

KINDERGARTEN
MATH WITH
CONFIDENCE



INSTRUCTOR GUIDE

KATE SNOW

Kindergarten
Math
with Confidence
Instructor Guide

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WELL-TRAINED MIND PRESS

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Table of Contents

Introduction	1
How to Use This Book	2
Unit 1: Numbers to 10	11
Week 1: Numbers 1-4	12
Week 2: Numbers 0 and 5	24
Week 3: Numbers 6-9	39
Week 4: Combinations that Make 10	53
Unit 2: Shapes	65
Week 5: Sorting and Classifying	66
Week 6: Shapes	79
Week 7: Pattern Blocks	92
Week 8: Symmetry	103
Unit 3: Directions and Patterns	117
Week 9: Directions	118
Week 10: Patterns	130
Unit 4: Comparing Numbers to 10	141
Week 11: Compare Without Numbers	142
Week 12: Compare Numbers to 10	155
Week 13: Sequence Numbers to 10	168
Week 14: 1 or 2 More, 1 or 2 Less	179
Unit 5: Addition	193
Week 15: Addition	194
Week 16: Many Ways to Show Addition	206
Week 17: Addition Practice	218

Unit 6: Numbers to 20.....229

Week 18: Count to 20..... 230

Week 19: Combinations of “10 and Some More”242

Week 20: Read and Write Numbers to 20.....256

Unit 7: Measurement..... 273

Week 21: Length 274

Week 22: Weight and Capacity288

Unit 8: Subtraction..... 303

Week 23: Take-Away Subtraction..... 304

Week 24: Take-Apart Subtraction..... 317

Week 25: Subtraction Practice..... 331

Unit 9: Numbers to 100..... 343

Week 26: Numbers to 30..... 344

Week 27: Numbers to 50358

Week 28: Numbers to 100..... 371

Unit 10: Time 383

Week 29: Months and Days of the Week.....384

Week 30: Time of Day395

Week 31: Read Clocks to the Hour..... 407

Week 32: Review and Celebrate..... 421

Helpful Resources430

Scope and Sequence 430

Complete List of Math Books of the Week.....432

Materials List434

Blackline Masters.....435

Introduction

Welcome to *Kindergarten Math with Confidence*!

Kindergarten Math with Confidence is a complete kindergarten math curriculum that will give your child a solid foundation in math. It's **playful, hands-on, and fun** with thorough coverage of all the skills your child needs to become capable and confident at math:

- reading, writing, and comparing numbers
- beginning addition and subtraction
- shapes, patterns, and directions
- counting to 100
- money, time, and measurement

The carefully-sequenced and confidence-building lessons will help your child develop a strong understanding of math, step by step. Daily review will ensure she fully masters what she has learned in previous lessons. With this blend of **deep conceptual understanding** and **traditional skill practice**, your child will be well-prepared for first grade.

Parents who pilot-tested this book describe the lessons as fun, relationship-building, and even joyful! Your child will develop both strong number sense and a **positive attitude** toward math with activities like Subtraction War, Number Relay, and Pretend Store. You'll need just basic household items (like coins, objects to count, and a clock) to make math come alive for your child.

Kindergarten Math with Confidence also includes a **colorful, engaging workbook** to reinforce what your child has learned. (If your child's fine-motor skills are still developing, it's fine for you to scribe her answers in the workbook.) You'll also find weekly suggestions for delightful **math picture books**, as well as ways to incorporate what your child is learning into your everyday activities.

If you're like most parents, you've probably never taught math before. You may even feel a little anxious. But don't worry: if you can add $5 + 3$ and count to 100, I promise you'll be fine! *Kindergarten Math with Confidence* is full of features that will help you teach math with confidence all year long:

- **Scripted, open-and-go lessons** that guide you every step of the way
- Clear goals at the beginning of each lesson so that you know exactly what you're trying to accomplish
- Explanatory notes that help you understand more deeply how children learn math so that you feel well-equipped to teach your child
- Checkpoints at the end of each unit that give you specific guidance on whether to spend more time on the current unit or move on to the next one

In the next section, you'll learn how the curriculum is organized and how to get your materials ready. Invest a little time reading this section right now (and getting your Math Kit ready), and you'll be ready to teach math like a pro all year long.

Wishing you a joyful year of kindergarten math!

Kate Snow

How to Use This Book

Is My Child Ready to Start *Kindergarten Math with Confidence*?

Most children will be ready to start *Kindergarten Math with Confidence* when they are 5 or 6 years old. Your child does not need to have used a formal preschool math program before starting, although it's helpful if she has already learned to count to 10 and hold a pencil.

If your child is ever frustrated, resisting math lessons, or crying during math time, it's a clear sign that you should take a break from the current topic, do some easy review, and then try again in a few weeks. If your child shows these signs frequently, it likely means that this book is too challenging for her current maturity level, no matter how old she is. Every child's brain matures at a different rate, and you and your child will both find your math lessons much more satisfying when your child is developmentally ready to begin.

Using this book with a younger child

A few 4-year-olds may be ready to use *Kindergarten Math with Confidence*, but most young children won't be ready for the number-writing on the worksheets or the more abstract concepts in the program (such as categorizing shapes or writing two-digit numbers). If your younger child is interested in numbers, you can use *Preschool Math at Home* before starting this program. Then, monitor his level of engagement and frustration to decide whether or not he is mature enough for kindergarten math.

Using this book after *Preschool Math at Home*

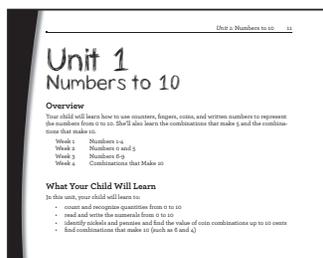
If you used *Preschool Math at Home* (or another preschool math program), you might find that the Unit 1 lessons are quite easy for your child. Do teach your child each lesson, but adjust the pace based on how quickly your child learns the new portions of each lesson. You may find that you can combine two lessons into one math session during Unit 1 because your child is already familiar with many of the concepts.

Overview

Kindergarten Math with Confidence is organized into units, weeks, and lessons with clear goals for each section so that you know exactly what you're trying to accomplish. At the end of the book, you'll also find an appendix of helpful resources, including the full scope and sequence, a list of recommended picture books, list of materials needed, and Blackline Masters.

Units

Kindergarten Math with Confidence is divided into 10 units. Each unit focuses on one core topic, such as shapes, addition, or counting to 100.

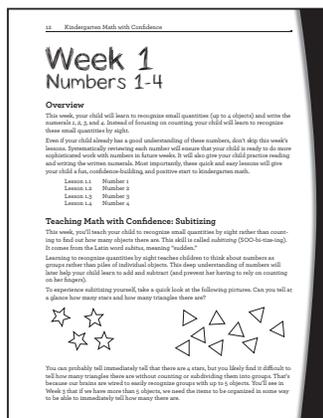


Sample Unit Overview

Weeks

Each unit is divided into 2–5 weeks, for a total of 32 weeks. Each week has a specific focus, such as putting numbers in order from least to greatest or understanding the concept of addition.

Although these groups of lessons are called weeks, that doesn't mean you have to finish each one in a calendar week—it's fine to have your "week" begin on Wednesday and end on the following Friday.



Sample Week Preview

The preview for each week includes the following:

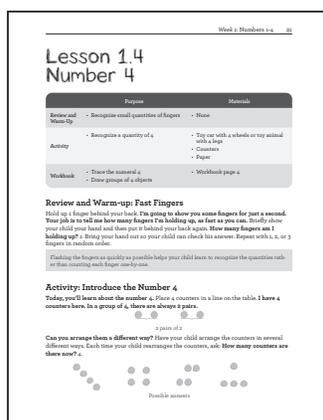
- **Overview.** A quick summary of what you'll teach your child that week, along with a list of the lessons.
- **Teaching Math with Confidence.** These notes will help you understand more deeply how children learn math so that you're well-prepared and confident as you teach your child the new concepts.
- **Household Materials Needed for the Week.** You'll sometimes need to supplement your regular math materials with a few everyday household items, such as stuffed animals, crayons, or plastic cups. This section will give you a heads-up if you need any extra materials for the week. (See below for more information on materials.)
- **Weaving Math Into Everyday Life.** These simple math applications will help you incorporate what your child is learning in math into everyday activities like eating a snack, going to the park, or running errands.

- **Math Book of the Week.** These math picture book recommendations align with what your child learns each week.

Note that Weaving Math into Everyday Life and the Math Book of the Week are completely optional. You do not need to hunt down every picture book or do every activity.

Lessons

Each week includes four lessons, which should be plenty for most kindergartners. It also gives your family a little extra room in the calendar for chores, errands, or appointments. (See below for options if you prefer to teach math 5 days per week.)



Sample lesson

Within the lessons:

- **Bold text** indicates what you are to say.
- *Italic text* provides sample answers.
- Gray-highlighted text indicates explanatory notes.

At the beginning of each lesson, you'll find the goals for each part of the lesson, as well as the materials you'll need. The lessons follow a consistent 3-part format:

Review and warm-up (3-5 minutes)

These brief activities practice key skills and review important concepts so that your child remembers and retains what she has learned. Try to keep these activities short and sweet so that your child isn't worn out before she gets to the main section of the lesson.

Hands-on activities (5-10 minutes)

These fun, playful, and informal activities are the core of each lesson. You'll use conversation, games, and everyday items to help your kindergartner develop a deep understanding of math.

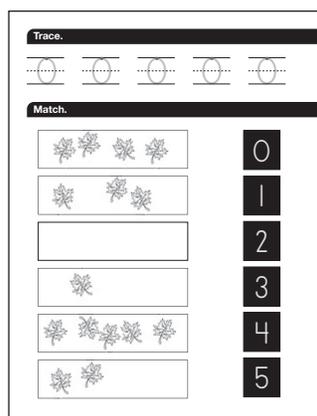
Don't be afraid to have fun and interject your own personality into the activities. They're scripted so that you can just open the book and start reading, but you're welcome to rephrase the words to fit your own teaching style better. Also feel free to personalize the lessons and tailor them to your child: you might use your child's favorite objects for counting, change the names in word problems to match your family members, or take your math lesson outside to enjoy a beautiful day.

Workbook (2-5 minutes)

Your child will complete a short workbook page at the end of each lesson. Most will take just a few minutes, but they will give your child important practice at writing numbers, following directions, and interpreting math in a written format.

Each workbook page has two parts:

- **Number tracing.** At the top of each page, your child will trace 5 numbers so that she learns to write numbers fluently. Learning how to write the numbers from 0 to 10 this year will make first-grade math much easier next year.
- **Practice or review.** At the bottom of each page, your child will either practice the new skills in the lesson or review previously-learned skills.



Sample workbook page

Kindergartners have a huge range of fine-motor abilities. If writing numbers is difficult for your child, feel free to adjust the writing activities to meet your child's needs better. One easy solution is to have him complete the bottom part of the worksheet orally rather than writing out the answers. If he finds tracing the numbers at the top of each page too difficult, have him trace the numbers with his finger instead. That way, he'll begin to learn the sequences of strokes that make up the written numbers and be better prepared to write the numbers once his fine-motor skills develop further.

Your child will be able to complete many of the workbook pages independently, but you'll often need to stay nearby to read the directions and help your child understand what to do on the page. After your child completes the workbook page, check it immediately to show you value the effort your child put into it and to catch any mistakes before they become habits.

Have your child use a pencil to complete the workbook pages so that it's easy to erase mistakes. You'll occasionally need crayons or colored pencils for the workbook. If that's the case, it will be noted in the materials list for the lesson.

Lesson Length

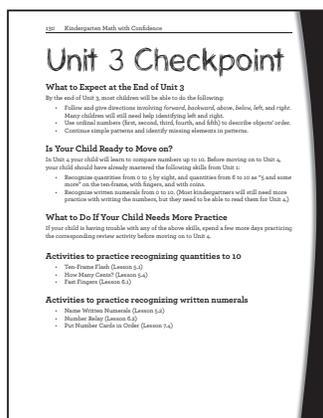
Most kindergartners have a short attention span. The lessons in this book are meant to take about 15 minutes with a variety of activities within each lesson to help keep your child engaged and on-task. You'll find that the Unit 1 lessons are especially short. This will help your child build her attention span during the first few weeks of the program.

If you find that a particular lesson is taking longer than 15 minutes or your child is getting restless, stop where you're at and resume the lesson the next day. Or, break the lesson into two parts: do the hands-on lesson during one part of the day, and then have your child do the workbook page at a different time of day.

Checkpoints

Each lesson gently builds on the previous one, but that doesn't mean that your child needs to fully master the skills from one lesson before moving on to the next. Most children will need lots of practice before they are proficient in each area, so this curriculum includes lots of opportunities for review and practice before your child is expected to achieve full mastery of any given skill.

As a general rule, continue teaching new lessons until you reach the end of a unit. At the end of the unit, you'll find a Checkpoint that will help you assess how your child is doing. The Checkpoints will also give you clear guidance on whether to move on to the next unit or give your child more practice with the current unit.



Each Checkpoint is divided into 3 parts:

- **What to Expect at the End of the Unit** This list of skills tells you what kindergartners are typically able to do at the end of each unit.
- **Is Your Child Ready to Move On?** This section tells you exactly what your child needs to have mastered before moving on to the next unit.
- **What to Do if Your Child Needs More Practice** If your child isn't quite ready to move on, this section gives you options for reviewing and practicing the essential skills that your child needs to master before the next unit. (This section is omitted if no specific skills are necessary for the next unit.)

Bear in mind that your child often does not need to have mastered all of the material from the current unit before moving on. For example, in Unit 1, your child will learn to recognize written numbers from 0 to 10. But your child does not need to master reading numbers before learning about shapes, patterns, and directions in Units 2 and 3. Instead, she'll continue to practice reading numbers throughout Units 2 and 3 so that she has them fully learned before beginning to compare numbers in Unit 4.

Scheduling Tips

The more consistently you teach math, the better your child will remember what she's learned—and the more you both will enjoy your math time together. Use these scheduling tips to make a plan that will help you teach math consistently all year long.

Yearly scheduling

Kindergarten Math with Confidence has a total of 32 weeks of lessons, with 4 lessons per week. You may want to pull out a calendar now and count how many weeks are in your academic year so that you don't have any unpleasant surprises at the end of the year.

If you find that you can't fit 32 weeks into your school year, one option is to teach 5 lessons per week so that you can fit in more of the lessons throughout the year. (If you teach 5 lessons every week, you'll only need 26 weeks to complete the curriculum.) Or, you might continue teaching into the summer so that you don't feel rushed and so your child has less time to forget math during the summer break.

Another option is to skip Unit 10 (which focuses on months, days of the week, and reading clocks) and incorporate some of the activities into your daily routine instead. Either way, do make sure to teach the final lesson in the book (Lesson 32.4), as it gives you and your child a chance to celebrate your child's progress and end the year on a positive note.

Weekly scheduling

In your weekly schedule, plan to teach math at least 4 days per week for about 15 minutes per day.

Each week includes a suggestion for a related picture book and real-life math application. This book and activity are perfect for the fifth day of the week if you'd like to do some math without teaching a full lesson. Or, you can add the picture book to your read-aloud time and look for another time in the week for the application activity. Either way, these extra activities are completely optional—you do not need to hunt down every picture book or do every activity.

Daily scheduling

To help you teach consistently, try to have a set time for teaching math each day. Many families find it best to do math first thing in the morning when everyone's fresh. If you have younger children, you might find that it works better to do math in the afternoon while your littler ones are napping (and are less likely to wander away with the pattern blocks).

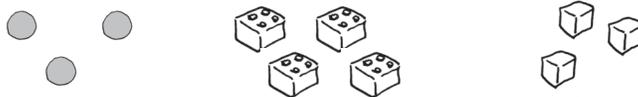
What You'll Need

You'll use simple household items to make math hands-on, concrete, and fun in *Kindergarten Math with Confidence*. You likely already own nearly everything you need (with the possible exception of pattern blocks—see below for details on how to buy these inexpensive blocks). Use the following guide to create a toolbox of math materials that you'll use in nearly every lesson.

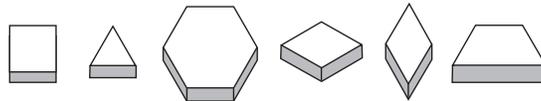
How to Create Your Math Kit

To create your Math Kit, stick the following materials in a box or basket and always keep them handy when you're teaching.

- **100 small counters.** Any type of small object (such as plastic tiles, Legos, blocks, plastic bears, coins, or dried beans) is fine. These will work best (and fit the Blackline Masters) if they are less than .75" (or 2 cm) across. You'll occasionally need 2 colors, so make sure at least 10 of the counters are a different color than the rest.



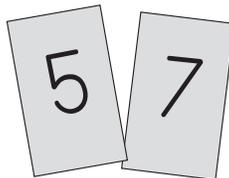
- **Pattern blocks.** Pattern blocks are a specific set of small plastic or wooden hexagons, triangles, squares, trapezoids, and diamonds. They're generally available for about \$10 online or at school supply stores. You can also photocopy and color Blackline Master 3 (pages 439-443) instead, although children usually find real blocks easier to maneuver.



- **Coins (20 pennies, 20 nickels, 10 dimes).** You can use toy coins, but children often enjoy using real coins more. If you live outside the U.S., see page 25 for options that you can use instead of American coins.



- **2 packs of 100 blank index cards.** You'll use index cards for many different activities, such as making Number Cards for games, covering parts of patterns, and creating a simple map for practicing left and right. Three-inch by five-inch blank cards are ideal, but anything similar will work.



- **Blank paper.** Any kind of paper is fine, including plain copy paper.
- **Pencils.** Keep sharp pencils on hand for occasional writing during the hands-on activities and for your child to use when completing the workbook pages.

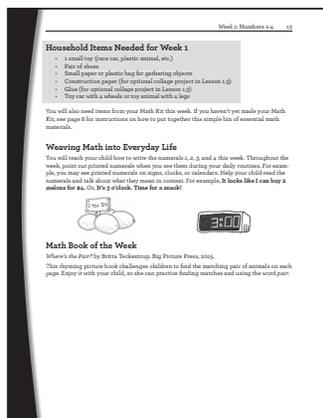
Some lessons will also call for you to use the Blackline Masters at the back of this book. You will use Blackline Masters 1, 4, 5, and 8 frequently, so you may want to laminate them or put them in plastic page protectors for durability.

You will occasionally make items that you will need to save for future lessons (such as Number Cards or a poster identifying left and right). **Bold text** will alert you if you need to save anything from the lessons.

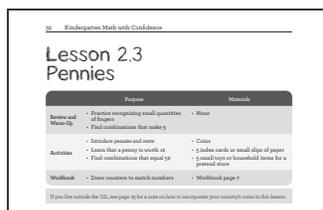
Other Supplies Needed

You'll only need your Math Kit to teach most lessons, but occasionally you'll need additional, common household items like stuffed animals, spoons, or shoes. You'll find these items listed in three different places in the curriculum to make sure you always know what you need:

- The preview for each week lists all extra household items needed that week.



- The top of each lesson lists all supplies you'll need to teach that lesson. These lists include items from your Math Kit as well as extra household items.



- You'll find the complete list of household items needed throughout the year on page 434.

Don't feel that you have to gather all these extra household items now. Most are common things like glue, scissors, or a stack of books that you can grab right before you begin the lesson.

Unit 1

Numbers to 10

Overview

Your child will learn how to use counters, fingers, coins, and written numbers to represent the numbers from 0 to 10. She'll also learn the combinations that make 5 and the combinations that make 10.

Week 1	Numbers 1-4
Week 2	Numbers 0 and 5
Week 3	Numbers 6-9
Week 4	Combinations that Make 10

What Your Child Will Learn

In this unit, your child will learn to:

- count and recognize quantities from 0 to 10
- read and write the numerals from 0 to 10
- identify nickels and pennies and find the value of coin combinations up to 10 cents
- find combinations that make 10 (such as 6 and 4)

Week 1

Numbers 1-4

Overview

This week, your child will learn to recognize small quantities (up to 4 objects) and write the numerals 1, 2, 3, and 4. Instead of focusing on counting, your child will learn to recognize these small quantities by sight.

Even if your child already has a good understanding of these numbers, don't skip this week's lessons. Systematically reviewing each number will ensure that your child is ready to do more sophisticated work with numbers in future weeks. It will also give your child practice reading and writing the written numerals. Most importantly, these quick and easy lessons will give your child a fun, confidence-building, and positive start to kindergarten math.

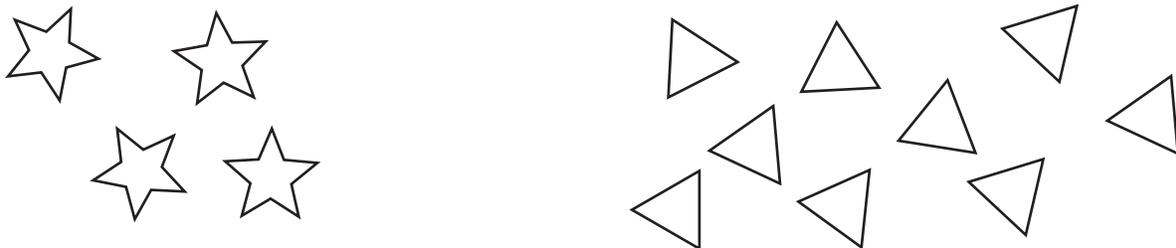
Lesson 1.1	Number 1
Lesson 1.2	Number 2
Lesson 1.3	Number 3
Lesson 1.4	Number 4

Teaching Math with Confidence: Subitizing

This week, you'll teach your child to recognize small quantities by sight rather than counting to find out how many objects there are. This skill is called *subitizing* (SOO-bi-tize-ing). It comes from the Latin word *subitus*, meaning "sudden."

Learning to recognize quantities by sight teaches children to think about numbers as groups rather than piles of individual objects. This deep understanding of numbers will later help your child learn to add and subtract (and prevent her having to rely on counting on her fingers).

To experience subitizing yourself, take a quick look at the following pictures. Can you tell at a glance how many stars and how many triangles there are?



You can probably tell immediately that there are 4 stars, but you likely find it difficult to tell how many triangles there are without counting or subdividing them into groups. That's because our brains are wired to easily recognize groups with up to 5 objects. You'll see in Week 3 that if we have more than 5 objects, we need the items to be organized in some way to be able to immediately tell how many there are.

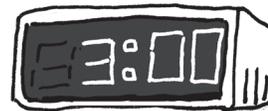
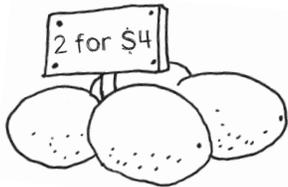
Household Items Needed for Week 1

- 1 small toy (race car, plastic animal, etc.)
- Pair of shoes
- Small paper or plastic bag for gathering objects
- Construction paper (for optional collage project in Lesson 1.3)
- Glue (for optional collage project in Lesson 1.3)
- Toy car with 4 wheels or toy animal with 4 legs

You will also need items from your Math Kit this week. If you haven't yet made your Math Kit, see page 8 for instructions on how to put together this simple bin of essential math materials.

Weaving Math into Everyday Life

You will teach your child how to write the numerals 1, 2, 3, and 4 this week. Throughout the week, point out printed numerals when you see them during your daily routines. For example, you may see printed numerals on signs, clocks, or calendars. Help your child read the numerals and talk about what they mean in context. For example, **It looks like I can buy 2 melons for \$4.** Or, **It's 3 o'clock. Time for a snack!**



Math Book of the Week

Where's the Pair? by Britta Teckentrup. Big Picture Press, 2015.

This rhyming picture book challenges children to find the matching pair of animals on each page. Enjoy it with your child, so she can practice finding matches and using the word *pair*.

Lesson 1.1

Number 1

	Purpose	Materials
Activity	<ul style="list-style-type: none"> Recognize a quantity of 1 	<ul style="list-style-type: none"> 1 small toy (race car, plastic animal, etc.)
Workbook	<ul style="list-style-type: none"> Trace and identify the numeral 1 	<ul style="list-style-type: none"> Paper Workbook page 1

Activity: Introduce 1

Today, you'll learn about the number 1. Place the toy on the table. **This toy is all by itself. There's just 1 toy.** Move the toy to another spot on the table. **No matter where I put it, there's still just 1 toy.**

Can you hold up 1 finger? *Child holds up 1 finger.*

Look at my face. I have 1 nose. Can you point to your 1 nose? *Child points to her nose.*

I have 1 mouth. Can you point to your 1 mouth? *Child points to her mouth.*

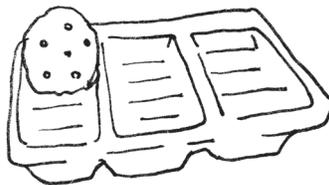
Can you clap your hands 1 time? *Child claps hands once.*

Can you balance on 1 foot? *Child balances on one foot.*

Activity: Find Groups of 1

You have just 1 nose and just 1 mouth. Let's look around the house for things that we have only 1 of.

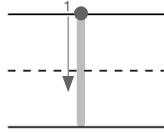
Walk with your child around your home and look for single objects. You might find one refrigerator, one favorite blankie, or one cookie left in a package.



Workbook (Page 1): Write 1

We can write numbers, just like we can write letters and words. If I'm making a grocery list and need just 1 apple, here's what I write. Write "1 apple" on a piece of paper and read it to your child.

At the top of workbook page 1, demonstrate how to trace the number 1. **To write a 1, start at the top and make a long line straight down.**



Have your child complete workbook page 1. Read the words on the page to your child and discuss where you might find each example of real-life numbers. For example, **These numbers look like the address for a house.**

Your child will practice tracing numbers at the top of every worksheet. Always have your child name the numbers as she traces them so that she gets practice at both writing and reading the numbers.

Lesson 1.2

Number 2

	Purpose	Materials
Activities	<ul style="list-style-type: none"> • Recognize a quantity of 2 • Learn the word <i>pair</i> 	<ul style="list-style-type: none"> • Pair of shoes
Workbook	<ul style="list-style-type: none"> • Trace the numeral 2 • Find pairs of 2 objects 	<ul style="list-style-type: none"> • Workbook page 2

For young children, concrete examples always need to come before abstract symbols. In the lessons this week, you'll provide many different concrete examples of each quantity before teaching your child the abstract written symbol for each number.

Activity: Introduce 2

Today, you'll learn about the number 2. Hold one shoe in each of your hands. **I have 1 shoe in this hand and 1 shoe in this hand. Together, I have 2 shoes.** Bring the shoes together and place them next to each other.



Can you hold up 2 fingers? *Child holds up 2 fingers.*

Hold up your hands. **How many hands do you have? 2. How many arms? 2. How many legs? 2.**

Look at my face. What do I have 2 of on my face? *Possible answers: 2 eyes, 2 nostrils, 2 ears, 2 eyebrows, 2 cheeks.*

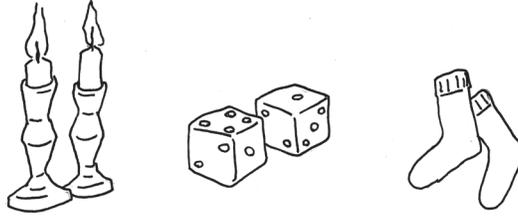
Can you point to your 2 eyes? 2 ears? 2 cheeks? *Child points to correct body parts.*

Can you hop 2 times? *Child hops twice.* **Can you pat your head 2 times?** *Child pats head twice.*

Activity: Find Pairs

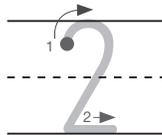
Point to the pair of shoes again. **We call 2 shoes a pair of shoes. Let's look around the house for some pairs.**

Walk with your child around your home and look for pairs of objects. For example, you might find a pair of socks, a pair of dice, or a pair of candlesticks. Point out that you and your child together are a pair of people.



Workbook (Page 2): Write 2 and Find Pairs

At the top of workbook page 2, demonstrate how to trace the number 2. **To write a 2, start at the top and curve around. Then, make a straight line across the bottom.**



Have your child complete workbook page 2.

Lesson 1.3

Number 3

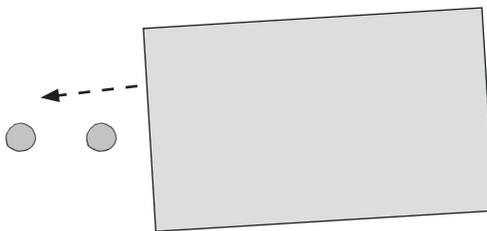
	Purpose	Materials
Review and Warm-Up	<ul style="list-style-type: none"> Recognize 1 or 2 counters 	<ul style="list-style-type: none"> Counters Paper
Activities	<ul style="list-style-type: none"> Recognize a quantity of 3 Understand that rearranging a quantity does not change its amount 	<ul style="list-style-type: none"> Counters Small paper or plastic bag for gathering objects Paper, optional Glue, optional
Workbook	<ul style="list-style-type: none"> Trace the numeral 3 Match small quantities with written numerals 	<ul style="list-style-type: none"> Workbook page 3

Starting with this lesson, you will do a quick review and warm-up activity at the beginning of each session. These activities review essential skills and help you and your child ease into math time. Try to keep the review and warm-up activities fast-paced and playful. Most should take no more than 3 minutes.

Review and Warm-up: Hidden Counters

Secretly place 2 counters on the table and cover them with a piece of paper.

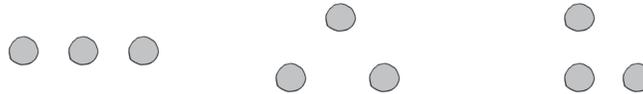
I'm going to show you some counters for just a second. When I lift the paper, tell me how many counters there are as fast as you can. Lift the piece of paper for just a second. **How many counters? 2.**



Repeat with 1 or 2 counters, several times and in random order. Adjust your speed so that your child is challenged to recognize the quantities as quickly as possible, but not frustrated. One or two seconds is a good length of time for most children.

Activity: Introduce 3

Today, you'll learn about the number 3. Arrange 3 counters in a line on the table. **I have 3 counters here. Can you arrange them a different way?** Have your child arrange the counters in several different ways. Each time your child rearranges the counters, ask: **How many counters are there now? 3.**



Possible arrangements

No matter how you rearrange the counters, there are still 3 of them.

Rearranging the counters emphasizes the important idea that changing objects' arrangement doesn't change their total number. If your child double-checks that there are still 3 counters, this means that she is still learning this important concept.

Can you hold up 3 fingers? Can you do 3 jumping jacks? Can you tap the table three times?

Many kindergartners have trouble articulating the *th* sound at the beginning of *three*. Instead, they pronounce *th* as *f*, so that *three* sounds more like *free*. From a speech perspective, this is completely normal, and it's nothing to worry about.

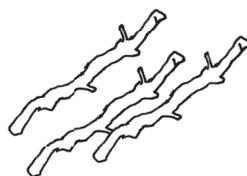
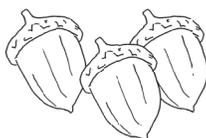
From a math perspective, however, this simple mispronunciation often makes it more difficult for children to learn number names, especially later in the year when they try to distinguish between *thirteen* and *fourteen*, or *thirty* and *forty*.

To help your child articulate the *th* in *three*, encourage her to place the tip of her tongue between her top and bottom front teeth and blow a small puff of air out while beginning the word. (In contrast, we usually place our top teeth on our bottom lip to pronounce *f*.) Have your child watch the way your mouth moves while you say *th* and *f*, then have her try to pronounce both sounds in front of a mirror. Don't worry if it takes a while for your child to begin to pronounce *th* correctly. Gentle reminders will eventually help her say *three* instead of *free* and will help her hear the difference between the similar-sounding numbers.

Activity: Collect Groups of 3

Today, we're going to go outside and collect some groups of 3. Take a walk outside. Have your child collect some groups of 3 items and put each group in the bag. For example, she might collect 3 acorns, 3 leaves, or 3 sticks.

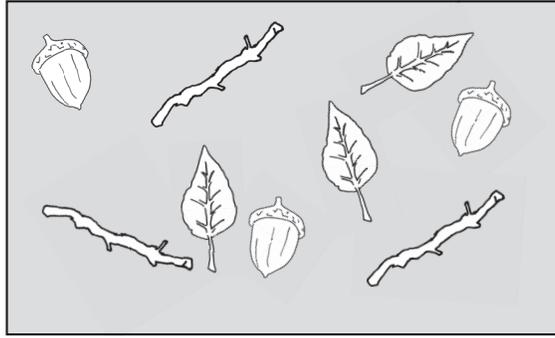
After you come back inside, have your child dump out her bag and sort the items into groups of 3.



If you'd rather not go outside or don't have time, have your child walk around the house and collect groups of 3 craft objects (such as stickers, feathers, or pompoms) instead.

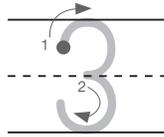
Activity: Make a Collage (Optional)

Give your child the construction paper and glue. Have her glue the groups of 3 objects to the construction paper.



Workbook (Page 3): Write 3 and Match Quantities

At the top of the page, demonstrate how to trace the number 3. **To write a 3, start at the top, then curve around twice.**



Have your child complete workbook page 3.

Lesson 1.4

Number 4

	Purpose	Materials
Review and Warm-Up	<ul style="list-style-type: none"> Recognize small quantities of fingers 	<ul style="list-style-type: none"> None
Activity	<ul style="list-style-type: none"> Recognize a quantity of 4 	<ul style="list-style-type: none"> Toy car with 4 wheels or toy animal with 4 legs Counters Paper
Workbook	<ul style="list-style-type: none"> Trace the numeral 4 Draw groups of 4 objects 	<ul style="list-style-type: none"> Workbook page 4

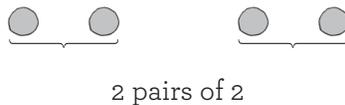
Review and Warm-up: Fast Fingers

Hold up 1 finger behind your back. **I'm going to show you some fingers for just a second. Your job is to tell me how many fingers I'm holding up, as fast as you can.** Briefly show your child your hand and then put it behind your back again. **How many fingers am I holding up?** 1. Bring your hand out so your child can check his answer. Repeat with 1, 2, or 3 fingers in random order.

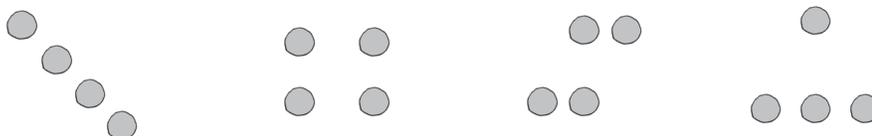
Flashing the fingers as quickly as possible helps your child learn to recognize the quantities rather than counting each finger one-by-one.

Activity: Introduce the Number 4

Today, you'll learn about the number 4. Place 4 counters in a line on the table. **I have 4 counters here. In a group of 4, there are always 2 pairs.**



Can you arrange them a different way? Have your child arrange the counters in several different ways. Each time your child rearranges the counters, ask: **How many counters are there now?** 4.



Possible answers

Arranging the counters multiple ways again emphasizes the important idea that changing objects' arrangement doesn't change their total number. If your child knows immediately that the quantity hasn't changed, you do not need to spend much time on this.

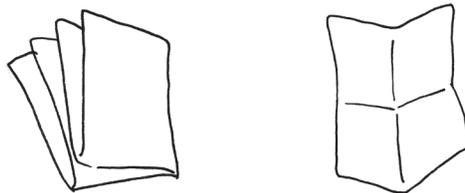
Can you show me 4 fingers? Can you turn around 4 times? Can you stomp your foot 4 times?

Show your child the toy car or animal. **Can you find 2 pairs of wheels (or legs) on this toy? Child points to 2 pairs of wheels (or legs). How many wheels (or legs) does the toy have? 4.**

Emphasizing that a group of 4 always has 2 pairs helps your child learn to recognize a quantity of 4 quickly. See the Week 1 **Teaching Math with Confidence** (page 18) for more details on why it is so important for children to learn to recognize quantities by sight and not just count them.

Activity: Fold Paper into 4 Rectangles

We can create a group of 4 by folding a piece of paper. Show your child how to fold a piece of paper in half horizontally and then vertically to divide it into four smaller rectangles.

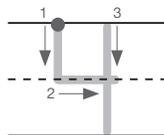


How many smaller rectangles did you create by folding the paper? 4. With your child find several different ways to divide the 4 smaller rectangles into 2 pairs.

You will teach your child the definition of a rectangle in Unit 2.

Workbook (Page 4): Write 4 and Draw Groups of 4 Objects

At the top of workbook page 4, demonstrate how to trace the number 4. **To make a 4, start at the top and make a small L. Then, go back to the top and make a straight line down.**

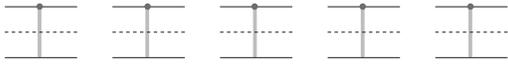


Have your child complete workbook page 4.

Week 1 Answer Key

Lesson 1.1

Trace.



Circle the 1s.



Lesson 1.2

Trace.

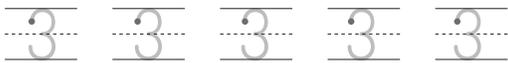


Circle the pairs.

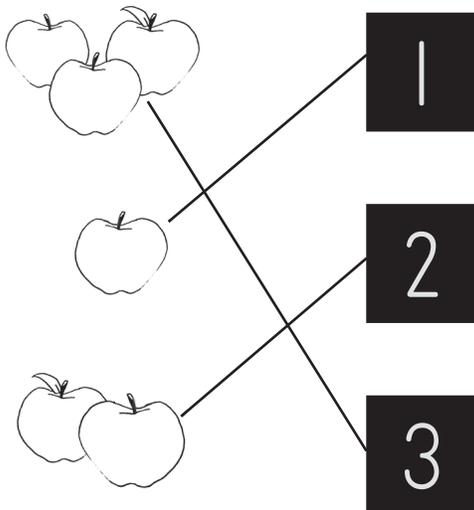


Lesson 1.3

Trace.

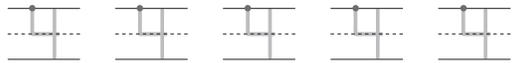


Match.

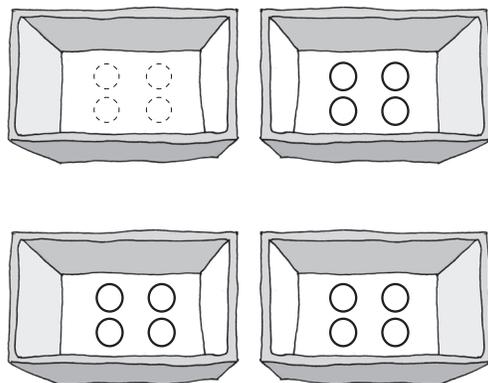


Lesson 1.4

Trace.



Draw 4 balls in each box.



Unit 1 Checkpoint

What to Expect at the End of Unit 1

By the end of Unit 1, most children will be able to do the following:

- Recognize most of the quantities from 0 to 10 on a ten-frame without counting. Many children will still have trouble recognizing 7 and 8 at this point.
- Recognize most of the written numerals from 0 to 10.
- Tell how much a nickel and some pennies are worth (up to 10 cents). Many kindergartners will need you to remind them how much each coin is worth before finding the total value.
- Identify the combinations that make 10. It's fine if your child still needs the ten-frame and counters to find the combinations.

Is Your Child Ready to Move on?

Your child does not need to master all of the skills from Unit 1 before moving on to Unit 2. Units 2 and 3 focus on shapes and patterns, but they also include lots of review of the numbers from 0 to 10. This will give your child many more opportunities to practice recognizing quantities and written numerals up to 10 before beginning to compare numbers in Unit 4.

Lesson 7.3

Pattern Block Puzzles

	Purpose	Materials
Review and Warm-Up	<ul style="list-style-type: none"> Practice finding combinations that equal 10 	<ul style="list-style-type: none"> Number Cards Ten-frame (Blackline Master 1), optional Counters, optional
Activity	<ul style="list-style-type: none"> Develop spatial skills by filling in outlines with pattern blocks 	<ul style="list-style-type: none"> Paper Pattern blocks
Workbook	<ul style="list-style-type: none"> Develop spatial skills by filling in outlines with pattern blocks 	<ul style="list-style-type: none"> Workbook page 27 Pattern blocks

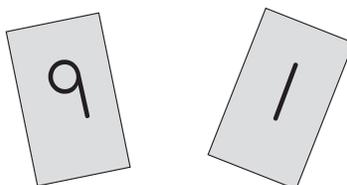
Review and Warm-up: Make 10 Go Fish

Today I'm going to teach you a new game called Make 10 Go Fish. (This game is just like the classic Go Fish game, but players find pairs of cards that equal 10 rather than cards with the same number.)

Shuffle two sets of Number Cards (0–10) together. Deal out 5 cards to yourself and 5 cards to your child. Spread the rest of the cards face down on the table to be the “fish pond.”

When it's your turn, choose one of the cards in your hand. Ask me for the card that would make a 10 with your card. For example, if you have a 9, you would ask for a 1.

If I have the card, I have to give it to you. If I don't have the card, I say, “Go fish!” and you take a card from the fish pond. When you get a match, put the pair of cards on the table in front of you.



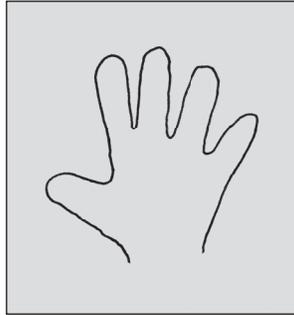
Choose who will go first, and then take turns with your child. Play until all the cards are matched. Whoever has the most pairs at the end wins.

If your child is not sure which card to ask for, have her model the number (from the card in her hand) with counters on the ten-frame. Then, she can look at the empty boxes to figure out which card to request.

Activity: Introduce Outlines

In the last lesson, you copied pattern block designs. Today, you'll use the pattern blocks to complete some pattern block puzzles.

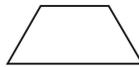
Have your child lay her hand flat on a piece of paper. Trace around the outside of her hand. Then, have her remove her hand and look at the outline.



Here is the *outline* of your hand. It shows the shape and size of your hand. Your hand fits right into it and covers the whole outline.

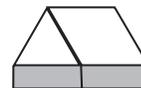
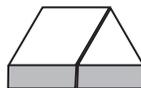
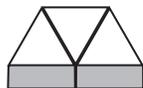
Activity: Fill a Pattern Block Outline Several Ways

Place one (red) trapezoid block on the paper. Have your child trace around the block (or have your child watch as you trace).



Can you use more than 1 pattern block to fill in the outline? *Child fills in outline with pattern blocks.* After she fills the outline, slide the blocks off the page in the same shape. **Can you fill in the outline another way?** *Child fills in outline a different way.* Again, slide the blocks off the page in the same shape so that your child can see both arrangements.

Possible ways to fill the outline:



Workbook (Page 27): Pattern Block Outlines

Have your child use pattern blocks to fill in the outlines on workbook page 27. (Note that your child does not need to write anything on the outlines.) Remind your child as needed that each outline should be entirely covered, with no blocks sticking out beyond the outline. There are many possible ways to complete each outline.

Lesson 9.1

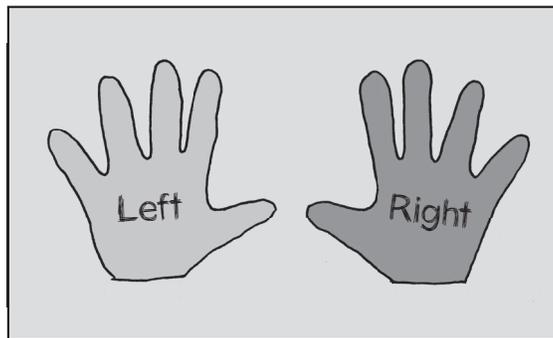
Follow Directions

	Purpose	Materials
Review and Warm-Up	<ul style="list-style-type: none"> Practice identifying left and right 	<ul style="list-style-type: none"> Left/Right Sign (from Lesson 8.4)
Activity	<ul style="list-style-type: none"> Follow directions with <i>forwards</i>, <i>backwards</i>, <i>left</i>, and <i>right</i> 	<ul style="list-style-type: none"> None
Workbook	<ul style="list-style-type: none"> Practice identifying combinations that make 10 	<ul style="list-style-type: none"> Workbook page 33

Review and Warm-up: Play Simon Says

Review left and right with your child. Remind her that her left hand forms an L when placed palm-down on a table. Also show her the Left/Right Sign from Lesson 8.4 and remind her that she colored the right hand red, and the left hand yellow (like a lemon).

Then, play Simon Says with your child (see Lesson 8.4 for full directions). Sometimes begin your directions with “Simon says” and sometimes don’t. Often include “left” or “right” in your directions. As you play, encourage your child to look at the Left/Right Sign from Lesson 8.4 if she can’t remember which side is left and which side is right.



This activity reviews left and right so that your child is prepared to use left and right in the next activity.

Activity: Follow Directions

In the last lesson, you learned the difference between your left and right hands. Today, we’ll use left and right to describe how to move around the room. We’ll also use *forward* and *backward* to describe moving.

Find an open space in your home where your child can take several steps in any direction. **First, we'll practice following directions and then we'll play a game. Listen closely to my directions so you know what to do.** Help your child as needed to determine right and left, and modify the directions as needed to suit your space.

- **Take 2 steps forward.** *Child takes 2 steps forward.*
- **Take 2 steps backward.** *Child takes 2 steps backward.*
- **Take 3 steps backward.** *Child takes 3 steps backward.*
- **Take 0 steps forward.** *Child stays still.*
- **Turn left.** *Child makes a quarter-turn to the left.* If your child isn't sure how far to turn, stand next to her and demonstrate.
- **Take 1 step forward.** *Child takes 1 step forward.*
- **Turn right.** *Child makes a quarter-turn to the right.*
- **Take 2 steps forward.** *Child takes 2 steps forward.*
- **Turn right.** *Child makes a quarter-turn to the right.*
- **Take 3 steps forward.** *Child takes 3 steps forward.*
- **Turn left.** *Child makes a quarter-turn to the left.*
- **Take 3 steps backward.** *Child takes 3 steps backward.*

Activity: Follow Directions to the Secret Object

I'm going to choose something in the room and give you directions for how to get to it. See if you can figure out which object I choose!

Secretly choose an item in the room. Give your child directions (like the ones in the previous activity) that guide her to the secret object. Once your child arrives, have her guess which object you chose.

If needed, give your child additional clues about the object to make it easier for her to guess. For example: **My object is long and thin, and it's yellow. We use it to write. A pencil!**

Sample directions: **Take 3 steps forward. Turn left. Take 2 steps forward. Turn right. Take 1 step backwards. You've arrived! Can you guess which object I chose?**

Repeat this activity several times, choosing a different secret object each time. Then, switch roles: have your child choose a secret object and direct you to it.

Workbook (Page 33): Review Combinations that Make 10

Have your child complete workbook page 33.

From this point onward, the number tracing exercises at the top of each worksheet will no longer include a starting dot to tell your child where to begin writing. This is so that she becomes more confident at writing the numbers without extra scaffolding. However, if you find that your child has trouble remembering where to begin each number, you can pencil in the starting dots as needed.

Week 12

Compare Numbers to 10

Overview

This week, your child will learn how to use words like *more*, *fewer*, *equal*, *greater than*, and *less than* to compare numbers up to 10. He'll begin by comparing concrete objects and will gradually progress to comparing written numerals.

- Lesson 12.1 *More, Fewer, and Equal*
- Lesson 12.2 Compare Tally Marks
- Lesson 12.3 Compare on the Ten-Frame
- Lesson 12.4 Compare Written Numerals

Teaching Math with Confidence: 3 Stages of Comparing

In Week 11, you taught your child to compare heights, lengths, and amounts of water without reference to numbers. This week, you will teach your child to make numerical comparisons.

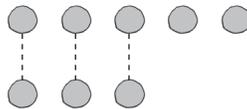
Children typically go through 3 stages as they learn to compare numbers:

- Stage 1: Visual estimation. In this stage, children decide which group has more based on which group looks bigger.



The pile on the right looks bigger, so it must have more.

- Stage 2: One-to-one matching. As children become more sophisticated comparers, they line up items and match them one-to-one to determine which group has more.



Comparing 5 and 3 counters by matching one-to-one

- Stage 3: Numerical reasoning. Finally, children use their knowledge of the number sequence to determine which group has more. They realize that numbers that come later in the counting sequence are greater than numbers that come earlier in the counting sequence. For example, *I know that 9 is more than 7 because 7 comes before 9.*

This week's lessons will help your child progress through these stages so that he can use numerical reasoning to make comparisons. (If your child is already at stage 3, you may want to combine Lesson 12.1 and 12.2 into a quick review lesson.)

Household Items Needed for Week 12

- About 10 crayons

Weaving Math into Everyday Life

Your child will learn how to compare numbers this week. Look for opportunities for him to make real-life comparisons: **Which plate has fewer crackers? Can you make a tower with an equal number of blocks? Which soccer team got more goals?**

Math Book of the Week

Albert Keeps Score, by Daphne Skinner. Illustrated by Deborah Melmon. Kane Press, 2012.

This book provides a wonderful variety of examples of what *equal* means in children's real lives. In the book, little brother Albert anxiously makes sure that he and his sister receive equal treatment: If she checks out 4 library books, he checks out 4 library books. If she gets to invite 3 friends to a tea party, he gets to invite 3 friends to his own tea party. The ending has a sweet twist as Albert realizes that perhaps not all things in life must be equal.

Boxes in the lower right-hand corners of the pages keep track of what each sibling received on the page. As you read, discuss the score-keeping boxes and how they relate to the story and illustrations.

Lesson 12.1

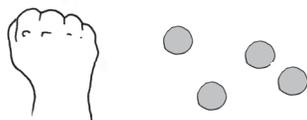
More, Fewer, and Equal

	Purpose	Materials
Review and Warm-Up	<ul style="list-style-type: none"> Find combinations that equal 5 	<ul style="list-style-type: none"> Counters
Activities	<ul style="list-style-type: none"> Understand what <i>more</i>, <i>fewer</i>, and <i>equal</i> mean Compare sets with up to 5 objects 	<ul style="list-style-type: none"> About 10 crayons
Workbook	<ul style="list-style-type: none"> Compare sets with up to 5 objects 	<ul style="list-style-type: none"> Workbook page 45

See the Week 12 **Teaching Math with Confidence** (page 155) for details on the 3 stages that children typically go through as they learn to compare. If your child is already at stage 3, you may want to combine Lessons 12.1 and 12.2 into a quick review lesson.

Review and Warm-up: Hidden Counters to 5

Show your child 5 counters. **How many counters are there?** 5. Hide 1 counter under your palm. **How many counters are hidden?** 1. **How many can you see?** 4.

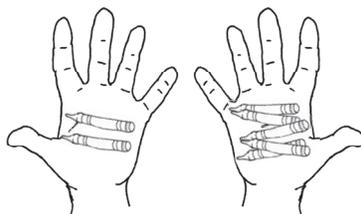


Continue in the same way, hiding different numbers of counters each time. Occasionally hide all (or none) of the counters to give your child practice with zero as well.

Activity: More, Fewer, and Equal with Crayons

You have been learning about shapes and patterns for the past few weeks. Today, we'll begin a unit that focuses on numbers again.

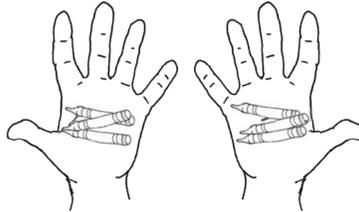
Hold 2 crayons in one hand and 5 crayons in the other hand. **How many crayons do I have in each hand?** 2 and 5.



Which hand has more crayons? Child points to the hand with 5 crayons. **Which hand has fewer crayons?** Child points to the hand with 2 crayons.

Children often are more comfortable using the word *more* than using the word *fewer*. Just as in Week 11, you can help your child become more comfortable with *fewer* by asking her to describe comparisons in both directions: “My cup has more counters than yours. Your cup has fewer counters than mine.”

Hold 3 crayons in each hand. **Which hand has more crayons?** Possible answer: Both hands have the same number! Both hands have an equal number of crayons.



Repeat this activity with the following numbers of crayons:

- 4 and 1
- 0 and 3
- 2 and 2
- 5 and 4

Then, switch roles with your child. Have her hold a few crayons in each hand and ask you which hand has more crayons and which hand has fewer crayons.

English has two different pairs of words for comparing quantities. *Fewer* and *more* are used for individual, countable objects: I have fewer toy cars than you do. You have more gumballs than I do. *Less* and *more* are used to compare quantities that can't be counted: There's less juice in my glass than in yours. Your bucket has more sand than mine.

In everyday use, though, people often use *less* for both kinds of comparisons, and you may find that your child does the same. During your lessons, focus on helping your child understand the underlying concept of comparing quantities without worrying too much about the grammar!

Workbook (Page 45): Which Group Has Fewer?

Have your child complete workbook page 45.

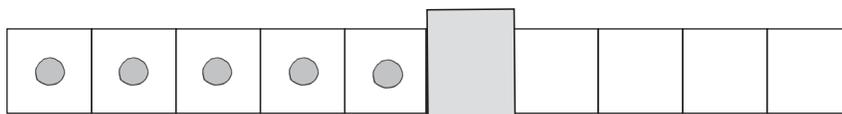
Lesson 12.2

Compare Tally Marks

	Purpose	Materials
Review and Warm-Up	<ul style="list-style-type: none"> Find combinations that equal 6 	<ul style="list-style-type: none"> Counters Ten-frames (Blackline Master 1) Index card or slip of paper
Activities	<ul style="list-style-type: none"> Introduce tallies Compare sets of tallies 	<ul style="list-style-type: none"> Coin with heads and tails Paper
Workbook	<ul style="list-style-type: none"> Draw equal sets of tallies 	<ul style="list-style-type: none"> Workbook page 46

Review and Warm-up: Hidden Counters to 6

Place 6 counters on the ten-frame. **How many counters are there?** 6. With an index card, cover the right-most counter. **How many counters can you see?** 5. **How many are hidden?** 1.



Continue in the same way, hiding different numbers of counters each time. Occasionally hide all (or none) of the counters to give your child practice with zero as well.

Activity: Keep Score with Tally Marks

In the last lesson, you learned about the words *more*, *fewer*, and *equal*. Today, you'll use these words to describe our scores in a game.

To play, we'll take turns flipping a coin. You get a point if you flip the coin and it shows heads. Whoever gets 5 points first wins the game.

If your child doesn't know the difference between heads and tails, show your child the two sides of the coin. To prepare for the game, turn the coin over a few times and ask your child whether heads or tails is showing.

We'll use tallies to keep score. Each time one of us gets a point, I'll write a tally to keep track.

Take turns flipping the coin with your child, marking a tally for each point. As you play, ask your child to tell who has more points and who has fewer points. (For example, **I have 3 points, and you have 4 points. Who has more points? Who has fewer points?**) When one of you reaches five points, draw the fifth tally horizontally so that your finished score sheet looks something like this:



Have your child look at the final score sheet. **How many points did we each get? Who got more points? Who got fewer points?** *Answers will vary.*

Play the game again. This time, have your child draw the tallies to keep score. Guide him as needed and remind him to draw the fifth tally horizontally across the other four tallies.

Your child will continue to use tallies throughout kindergarten. Later this year, he will learn to use tallies to represent numbers greater than 5. Because tallies are arranged in groups of 5, they provide another way to reinforce the numbers 6 to 10 as combinations of “5 and some more.”

Workbook (Page 46): Equal Tallies

Have your child complete workbook page 46. For the group of 5 tallies, remind him to draw the 4 vertical tallies first and then draw the fifth tally horizontally across the other tallies.

Lesson 12.3

Compare on the Ten-Frame

	Purpose	Materials
Review and Warm-Up	<ul style="list-style-type: none"> Practice drawing up to 5 tallies Review the concept of equality 	<ul style="list-style-type: none"> Paper
Activities	<ul style="list-style-type: none"> Use ten-frames to compare numbers greater than 5 Compare numbers in real-life problems 	<ul style="list-style-type: none"> Counters Double ten-frames (Blackline Master 4)
Workbook	<ul style="list-style-type: none"> Use ten-frames to compare numbers greater than 5 	<ul style="list-style-type: none"> Workbook page 47

You will begin using Blackline Master 4 (with 2 ten-frames) in this lesson. You will use Blackline Master 4 frequently, so you may want to laminate it or put it in a plastic page protector for durability.



Review and Warm-up: Equal Numbers of Tallies

Draw 3 tallies on a piece of paper. Can you draw an equal number of tallies? *Child draws 3 tallies.* How many tallies did you draw? 3.



Repeat with groups of 1, 2, 4, and 5 tallies. For the group of 5, make sure to draw the fifth tally horizontally across the other 4 tallies.

Activity: Compare with Ten-Frames

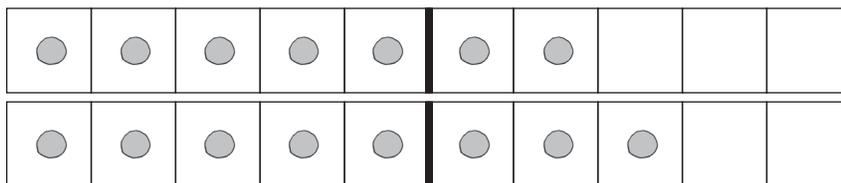
In the last lesson, you compared numbers by using tallies. Today, you'll learn how to use ten-frames to compare numbers.

Place two small handfuls of counters (with 6-10 counters in each handful) on the table.



It can be hard to tell which pile has more counters when there are so many. Which group do you think has more counters? Why? *Sample answer: I think that one has more counters because it looks bigger.*

We can use ten-frames to help us check our answers. Since we have 2 different groups to compare, we'll use 2 ten-frames. Show your child Blackline Master 4. Have your child help you arrange one pile of counters on the top ten-frame and the other pile on the bottom ten-frame.



Now it's easier to tell how many are in each group. How many counters are on each ten-frame? *Sample answer: 7 counters on the top and 8 counters on the bottom.* Which group has more counters? *Sample answer: The bottom ten-frame with 8 counters.*

Repeat with 2 more handfuls of 6-10 counters each.

Many kindergartners are still learning that the size of a set does not change depending on how much space is between the counters. Using two ten-frames to line up the counters ensures that all of the counters are equally spaced.

Activity: Real-Life Comparisons

Ask your child each of the following comparison word problems. If your child is unsure of an answer, have her represent the numbers in the question with counters on the ten-frames. (For example, for the first story, she can put 7 counters on the top ten-frame and 9 counters on the bottom ten-frame to see that 9 is more than 7.)

- Cora checked out 7 books from the library, and Jayden checked out 9. Who checked out more books? *Jayden.*
- Alex picked 8 dandelions, and Laura picked 6 dandelions. Who picked more dandelions? *Alex.*
- Lydia scored 10 baskets, and Solomon scored 7 baskets. Who scored fewer baskets? *Solomon.*
- Sarah used 5 stickers on her craft, and Jacob used 8 stickers. Who used fewer stickers? *Sarah.*
- Elizabeth collected 8 leaves on the nature walk, and Henry collected 8 leaves. Who collected more leaves? *They both collected an equal number.*

Children often love it if their word problems are about people they know. Feel free to change the names in these word problems (or any of the word problems in this book) to the names of your child's family members or friends.

Workbook (Page 47): Compare with Ten-Frames

Have your child complete workbook page 47.

Lesson 12.4

Compare Written Numerals

	Purpose	Materials
Review and Warm-Up	<ul style="list-style-type: none"> Practice counting forward from numbers other than 1 or 0 	<ul style="list-style-type: none"> Number Cards
Activities	<ul style="list-style-type: none"> Introduce the terms <i>greater than</i> and <i>less than</i> Compare written numerals to 10 	<ul style="list-style-type: none"> Number Cards Counters Double ten-frames (Blackline Master 4)
Workbook	<ul style="list-style-type: none"> Compare written numerals to 10 	<ul style="list-style-type: none"> Workbook page 48 Counters, optional Ten-frames (Blackline Master 4), optional

In English, we use *more* and *fewer* (or *less*) to compare quantities. But when we compare numbers on their own (without reference to any objects), we use the terms *greater than* or *less than*. (For example, 3 is greater than 2. 2 is less than 3.) You'll introduce these terms to your child today as you compare written numerals in a card game.

Note that you will not introduce the symbols for these words (< and >). Since most kindergartners are still learning to write letters in the correct direction and identify left and right, they tend to find these symbols confusing. Instead, focus on teaching your child to understand and use the terms when describing number relationships orally.

Review and Warm-up: Count Forward

Mix up 1 set of Number Cards (0-10) and spread them out face up on the table. Have your child put the numbers in order, starting with 0 and placing the cards from left to right.

When we count, we usually start at 1, but sometimes it's helpful to be able to start counting at other numbers. Can you count from 3 to 10? 3, 4, 5, 6, 7, 8, 9, 10.

Can you count from 5 to 10? 5, 6, 7, 8, 9, 10.

Can you count from 8 to 10? 8, 9, 10.

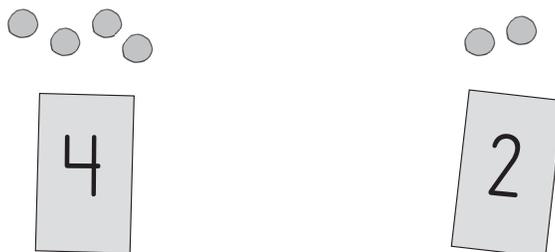
If your child finds this difficult, have her point to each number card as she counts.

This activity previews the "counting on" that your child will do in Week 14 when he answers questions like, "What number is 2 more than 6?" (One way a child might find the answer is by counting on from 6: 6, 7, 8. So, 8 is 2 more than 6.)

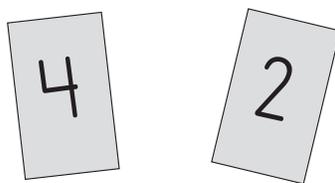
Activity: Introduce *Greater Than* and *Less Than*

You've been learning to compare groups with words like *more*, *fewer*, and *equal*. Today, you'll learn some new words for comparing numbers: *greater than* and *less than*.

Show your child a group of 4 counters and a group of 2 counters. **Which group has more counters? Which group has fewer counters?** *Child points to the correct group.* Have your child place the matching number card next to each group.



When we compare groups of counters, we use the words *more* and *fewer*. But when we talk about plain numbers, we use the words *greater than* and *less than*. Take away the counters, leaving just the Number Cards. **4 is greater than 2, and 2 is less than 4.**



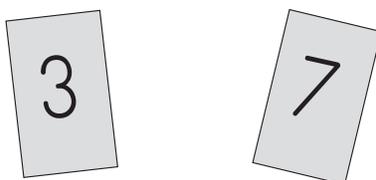
Show your child the following pairs of Number Cards. Have him compare the numbers using the terms *greater than* and *less than*. If your child isn't sure about an answer, have him model each number with counters on the ten-frames.

- 3 and 5. 3 is less than 5. *5 is greater than 3.*
- 10 and 2. 2 is less than 10. *10 is greater than 2.*
- 6 and 9. 6 is less than 9. *9 is greater than 6.*

Activity: Play War Card Game

We're going to play a card game called **War** today. Shuffle 2 sets of Number Cards (0-10) and deal the cards face down in two piles.

To play, take turns flipping over the top card in your pile. Have your child tell which card is greater. Whoever has the greater number wins both cards. If the cards are equal, both of you flip over another card and play again. For example, if you turn over a 3 and your child turns over a 7, your child wins both cards because 7 is greater than 3.



As you play, encourage your child to use the words *greater than* and *less than*. Model using the words correctly yourself. Play until both you and your child have played all the cards in your piles. The player with more cards wins the game.

If your child is ever unsure of which number is greater, have him represent each number with counters on ten-frames and compare.

Workbook (Page 48): Compare Numbers

Have your child complete workbook page 48. Have your child represent each number with counters on the ten-frame if he isn't sure which number is greater.

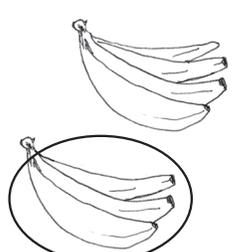
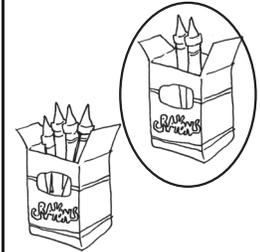
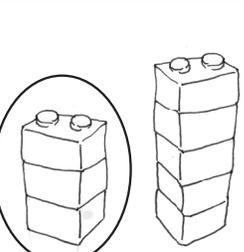
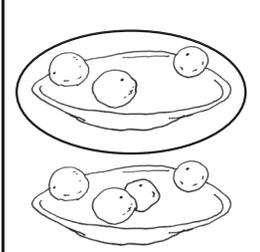
Week 12 Answer Key

Lesson 12.1

Trace.

1
2
3
4
5

Circle the group that has fewer.

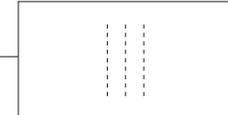
	
	

Lesson 12.2

Trace.

6
7
8
9
10

Draw an equal amount of tallies.

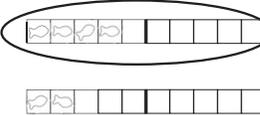
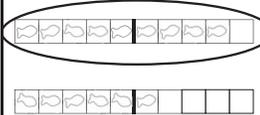
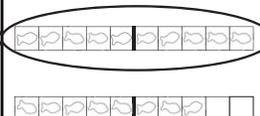
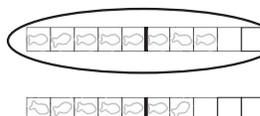
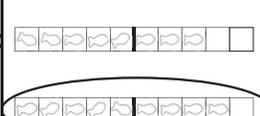
	
	
	
	

Lesson 12.3

Trace.

1
2
3
4
5

Circle the ten-frame that has more.

Lesson 12.4

Trace.

6
7
8
9
10

Circle the number that is greater.

4	8	5	0
3	7	8	6
10	9	8	9

Lesson 15.4

Equations

	Purpose	Materials
Review and Warm-Up	<ul style="list-style-type: none"> Practice finding combinations that make 10 	<ul style="list-style-type: none"> Number Cards
Activities	<ul style="list-style-type: none"> Introduce the term <i>equation</i> Create equations to match concrete objects Introduce the idea that you can add numbers in any order (for example, that $3 + 2$ equals $2 + 3$) 	<ul style="list-style-type: none"> Pattern blocks Plastic plate or piece of paper Number Cards
Workbook	<ul style="list-style-type: none"> Solve simple addition problems 	<ul style="list-style-type: none"> Workbook page 60

Review and Warm-up: Play Make 10 Memory

Play Make 10 Memory. See Lesson 4.4 for full directions.

Activity: Introduce Equations

In the last lesson, you used your fingers to act out addition problems. Lay the Number Cards in front of your child as shown.

$$\boxed{4} \quad \boxed{+} \quad \boxed{2} \quad \boxed{=} \quad \boxed{6}$$

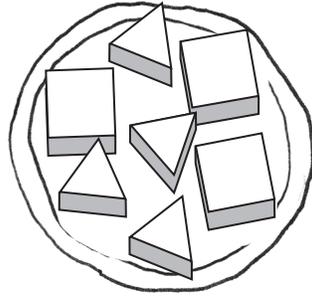
Use your fingers to show me what 4 plus 2 equals 6 means. Child holds up 4 fingers on one hand and 2 fingers on the other hand. Sample answer: 4 and 2 make 6.

4 plus 2 equals 6 is called an equation. Do you hear how the word equation starts like the word equals? That's because equations tell that two amounts are equal to each other. Equations always have an equals sign. This equation shows that 4 plus 2 equals 6.

Your child does not need to master the term *equation*, although it will be used throughout the book for clarity.

Activity: Create Equations

We're going to play restaurant today. Let's pretend that the pattern blocks are crackers. I'll be a customer at the restaurant, and you can be the server. Could you please serve me 4 triangle crackers and 3 square crackers? *Child places 4 triangles and 3 squares on a plastic plate (or blank piece of paper) and pretends to serve it to you.*



How many triangle crackers did you serve me? 4. How many square crackers? 3. How many crackers are there all together on my plate? 7.

Let's make an equation to show how you joined the two groups. Place the Number Cards as shown below.

$$4 + 3 = 7$$

Ask the following questions about the equation:

- What does the 4 stand for? (4 triangle crackers)
- What does the 3 stand for? (3 square crackers)
- What does the 7 stand for? (7 crackers all together)
- What does the plus sign mean? (Joining the group of 4 and the group of 3.)
- What does the equals sign mean? (It means $4 + 3$ is the same as 7.)

There's another way to show this plate of crackers with numbers and signs, too. Switch the positions of the 3-card and the 4-card.

$$3 + 4 = 7$$

The 3 still stands for the 3 square crackers, and the 4 still stands for the 4 triangle crackers. We're just adding them together in a different order.

This discussion is meant only as an introduction to the fact that we can add numbers in any order without changing the result (also known as the commutative property of addition). Your child does not need to fully understand why $3 + 4$ equals $4 + 3$ at this point.

Play restaurant some more. Order the following amounts of “crackers” and ask your child to “serve” them to you. For each plateful, have her use Number Cards to create a corresponding addition equation.

- 5 triangles and 1 square ($5+1=6$ or $1+5=6$)
- 3 triangles and 5 squares ($3+5=8$ or $5+3=8$)
- 4 triangles and 4 squares ($4+4=8$)

Workbook (Page 60): Addition

Have your child complete workbook page 60.

Lesson 18.4

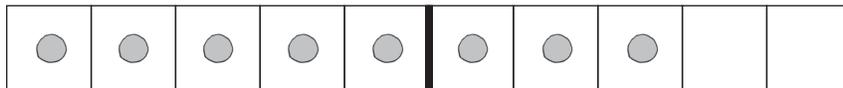
Count out up to 20 Objects

	Purpose	Materials
Review and Warm-Up	<ul style="list-style-type: none"> Practice identifying up to 10 counters on the ten-frame by sight 	<ul style="list-style-type: none"> Counters Ten-frame (Blackline Master 1) Paper
Activities	<ul style="list-style-type: none"> Practice counting forward and backward to 20 Count out up to 20 objects 	<ul style="list-style-type: none"> Counters
Workbook	<ul style="list-style-type: none"> Draw a given number of shapes 	<ul style="list-style-type: none"> Workbook page 72

In this lesson, you will ask your child to count out a given quantity of counters. To do this, he has to keep the target number in mind and stop after each number to consider whether he's reached the target number. As a result, children usually find this more difficult than counting the objects in an already-existing set, as in Lesson 18.3.

Review and Warm-up: Ten-Frame Flash

Secretly place 8 counters on the ten-frame and cover the counters with a piece of paper.



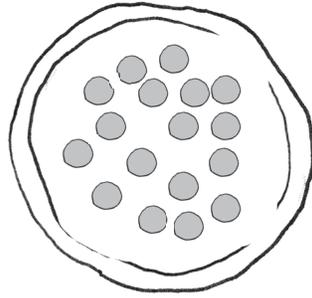
I'm going to show you some counters for just a second. When I lift the paper, tell me how many counters there are, as fast as you can. Lift the piece of paper for just a few seconds. **How many counters?** 8. After your child responds, lift the paper and allow him to check his answer.

Repeat with 5, 6, 7, 9, and 10 counters, in random order. Encourage him to think about the combinations of "5 and some more" or count on from 5 instead of counting each object one-by-one.

Activity: Count Out a Given Quantity

You have been doing lots of counting! Count forward and backward to 20 with your child, gradually standing up as you count forward and gradually crouching down as you count backward.

Today, we're going to play restaurant again. Let's pretend that the counters are cookies. I'll be a customer at the restaurant, and you can be the server. I'm very hungry today! Could you please serve me 17 cookies? *Child counts out 17 counters and pretends to serve them to you. Pretend to eat the cookies.*



Repeat with several other numbers of cookies between 10 and 20.

Activity: Count around the House

Walk around the house and ask your child to count out some groups with 10-20 objects. For example:

- **Make a pile of 16 shoes.**
- **Make a tower with 13 blocks.**
- **Stack up 14 books.**
- **Put 20 crayons in the box.**



If the weather allows, you can do this activity outside instead. Have your child find 18 pebbles, 20 sticks, 13 pine cones, etc.

Workbook (Page 72): Draw a Given Number of Shapes

Have your child complete workbook page 72. Read the directions to your child so that he knows how many circles and Xs to draw in each section of the page. Encourage him to keep his circles and Xs small so that they all fit on the page.

Your child is not expected to be able to read number words like fourteen or twenty on his own.

Week 20

Read and Write Numbers to 20

Overview

This week, your child will begin to write and read numbers from 11 to 20. You will use overlapping Number Cards to help your child understand the connection between the written numerals and the combinations of “10 and some more” that she learned in Week 19.

- Lesson 20.1 Introduce Written Numbers 11-20
- Lesson 20.2 Use Counters to Model Written Numbers
- Lesson 20.3 Read and Write Numbers 11-20
- Lesson 20.4 Play Store with Dimes and Pennies

Teaching Math with Confidence: Why We Don't Introduce Place-Value in Kindergarten

Place-value serves as the organizing principle of our number system. When we write a number, each digit's place determines its value. For example, 41 and 14 both contain the same digits. But they represent different amounts because the 1 and 4 are in different places. In 41, the 4 has a value of 40 because it is in the tens-place. In 14, the 4 has a value of only 4 because it is in the ones-place.



Most kindergartners are not developmentally ready to tackle this difficult concept head-on. Here's why:

1. Kindergartners tend to be concrete thinkers. In their everyday experiences, objects' meanings stay the same regardless of their location. (For example, a toy truck remains a toy truck whether it's in the family room or the laundry hamper.) As a result, kindergartners often struggle to understand why a digit's value changes based on its position.
2. Kindergartners are still learning to tell right from left, so they can't consistently remember which place is the tens-place and which place is the ones-place (not to mention the hundreds- or thousands-place!)
3. To understand place-value, children must learn to regard 10 objects as both “10 ones” and as “1 ten.” This requires mental flexibility that many kindergartners have not developed yet.

Teaching place-value in kindergarten often leads to tears and frustration. Instead, you'll keep emphasizing the combinations of "10 and some more" as you teach your child to read and write numbers to 20. Later, in Unit 9, your child will learn to count to 100 by 1s, 5s, and 10s. With this developmentally-appropriate foundation, your child will be well-prepared to understand place-value on a more abstract level in first grade.

Household Items Needed for Week 20

- 5 small toys or household items for a pretend store

Also, make sure your Math Kit has 20 pennies, 10 nickels, and 10 dimes for this week's lessons.

Weaving Math into Everyday Life

If your child knows some teenagers, talk about how old they are and have your child help you write down their ages: **Our next-door neighbor, Anna, is 13 years old. How would we write her age? 13.**

Math Book of the Week

Tally Cat Keeps Track, by Trudy Harris and illustrated by Andrew N. Harris. Millbrook Press, 2010.

This book tells of a competitive alley cat who loves to use tally marks to compare himself with his friends. As you read the book, talk with your child about how the tallies match the numbers in the story.

Lesson 20.4

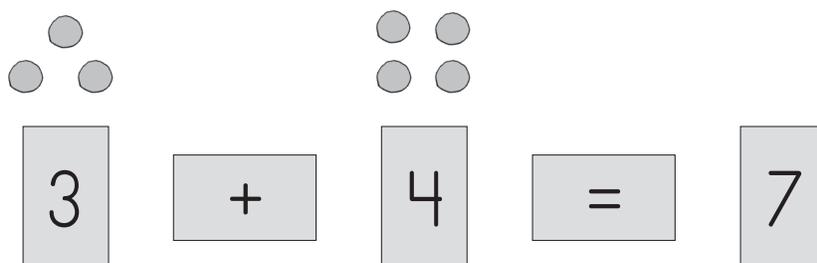
Play Store with Dimes and Pennies

	Purpose	Materials
Review and Warm-Up	<ul style="list-style-type: none"> Use counters to model addition equations 	<ul style="list-style-type: none"> Number Cards Counters of 2 different colors Double ten-frames (Blackline Master 4)
Activities	<ul style="list-style-type: none"> Practice chanting combinations of “10 and some more” from 11 to 20 Read numbers 11-20 Create combinations of dimes and pennies from 11¢ to 20¢ 	<ul style="list-style-type: none"> Coins 5 small toys or household items for a pretend store Number Cards
Workbook	<ul style="list-style-type: none"> Write numbers up to 20 	<ul style="list-style-type: none"> Workbook page 80 Number Examples, Blackline Master 5

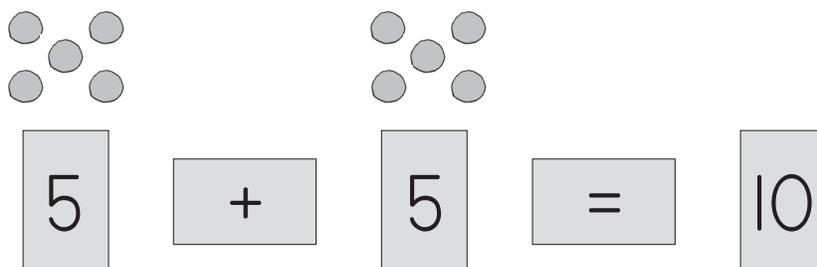
Review and Warm-up: Addition Word Problems

Read the following word problems to your child. Have your child model each problem with counters on the ten-frame and create a matching equation from Number Cards, as shown.

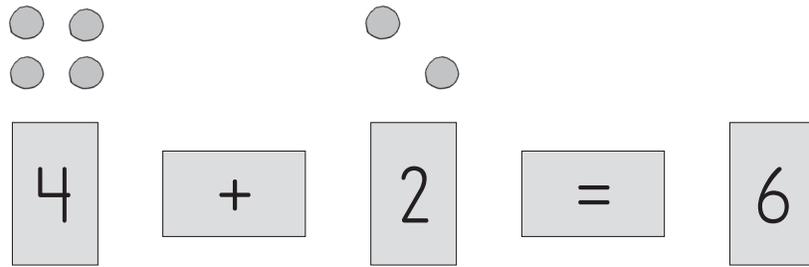
- 3 chipmunks were playing in the leaves. Then, 4 more chipmunks came to play. How many chipmunks were playing in all? 7.**



- A mother bird started to build her nest. First, she brought 5 sticks. Then she brought 5 more sticks. How many sticks did she have then? 10.**



- Zoe caught 4 tadpoles. Then, she caught 2 more tadpoles. How many tadpoles did she have then? 6.



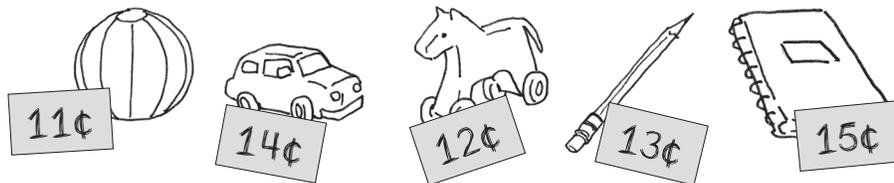
Activity: “10 and Some More” Chant with Number Cards

In the last lesson, you learned how to write the numbers from 11 to 20. Place Number Cards 11-20 on the table. Have your child help you put the cards in order from 11 to 20.

Rhythmically say the “10 and Some More” Chant with your child. Have your child point to the matching card as he chants each number, as shown below. Chant in this way from 11 up to 20 and then back down again to 11.

Activity: Play Store with Dimes and Pennies

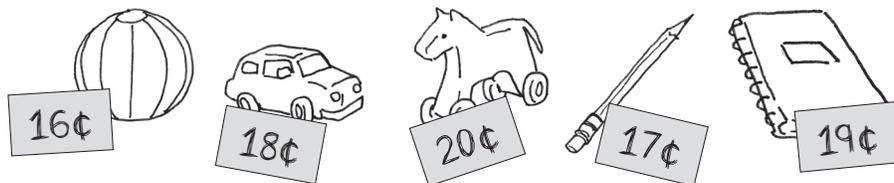
Today, we’ll use dimes and pennies to play store. Set up a pretend store by laying five small toys in a row. Give each item a price by laying a Number Card (from 11 to 15) in front of it. Give your child some dimes and pennies to use to “buy” things.



At this store, there are five different things you can buy with your dimes and pennies. What would you like to buy? *Answers will vary.* After your child chooses, have her tell you the “price” and “pay” for the item with a dime and the correct number of pennies. Continue until your child has bought all of the items.

If your child is not sure which coins to use, encourage him to use the “10 and some more” chant to help. For example, since 10 and 3 equal 13, he can pay for a 13¢ item with a dime (10 cents) and 3 pennies (3 cents).

Then remove the Number Card prices and replace them with Number Cards 16 through 20. Have your child pretend to buy the items again. For the 20¢ item, you may need to remind your child that 2 dimes equal 20 cents.



If your child finds this activity easy, include nickels to increase the challenge level. But if your child has any trouble finding the value of coin combinations, use dimes and pennies only. That way, he only has to remember the value of two kinds of coins.

Workbook (Page 80): Write Numbers in the Teens

Have your child complete workbook page 80. Show your child Blackline Master 5, Number Examples. **You can look at these numbers if you have trouble remembering how to write any of the numbers.**



Keep this page in your math area so your child can refer to it throughout the rest of the year. You can post it on a wall, tape it onto the table where your child usually works, or simply tuck it into the workbook so your child can bring it out as needed. (You may also want to laminate it or place it inside a plastic page protector for durability.)

Up until this point, your child always has traced numbers at the top of the worksheets before writing them at the bottom. (For example, your child first practiced tracing a 4 at the top if he needed to write a 4 in an exercise at the bottom.)

For the rest of the year, your child will continue to practice number tracing each day. However, he will sometimes write numbers at the bottom of the worksheet that he did not trace at the top. This will help him become more proficient and automatic at writing numbers. Many children will still need some help remembering what the numbers look like and which direction they face, so Blackline Master 5 provides a visual model to jog your child's memory if needed.

Lesson 22.2

Pounds (or Kilograms)

	Purpose	Materials
Review and Warm-Up	<ul style="list-style-type: none"> Practice reading written numerals 11-20 Put numbers in order from 11 to 20 and identify missing numbers in the sequence 	<ul style="list-style-type: none"> Number Cards
Activities	<ul style="list-style-type: none"> Introduce pounds (or kilograms) Compare objects' weights to 1 pound (or 1 kilogram) 	<ul style="list-style-type: none"> <i>If you use U.S. customary units:</i> something that weighs about 1 pound, such as a can of vegetables or box of pasta <i>If you use metric units:</i> something that weighs about 1 kilogram, such as a pair of adult shoes or a medium-sized textbook
Workbook	<ul style="list-style-type: none"> Identify heavy and light objects 	<ul style="list-style-type: none"> Workbook page 86

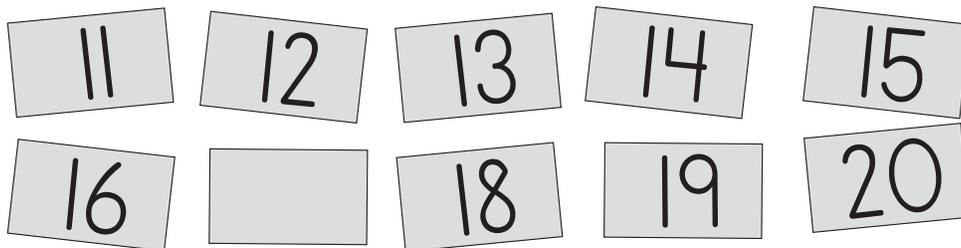
Note for Families that Use the Metric System

To modify this lesson for the metric system:

- use metric equivalents for the U.S. units: *centimeters* instead of *inches*, *meters* instead of *feet*, and *kilograms* instead of *pounds*.
- use a 1-kilogram weight instead of a 1-pound weight.

Review and Warm-up: What's the Missing Number?

Mix up Number Cards 11-20 and spread them out face up on the table. Have your child put the numbers in order from 11 to 20. With your child looking away, turn over one of the cards.



Have him identify the missing number and then flip over the card to check. Repeat with different numbers until your child has practiced identifying all of the cards.

Activity: Introduce Pounds (or Kilograms)

In the last lesson, you compared the weights of different books. Today, you'll learn how we measure weight with pounds.

When we measure length, we use inches and feet. But we can't use inches and feet to measure how heavy something is! To measure weight, we use pounds. Have your child place one hand palm up in front of him and place a 1-pound weight in his hand. (See Materials for suggestions for 1-pound weights.) **This is 1 pound. Does it feel heavy or light to you?** *Answers will vary.*



Tell your child his weight in pounds and explain how that weight relates to the 1-pound weight. For example: **You weigh 47 pounds. That means you weigh the same as 47 of these 1-pound weights!**

Your child may also be interested in knowing how much he weighed when he was born.

Activity: Pounds (or Kilograms) Scavenger Hunt

Now, we're going to go on a scavenger hunt. This scavenger hunt has 3 parts.

First, find 3 things in the house that weigh less than a pound. *Sample answers: toy car, small stuffed animal, paperback book.* Have your child compare each object with the 1-pound weight by holding the weight in one hand and the object in the other hand.

Second, find 3 things in the house that weigh about the same as a pound. *Sample answers: loaf of bread, package of butter, soccer ball.* Again, have your child compare each object to the 1-pound weight to confirm that each object is about a pound.

Third, find 3 things in the house that weigh more than a pound. *Sample answers: chair, bed, table.* If possible, have your child compare these objects to the 1-pound weight. It's fine if most of them are too large to hold!

Using our hands to compare weights is a very imprecise method, so don't worry if your child isn't entirely accurate in comparing the weights or if you disagree with his conclusions. What's most important is that your child understands that heavier objects "push down" on his hands more, and that weight can be measured and compared like length.

Workbook (Page 86): Identify Heavy and Light Items

Have your child complete workbook page 86. Since heavy and light are relative terms, your child may interpret *heavy* and *light* on the page however he wishes. If he can't think of anything to draw, encourage him to draw objects that he found during the scavenger hunt activity.

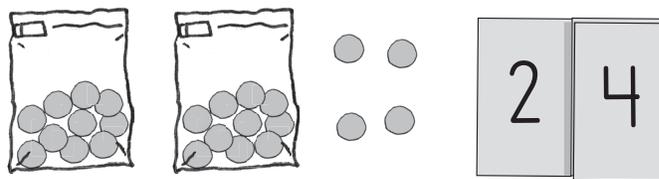
Lesson 27.3

Read Numbers 31-50

	Purpose	Materials
Review and Warm-Up	<ul style="list-style-type: none"> Practice identifying combinations of “20 and some more” 	<ul style="list-style-type: none"> Counters (organized into 5 bags of 10 in Lesson 27.2, plus 10 additional loose counters) Number Cards
Activities	<ul style="list-style-type: none"> Practice counting by 10s to 50 Introduce written numbers from 31 to 50 	<ul style="list-style-type: none"> Counters (organized into 5 bags of 10 in Lesson 27.2, plus 10 additional loose counters) Number Cards
Workbook	<ul style="list-style-type: none"> Recognize quantities up to 30 	<ul style="list-style-type: none"> Workbook page 107 Number Cards, optional

Review and Warm-up: Identify Combinations of “20 and Some More”

In the last lesson, we pretended that the counters were chocolates. We put 10 chocolates in each bag. Place 2 bags (each containing 10 counters, from Lesson 27.2) and 4 loose counters on the table. **How many chocolates do we have here?** 24. Then have your child construct the quantity by overlapping Number Cards.



If your child isn't sure how many counters there are, or starts counting by 1s, point out that there are 20 chocolates in the 2 bags and 4 more loose chocolates. So there must be 24, since 20 and 4 make 24.

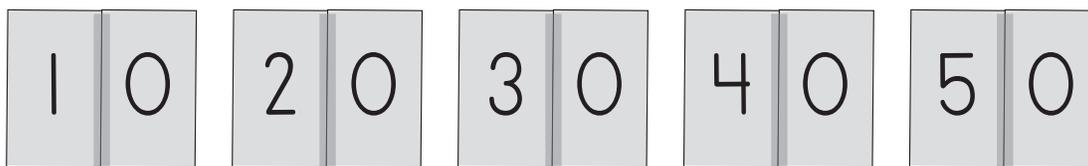
Repeat with 27 (2 bags plus 7 loose counters), 21 (2 bags plus 1 loose counter), and 25 (2 bags plus 5 loose counters).

Reviewing these combinations of “20 and some more” prepares your child to use similar reasoning for larger quantities later in the lesson.

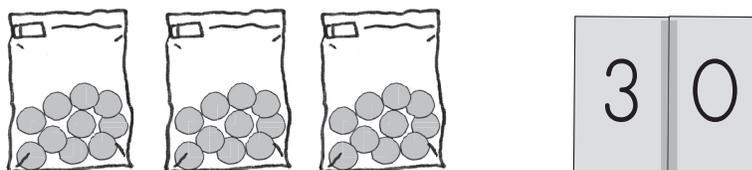
Activity: Practice Counting by 10s

In the last lesson, you learned to count to 50 by 10s. Count by 10s to 50 in unison with your child. Have your child point to each number on the 100 Chart as you say it.

Place the oversized two-digit Number Cards on the table (10, 20, 30, 40, and 50). Have your child place them in order, and then practice counting by 10 as she points to each card.



Show your child 3 bags (with 10 counters each). **How many chocolates are in these bags?** 30. If your child is not sure or tries to count the counters by 1s, encourage her to count by 10s: 10, 20, 30. Have your child find the 30 card and place it next to the bags.

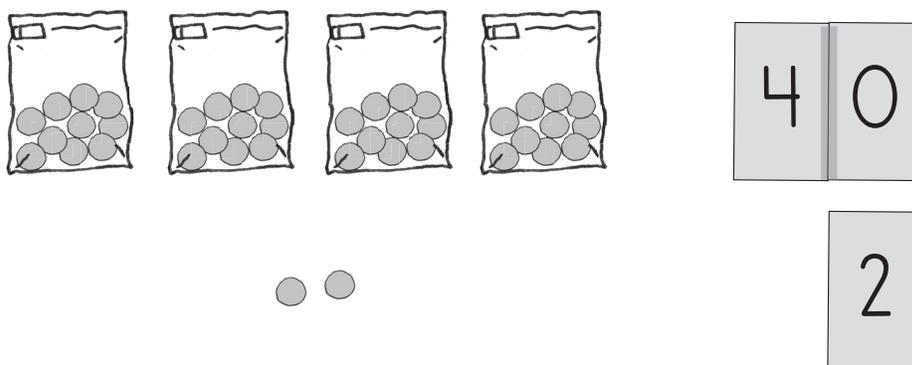


Repeat with 2, 5, 1, and 4 bags. Have your child tell the total number of counters in the bags and find the matching Number Card each time.

Activity: Introduce Written Numbers to 50

Today, you'll learn how to read the numbers from 31 to 50. We'll use the Number Cards to help.

Place 4 bags and 2 loose counters on the table as shown below. **How many counters are in the 4 bags?** 40. Have your child place the oversized 40-card below the bags. **How many loose counters are there?** 2. Have your child place the 2-card below the 2 loose counters.



So how many counters are there in all? 42. Overlap the Number Cards so that the 2 is directly on top of the 0 in the oversized 40-card. **This is number 42.** Have your child find 42 on the 100 Chart.

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50

Repeat this process with 35, 48, 39, and 41.

Then, reverse the activity. Point to number 34 on the 100 Chart. Have your child make 34 with Number Cards, name the number, and then arrange bags and loose counters to match.

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50

Repeat with 45, 40, and 27.

Your child is not expected to master reading and writing numbers beyond 30. Exposing your child to the numbers from 31 to 100 will help her become more aware of these numbers in daily life and help her begin to read them. She will learn to read and write all the numbers to 100 in first grade.

Workbook (Page 107): Recognize Quantities to 30

Have your child complete workbook page 107. If your child forgets how to write any of the numbers (or reverses the digits) have her create the number with overlapping Number Cards before writing the number on the page.

Lesson 29.3

Days of the Month

	Purpose	Materials
Review and Warm-Up	<ul style="list-style-type: none"> Practice reading and writing numbers up to 31 	<ul style="list-style-type: none"> Paper
Activities	<ul style="list-style-type: none"> Practice reciting the months in order Learn that the days of each month are numbered Introduce reading the date on a calendar 	<ul style="list-style-type: none"> Month Cards, made in Lesson 29.2 Printed 12-month calendar (January-December) 3 small sticky notes, or 3 small slips of paper and tape
Workbook	<ul style="list-style-type: none"> Complete dates on a monthly calendar 	<ul style="list-style-type: none"> Workbook page 115

Review and Warm-up: Read and Write Numbers to 31

Write 17 on a piece of paper. **What number is this?** 17. Repeat with the following numbers: 7, 27, 30, 19, 12, 25, 22.

Now, I'm going to say a number. Your job is to write it on the paper. Have your child write the following numbers: 4, 24, 14, 20, 21, 31, 11, 13.

This activity prepares your child to read and write dates on a calendar in the rest of the lesson.

Activity: Introduce Days of the Month

In the last two lessons, you learned the names of the months. Mix up the Month Cards on the table and help your child place them in order from January to December.

Have your child say the names of the months in order, pointing to each month as he says it. Then, secretly flip over a few cards and have him figure out which ones you flipped over (as in Lesson 29.2).

Today, you'll learn how to read the date on a calendar. Show your child the current date on a paper monthly calendar. Point to the name of the month on the page. For example: **The month right now is May.** Point to the current day on the calendar and tell your child what the date is. For example: **Today is May 7.**

MAY						
S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

Point to yesterday's date and tomorrow's date and read them to your child. For example: **Yesterday was May 6. Tomorrow is May 8.**

In English, we use both cardinal numbers (like *six*, *twenty-seven*, and *eighteen*) and ordinal numbers (like *first*, *thirteenth*, or *twenty-fifth*) when reading dates. Use whatever is most comfortable to you as you read the dates on the calendar. If you usually use ordinals to name dates, briefly explain these numbers. For example: **Listen to how *twenty-fifth* and *twenty-five* sound very similar. The 25th of the month is the date with a 25 on it.**

What date is your birthday? *Answers will vary.* Find the month with your child's birthday and have her find the date of her birthday on the page.

Flip back to the current month on the calendar. If you have appointments or events written on the calendar, ask your child to point to a few of the dates and then tell her what's happening on that date. For example: **Can you point to May 11? Grandma is coming that day!**

If you don't have any events written on the calendar, simply have your child point to a few of the dates. For example: **Point to May 4. Point to May 25.**

Then, point to a few dates in the current month and ask your child to identify them. **What date is this?** *Sample answer: May 12.*

Activity: Identify Dates

Flip the calendar to the current month. With your child not looking, secretly cover the dates marked with 9, 16, and 27 with a sticky note or small slip of paper. **Can you figure out which dates I covered? 9, 16, and 27.**

MAY						
S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8		10	11
12	13	14	15		17	18
19	20	21	22	23	24	25
26		28	29	30	31	

Encourage your child to use her knowledge of the number sequence to figure out the covered dates. For example: **This date comes after May 8 and before May 10. What number comes between 8 and 10?** Uncover each number as your child names it.

Repeat several times, covering 3 numbers each time.

Workbook (Page 115): Complete Dates on a Calendar

Have your child complete workbook page 115.

Scope and Sequence

Unit	Your child will learn to:
Unit 1 Numbers to 10	<ul style="list-style-type: none">• count and recognize quantities from 0 to 10• read and write the numerals from 0 to 10• identify nickels and pennies and find the value of coin combinations up to 10 cents• find combinations that make 10 (such as 6 and 4)
Unit 2 Shapes	<ul style="list-style-type: none">• sort objects based on attributes such as color, size, and type• identify and describe circles, triangles, rectangles, and squares• create complex designs from basic shapes• identify symmetry and create symmetric designs• identify left and right
Unit 3 Directions and Patterns	<ul style="list-style-type: none">• follow and give directions with words like <i>right</i>, <i>left</i>, <i>forward</i>, <i>backward</i>, <i>above</i>, and <i>below</i>• understand what <i>first</i>, <i>second</i>, <i>third</i>, <i>fourth</i>, and <i>fifth</i> mean• create and extend patterns
Unit 4 Comparing Numbers to 10	<ul style="list-style-type: none">• compare objects' heights and lengths• use <i>greater than</i>, <i>less than</i>, and <i>equal</i> to describe number relationships• put numbers in order from least to greatest or greatest to least• count backwards from 10• identify which number is 1 or 2 more (or 1 or 2 less) than a given number
Unit 5 Addition	<ul style="list-style-type: none">• understand that addition means joining two groups• use the + and = signs• represent addition situations with counters, pictures, and numbers• solve simple addition problems

Unit	Your child will learn to:
Unit 6 Numbers to 20	<ul style="list-style-type: none">• count forwards to 20 and backwards from 20• identify numbers from 11 to 20 as combinations of “10 and some more”• read and write numbers from 11 to 20• identify dimes and find the value of coin combinations up to 20 cents
Unit 7 Measurement	<ul style="list-style-type: none">• understand that objects can be measured in more than one way (for example, by length, height, or weight)• use repeated units to measure length• be familiar with your family’s common units of measure (inches, feet, pounds, cups, and gallons or centimeters, meters, kilograms, and liters)
Unit 8 Subtraction	<ul style="list-style-type: none">• understand that subtraction can mean either taking away items from a group or taking apart a group• use the – and = sign• model subtraction situations with counters, pictures, and numbers• solve simple subtraction problems
Unit 9 Numbers to 100	<ul style="list-style-type: none">• count to 50 by 1s, 2s, 5s, and 10s• count to 100 by 1s, 5s, and 10s• write numbers to 30• begin to read numbers to 100
Unit 10 Time	<ul style="list-style-type: none">• name the days of the week and months of the year• identify a date on a monthly calendar• read time to the hour on a digital clock or a clock with hands

Materials List

What You'll Need in Your Math Kit

You'll use the following materials nearly every day in *Kindergarten Math with Confidence*. Stash them in a box or basket and always keep them ready for your next lesson. (See page 8 in the Introduction for more detailed description of each item.)

- 100 small counters
- Pattern blocks (or Blackline Master 3, colored and cut apart as directed)
- Coins (20 pennies, 20 nickels, 10 dimes)
- 2 packs of 100 blank index cards
- Blank paper
- Pencils

Other Supplies

Beyond your Math Kit, you'll also need the following household items. You'll only need most of them once or twice, so you don't need to gather them ahead of time or store them separately.

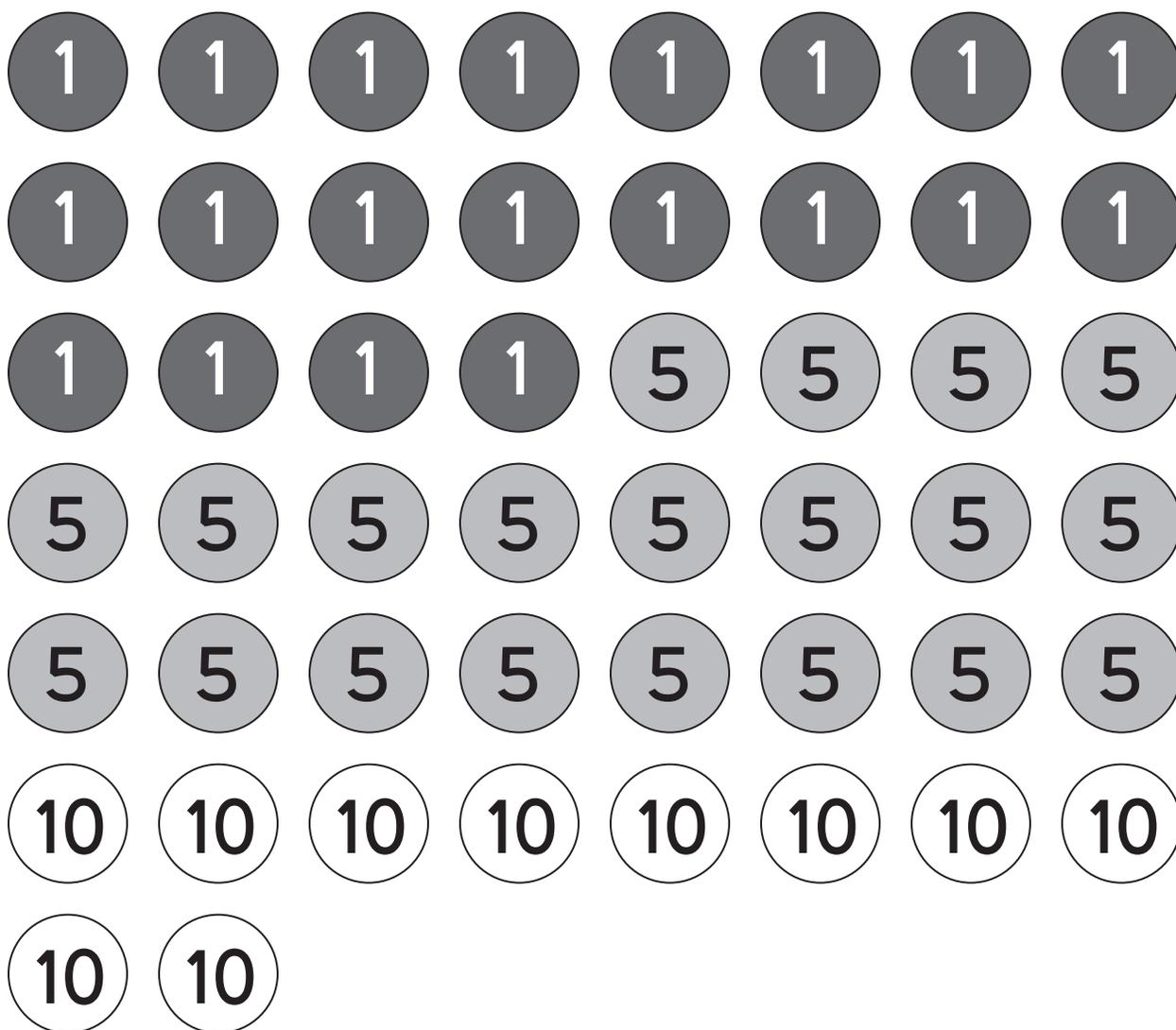
Check the weekly previews for the specific household items you'll need for each week's lessons.

- Scissors
 - Tape
 - Crayons, markers, or colored pencils
 - Construction paper
 - Glue
 - Printed 12-month calendar (January-December)
 - Clock with hands
 - Digital clock
 - Egg carton
 - Pair of shoes
 - About 10 different spoons, with a variety of different materials, sizes, and types
 - Piece of string or yarn, approximately 1 foot long
 - Mirror, preferably full-length
 - 3 different-sized circular lids and 1 rectangular lid
 - 6 small toys for a pretend store
 - 5 books with varying heights
 - 5 books of varying weights (for example: a light picture book, a paperback novel, a hardcover novel, a cookbook, and a heavy textbook)
 - 5 stuffed animals with varying heights
 - Timer (or phone with timer option)
 - 25 straws or narrow strips of paper
 - 20 toothpicks
 - 5 small clear plastic bags or shallow cups
 - 100 small craft items, such as stickers, pompoms, dried beans, beads, or small paper squares
 - 5 "skinny" household items that are less than 10 inches (25.4 cm) long and vary in length (for example, toothpick, pencil, screwdriver, fork, comb)
 - 10 standard-size (1.25-inch or 32 mm) paper clips
 - 4 identical water glasses
 - 4 waterproof containers with different capacities (for example, a small plastic cup, a water bottle, a small bowl, and a large bowl)
 - Pitcher of water
 - Funnel, optional
- If you use U.S. customary units:*
- 1-foot ruler
 - something that weighs about 1 pound, such as a can of vegetables or box of pasta
 - 1-cup measuring cup
- If you use metric units:*
- centimeter cubes or Blackline Master 7 (cut apart as directed)
 - meter ruler or meter-long strip of paper
 - something that weighs about 1 kilogram, such as a pair of adult shoes or a medium-sized textbook
 - 1-liter measuring cup

Play Money for Families Outside the US (Blackline Master 2)

You do not need these if you use American coins. If you live outside the U.S. and your local currency does not come in units of 1, 5, and 10, you can use these generic coins in place of American coins in the lessons. (See page 25 for more details on how to substitute other options for coins.)

Directions: Copy this page on sturdy paper and cut out the coins.

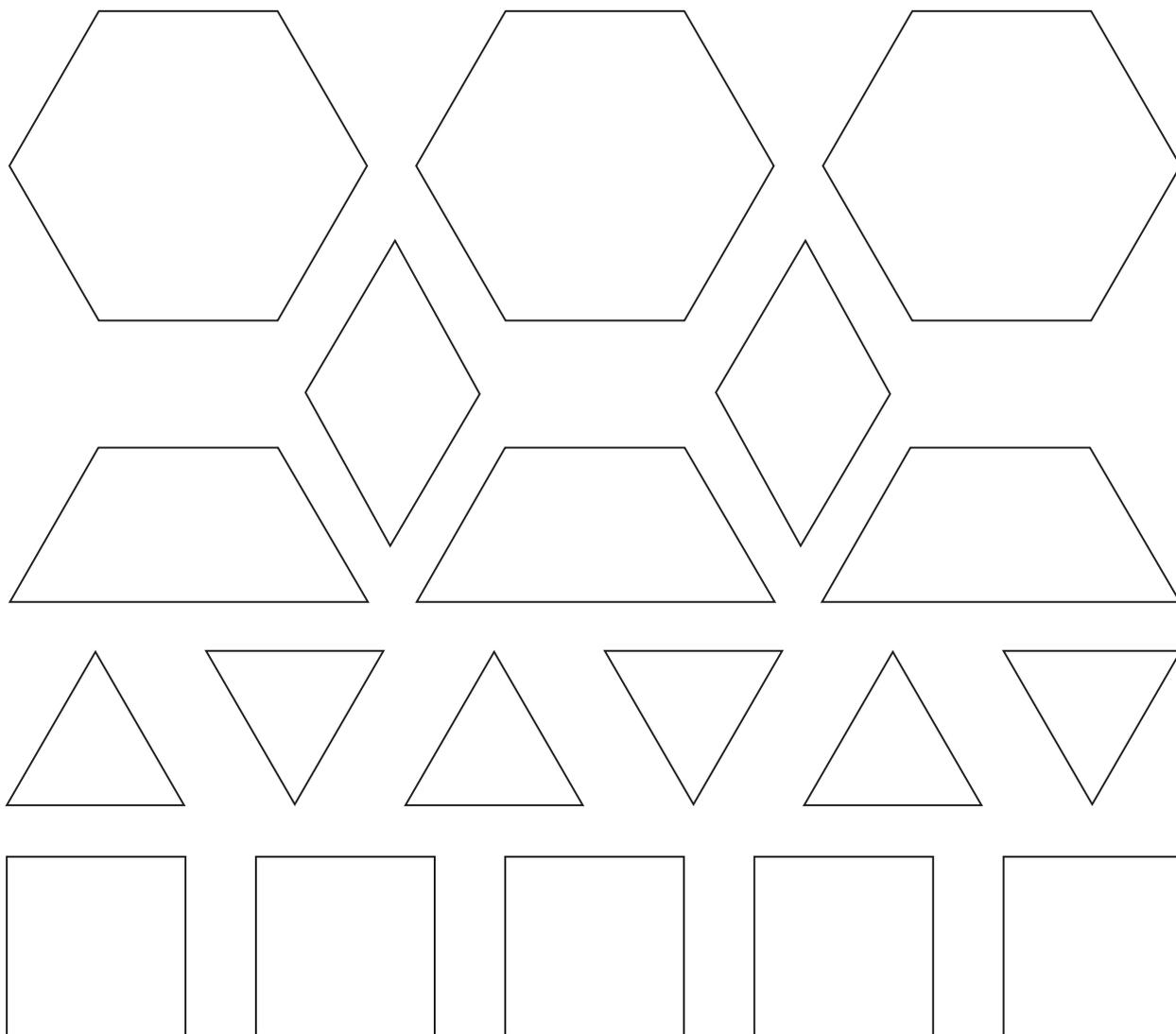


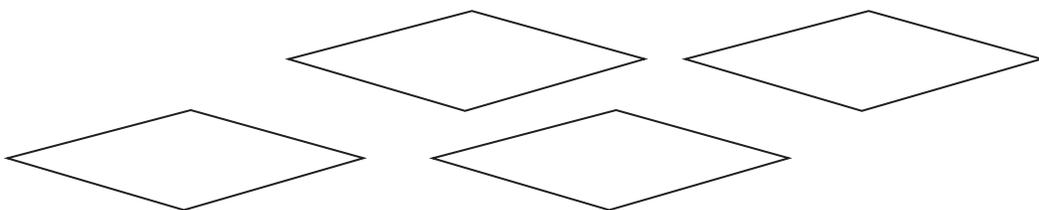
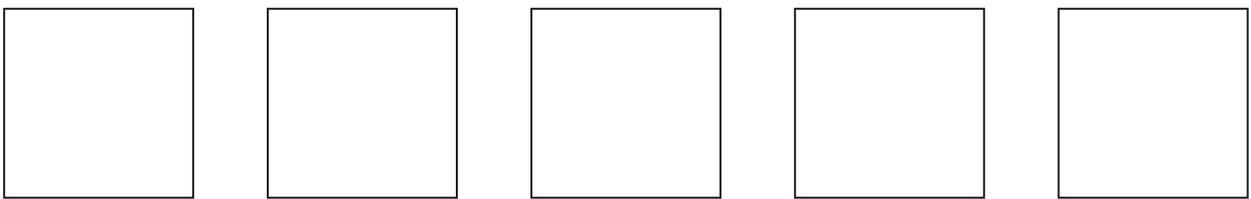
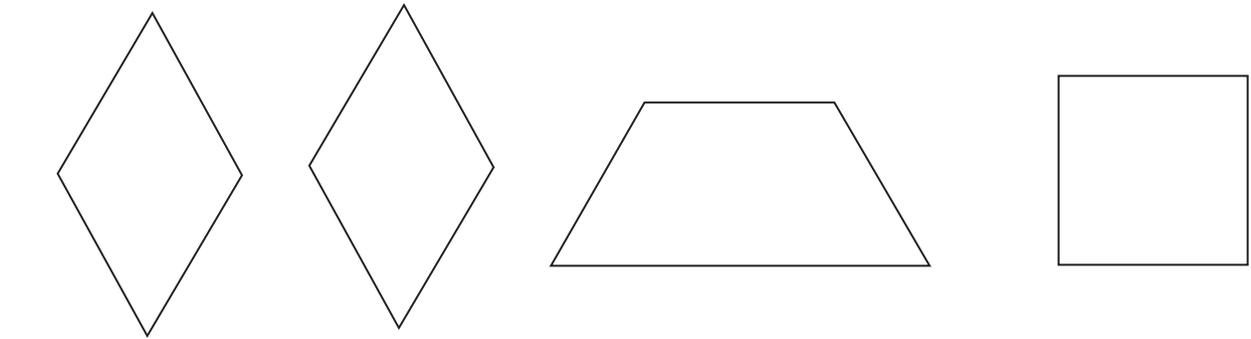
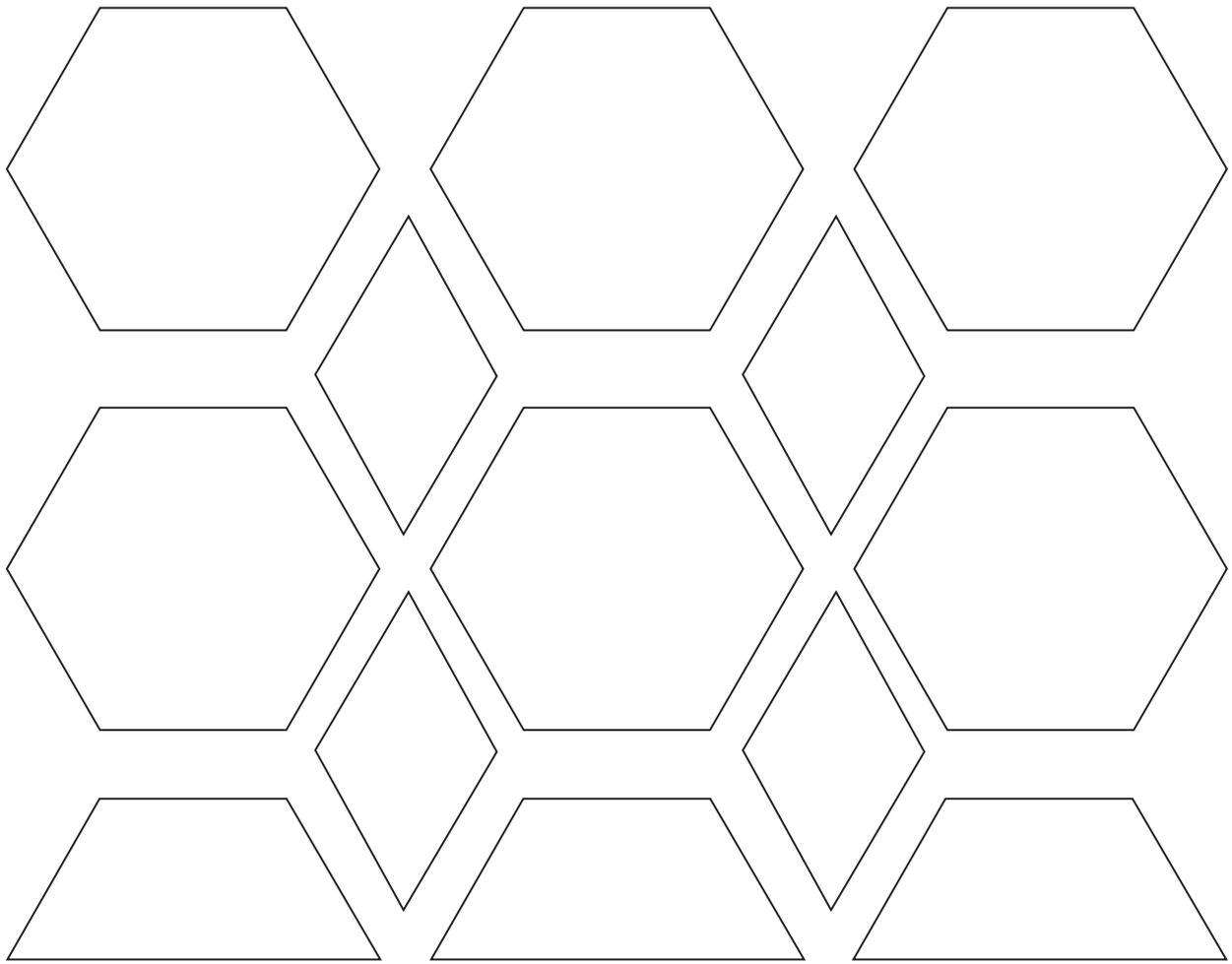
Pattern Block Templates (Blackline Master 3)

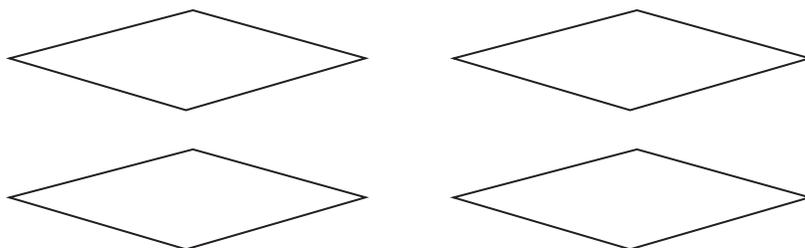
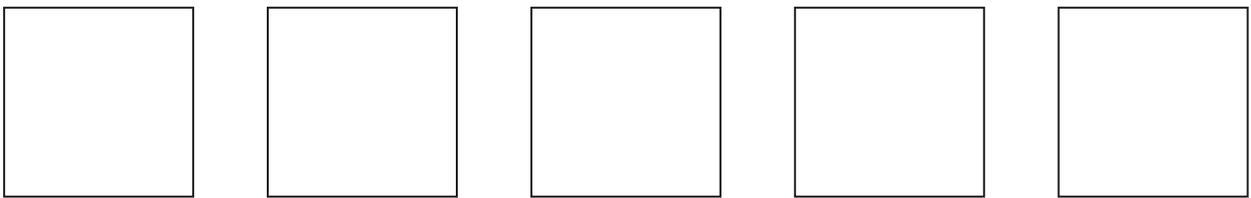
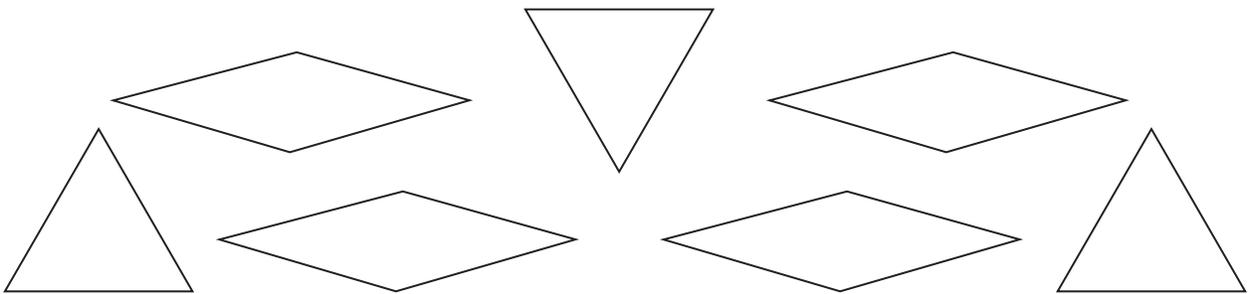
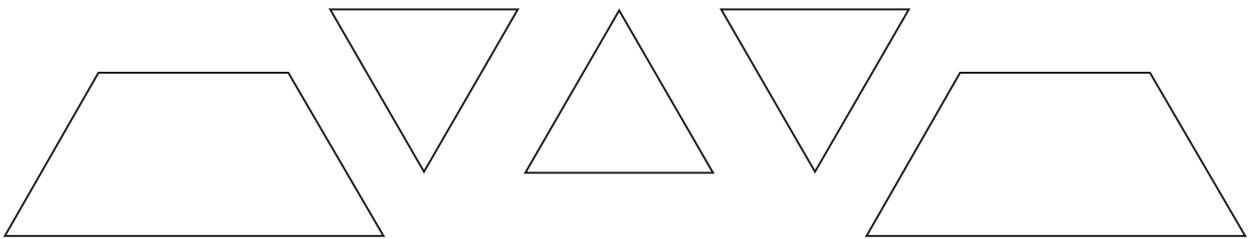
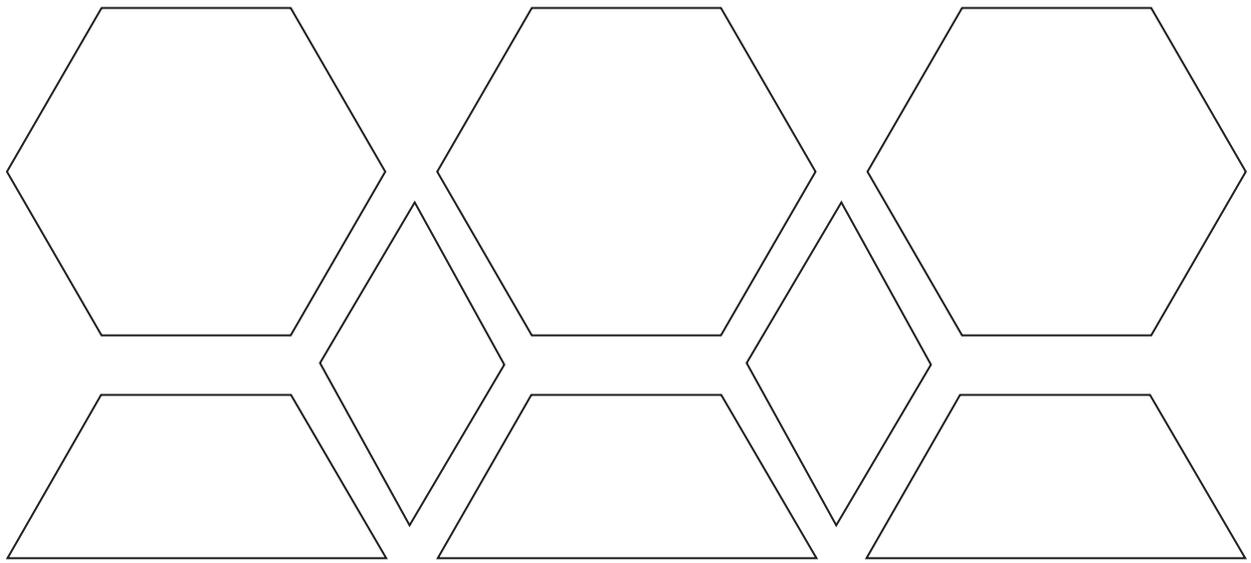
You do not need these if you already have pattern blocks. If you do not have access to wooden or plastic pattern blocks, you can use this paper version instead.

Directions: Cut out the shapes and color them according to the following key:

- Hexagons (large, 6-sided shape): yellow
- Trapezoids (4-sided shape with 3 shorter sides and 1 longer side): red
- Triangles: green
- Squares: orange
- Wider diamonds: blue
- Narrower diamonds: tan



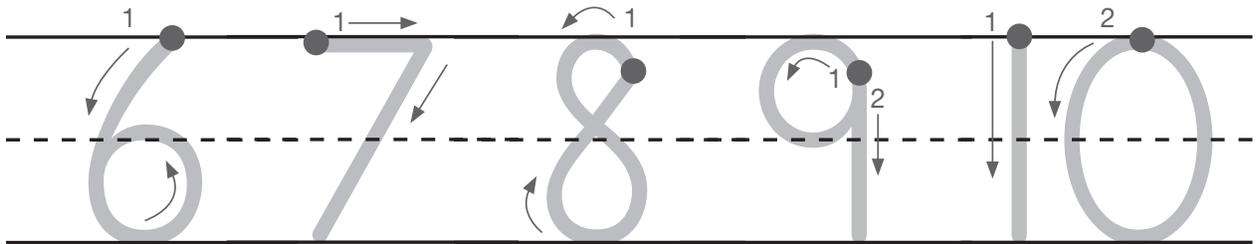
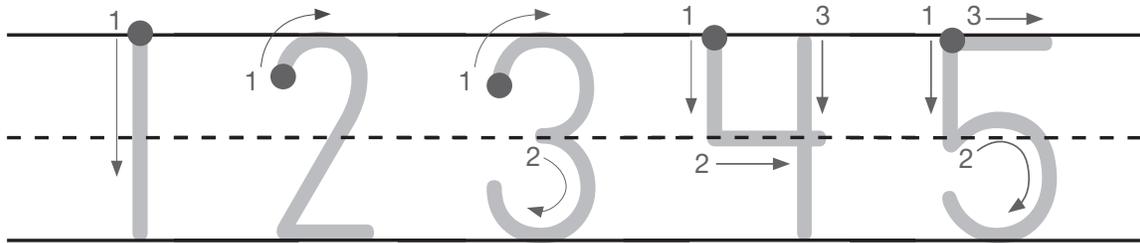




Double ten-frames (Blackline Master 4)

The image shows two identical double ten-frames. Each frame is a vertical rectangle divided into two horizontal rows of five squares each. A thick black horizontal line is drawn across the middle of each frame, separating the two rows. The top row of each frame contains five empty squares, and the bottom row also contains five empty squares.

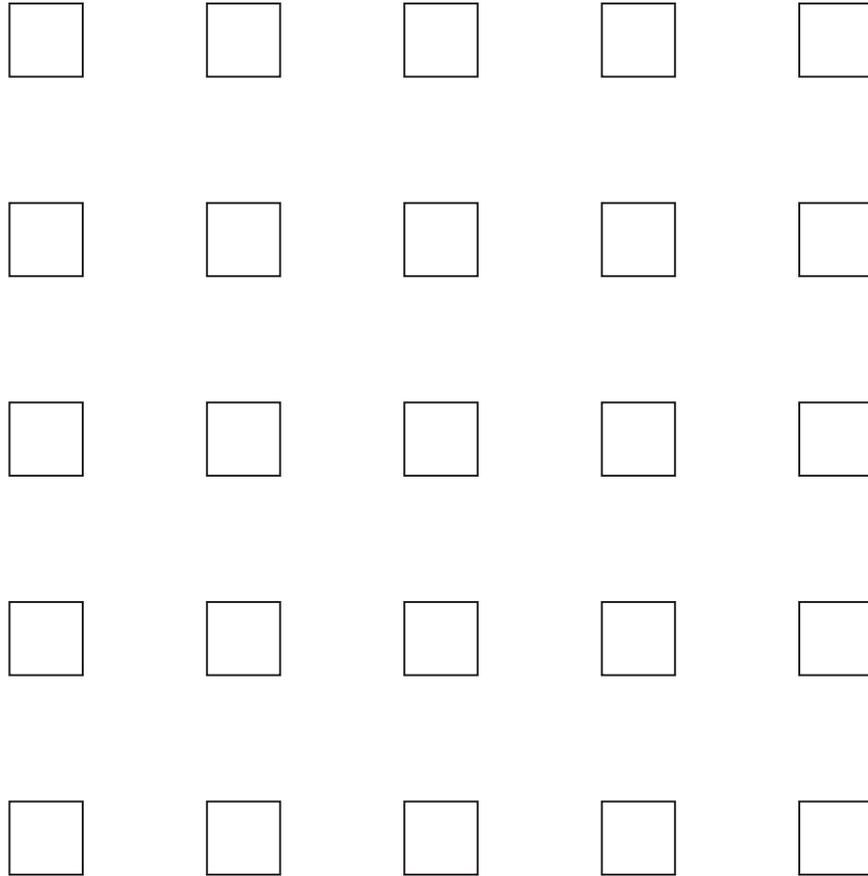
Number Examples (Blackline Master 5)



Centimeter Squares (Blackline Master 7)

You only need these if you use the metric system and do not have any centimeter cubes.
(See page 275 for more details on centimeter squares and centimeter cubes.)

Directions: Copy this page on sturdy paper, and then cut out the squares.



100 Chart (Blackline Master 8)

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Acknowledgements

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Lastly, thank you to the following members of the online *Kindergarten Math with Confidence* pilot-test group. Your suggestions helped make this book as practical, fun, and easy-to-use as possible, and your enthusiasm for this project (and adorable pictures of your children doing math) inspire me.

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Ashley Turner