishing, children may determine that they are being sorted by clothing color or the type of shoes they are wearing (or both). Using rules to create and describe categories is an important mathematical skill.

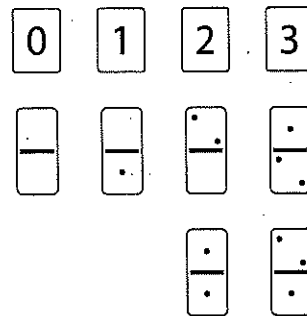


Children discover the "shoe type" rule by noting that all who are asked to stand have shoes that tie.

Dear Families,

We are beginning Section 7 in *Kindergarten Everyday Mathematics*. Below is information about the main topics we will learn about during the next few weeks.

Addition and Subtraction Strategies Children will solve basic addition and subtraction problems using a counting-on or counting-back strategy. For example, to add 6 and 2: *I can start at 6 and count up 2 numbers: 6 ... 7, 8. Six and 2 equals 8.* Children will hop along a large, walk-on number line to model these strategies concretely. They will also add the dots on both sides of dominoes and match the totals with written numerals, noticing different combinations that add to the same number. To develop fluency with addition and subtraction facts within 5, children will learn and play *Dice Addition* in Section 7. (They will learn and play *Dice Subtraction* in Section 8.)

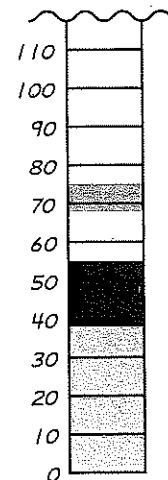


Children add the dots on dominoes and look for different ways to find the same totals.

Collecting and Representing Data During Section 7, children will collect and record data in various contexts. They will ask interesting survey questions of their classmates, and then organize, display, and analyze the response data they collect.

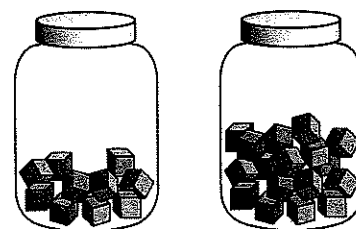
Children will also begin to accumulate data about a class collection. First they will vote on an object the class can collect. Then they will count and record the total as the children bring in objects from home to add to the collection. The collection provides valuable practice in counting to large numbers, counting by 10s and 1s, and organizing and tracking data.

Through these different experiences with data, children will learn about representing and analyzing information in mathematical ways.



Children represent the number of objects in their class collection using a thermometer-style graph.

Estimation Children will use a reference jar filled with a known number of objects to help them make estimates (or "smart guesses") about the number of objects in a second container. We will revisit this Estimation routine regularly for the remainder of the school year. Children get better at estimation with experience and practice, so look for real-life opportunities for your child to estimate how many people are in a room, snacks are in a bag, flowers are in a garden, and so on! Encourage your child to explain his or her estimate; then count the objects together. Estimation develops number sense and problem-solving skills, so estimate with your child often!



Children use a jar of 10 objects to estimate the number in the second jar.

Section 8: Family Letter

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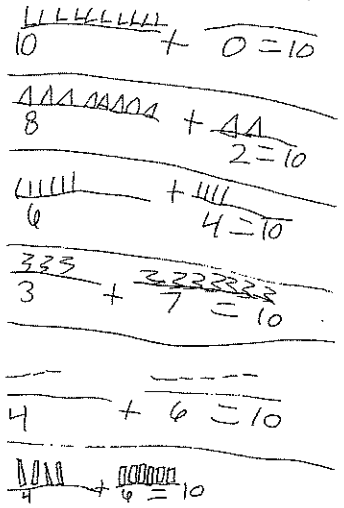
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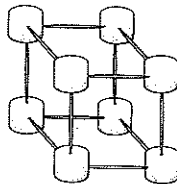
We are beginning Section 8 in *Kindergarten Everyday Mathematics*. Below is information about the main topics we will learn about during the next few weeks.

Making Ten Children will continue to do activities and play games (such as *Hiding Bears* and *Car Race*) that help them find pairs of numbers that add to 10. In the open response lesson, children will look for as many ways as they can to place 10 birds on 2 wires. As they find combinations that add to 10, children will notice number patterns and prepare for later work with multi-digit addition and subtraction.

Modeling 3-Dimensional Shapes Children will continue their exploration of 2- and 3-dimensional shapes by using toothpicks, marshmallows, and clay to create shapes and then using shape terminology to describe their creations. They will discover that toothpicks are useful for creating shapes with straight edges (such as cubes and prisms), while clay allows for creating shapes with curves (such as cones and cylinders).



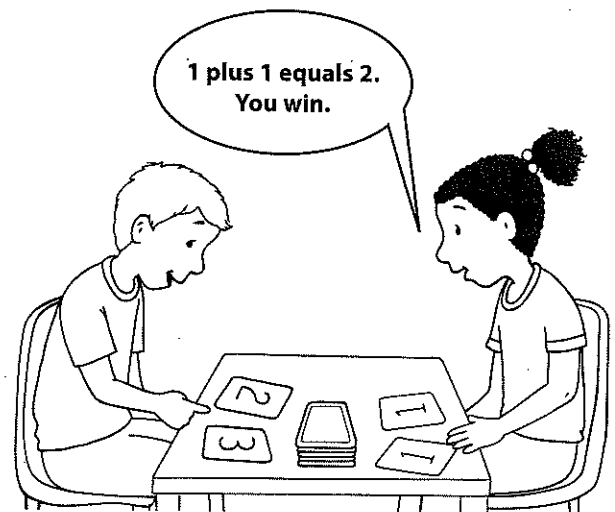
Children find and record many ways to place 10 birds on 2 wires.



Children build shapes out of marshmallows, toothpicks, and clay.

Adding and Subtracting Children will practice adding and subtracting small numbers by playing games such as *Dice Subtraction* and *Addition Top-It*. As they play, children will recall some sums or differences from memory and will develop and practice quick and accurate strategies for finding others. The goal is for children to develop fluency for sums and differences at least within 5 by the end of Kindergarten. This will also lay the groundwork for fluency with more facts as they move into later grades.

Measuring Time Children will practice timing classroom activities using steady beats (such as counting "1-Mississippi, 2-Mississippi"). This allows children to practice oral counting to higher numbers in an interesting, meaningful context.



Section 9: Family Letter

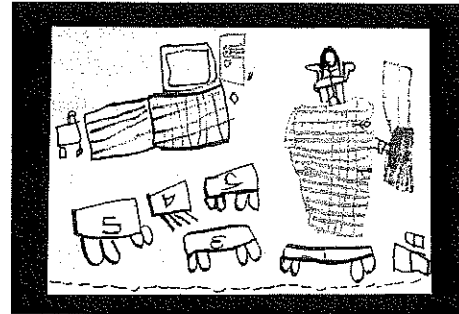
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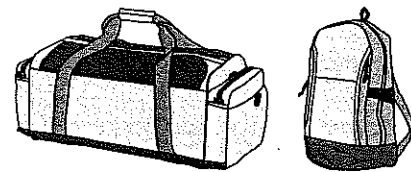
We are beginning Section 9 in *Kindergarten Everyday Mathematics*. Below is information about some of our mathematics work during the next few weeks.

Spatial Relationships In Section 9, children will use shape and positional language and develop spatial thinking as they describe a pattern-block design to a partner, who will then try to re-create the design without looking at it. In the Open Response lesson, children will draw maps of the classroom and will later use the maps to locate "hidden treasures." These activities will help children develop spatial reasoning, which is an important aspect of geometry.



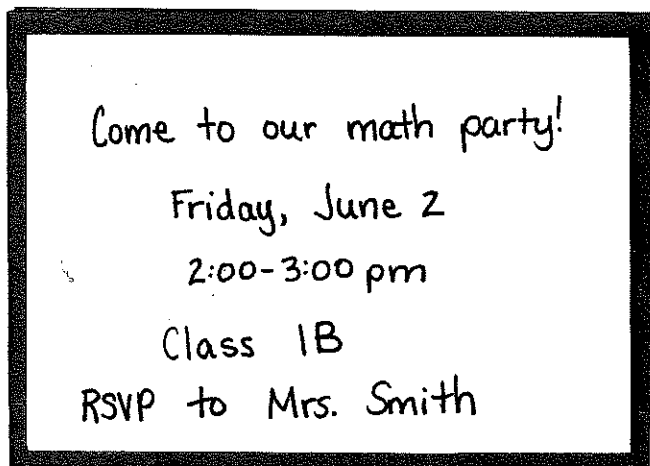
Children draw and use maps of the classroom.

Measurement Children will extend and apply the many ways they have learned to describe the sizes of objects as they measure and compare the heights, widths, areas, weights, and capacities of their backpacks. They will also learn to use a pan balance to measure the weight of objects using same-size units, such as paper clips.



Children compare their backpacks along several different size dimensions.

Class Math Celebration Children will end the year by having a two-day math celebration to apply the math skills and understandings they have learned in Kindergarten. On the first day, children will use their number, geometry, and other emerging mathematics skills to write invitations, create decorations, and plan and prepare seating charts, food, and party games. On the second day, children will play their favorite math games, estimate the number of snacks in jars, and celebrate how much math they have learned in Kindergarten!



Children apply their math skills to plan and have a math celebration at the end of the year.