Teachers' Guide

part 1

Education Development Center
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Welcome educators!

Thank you for participating in the *Ready to Learn* study and using the Math Curriculum Supplement. This curriculum supplement builds on research showing that educational media, such as video clips and interactive games, can help teachers prepare preschoolers for school success. When used in combination with other effective learning experiences, such as read-alouds and hands-on activities, media can provide powerful supports for young children's early math learning by giving them new ways to explore and practice concepts in different ways. Here are the two kinds of educational media used in the supplement:

- **Videos** to help introduce new math concepts and vocabulary, as well as provide children with models of how to apply their emerging math skills.

- **Interactive Games** to provide opportunities for children to practice math skills in pairs and groups and get immediate feedback on their learning.

Just as early teachers play a critical role in supporting preschoolers' learning throughout the school day, they also play an active role in helping children learn from educational media. In order to be sure your children can get the most from the videos and interactive games, we're supplying new technology for you to use in your classroom:

- **Interactive Whiteboards** help the whole class visualize mathematical concepts and practice them together. You'll be using your "IWB" to show each week's video and to demonstrate how to play the week's interactive games. Sometimes children will take turns using the IWB with you.

- **Laptop Computers** let children experience and explore the interactive games with a partner. You'll have a new computer center in your class with laptops, mice, and headphones for sharing.

- **Wireless Internet Routers** allow every computer in the classroom to have high-speed Internet access in order to view videos and play games.

In addition to the new technology, we also will supply you with all of the necessary materials to implement the other classroom activities in the Math Curriculum Supplement, including hands-on objects such as counting bears, unifix cubes, and crayons, as well as printed materials to facilitate large and small group activities (number lines, pattern signs, etc.).

Overview of Preschool Math Skills

In this curriculum, we focus on four major areas of mathematics teaching and learning:

- Counting,
- Recognizing Number and Subiziting,
- Recognizing and Composing Shapes, and
- Patterning.

Counting

During the preschool years, counting is comprised of Numbers and Operations. By age 5, children are usually able to develop an understanding of whole numbers, including the concepts of counting, correspondence, cardinality, and comparison.

- **Counting:** Children develop an understanding of the meanings of whole numbers (1, 2, 3, etc.) and recognize the number of objects in small groups by counting them.

- **Correspondence:** Children develop an understanding that number words refer to quantity. They understand one-to-one correspondence when they can count one object at a time, counting up for each new object and assigning it the correct number as they go. For example, when they are counting 2 toys, they point to the first, say "One," and then point to the second and say, "Two."

- **Cardinality:** Children develop an understanding that the last number they reach when counting aloud answers the question, "How many altogether?" For example, after counting 5 objects, if you ask a child how many objects there are altogether, the child can correctly respond, "Five." Cardinality is an important math skill that is not assessed just by counting correctly.

- **Comparison:** Children develop an understanding they can count to determine number amounts and compare quantities using language like "more than" and "less than." For example, when counting pictures of two dogs and three cats, a child can state that there are more cats than dogs.

Recognizing Number and Subiziting

During the preschool years, children develop an understanding that whole numbers represent quantities, begin to read the numerals, and are able to recognize the number of objects in small groups without counting.

Subitizing is a way of recognizing an amount just by looking at it (as opposed to counting objects to figure out the amount)—for example, they can recognize the number of dots on a die without having to count them.

Overview of Preschool Math Skills

Recognizing and Composing Shapes

Children can learn about shapes in several ways. Some of the ways in which children learn about shapes are the following:

- **Comparing:** Matching shapes that are the same size and have the same orientation. For example recognizing shapes of the same size.
- **Classifying:** Recognizing and naming shapes, as well as sorting them by their parts. For instance, recognizing a triangle because it has three sides.
- **Recognizing Parts:** Children can name, describe, and count the components of shapes, such as sides and corners (angles).
- **Representing:** Children can correctly build or draw shapes.

Patterning

A pattern is an arrangement of repeated parts. Patterning is the search for mathematical regularities and structures. Children's understanding of patterns develops gradually during the early childhood years. Preschoolers can learn to copy simple patterns and, at least by kindergarten, children can learn to extend and create patterns.

Children benefit from learning to identify core units of patterns (e.g. AB) that either repeats (ABAB) or grows (ABAABAAAB), and then using it to generate both of these types of patterns.

Recognizing, duplicating, or extending patterns can be done in many spontaneous ways, such as lining up students in a boy-girl-boy-girl pattern for outside time, or replicating or extending patterns with blocks (red, blue, red, blue).

About the Educational Media

Science and math go hand-in-hand, so the Math Curriculum Supplement uses a variety of PBS educational media designed to support math and science learning for preschool-aged children.

Sid the Science Kid

Sid the Science Kid, The Jim Henson Company's first series for PBS KIDS that features a practical in-school science curriculum, uses music and humor to celebrate children's natural curiosity about science in everyday life. The energetic and inquisitive Sid starts each episode with a new question ("Why are my shoes shrinking?" "Why do bananas get mushy?") and embarks on a fun-filled day of finding answers with the help of family and friends, often using math concepts in the process.

The Cat in the Hat Knows a Lot About That!

Based on the beloved Dr. Seuss children's books, the TV series and interactive games are designed to cultivate positive views about science and scientists among the next generation—the children who will become tomorrow's citizens and innovators—and help families and teachers build communities of science explorers. In each episode, the Cat in the Hat and his friends Sally and Nick go on a science adventure with the help of different math concepts. Guided by the Cat, the children figure things out by engaging in science inquiry. They ask questions, make observations, make predictions, plan investigations, collect data, make discoveries, and generate and discuss ideas about how the world works.

Curious George

Curious George is an Emmy award-winning animated series based on the popular books by Margret and H.A. Rey. Aimed at preschool viewers (ages three to five), the goal of the series is to inspire children to explore science, engineering, and math in the world around them. And what better guide is there for this kind of exploration than the world's most curious monkey? Episodes feature George and his caretaker, The Man with the Yellow Hat.

Dinosaur Train

Dinosaur Train embraces and celebrates the fascination that preschoolers have with both dinosaurs and trains, while encouraging basic scientific thinking skills as children learn about life science (including math concepts in science), natural history and paleontology. Each episode features Buddy, an adorable preschool age Tyrannosaurus Rex and his adoptive Pteranodon family on a whimsical voyage through prehistoric jungles, swamps, volcanoes and oceans, as they unearth basic concepts in life science, natural history and paleontology.

Weekly Activities

In the following sections, you will find scripts and activity descriptions for each of the 10 weeks of the Math Curriculum Supplement. The activities are designed to be simple and repetitive because children need to practice the same math skills many times and in many different situations to learn them. The content changes from week to week, but many of the activities remain the same or are very similar, so you and the children will have a familiar routine to follow. Below is an overview of the activities you and your class will do each week.

Activity	Setting	Description
Video Co-Viewing (25 minutes)	Circle Time with the IWB	Each week's video includes key math content for preschoolers. Pause points within the videos allow you to explain tricky math concepts, ask questions, and open up discussion. Videos introduce new math concepts and review math the children already know.
Guided Challenge Game Play (25 minutes)	Circle Time with the IWB	Each week, you'll model playing a challenging interactive game for the children. As you model, you'll point out key math content as well as explain the game's goals. Then each child can take a turn playing while the class cheers them on. The game reinforces key math concepts and presents them in different ways than in the videos.
Weekly Math Circle Routine with Guided Reading (25 minutes)	Circle Time	Once a week, you'll read aloud a math storybook to your class. To get them ready to think about the math, we have a quick set of fast-paced review activities you will guide them through first.
Math Detective Journal and Easy Game Play (15 minutes per small group)	Small group table and IWB	Every child will receive a Math Detective Journal to use during the 10 weeks. Each week's journal activity will give you a chance to review math ideas with small groups of children. Then you can wrap up the group with a quick demonstration of the easy interactive game of the week at the IWB.
Computer Center (10 minutes, 3 times per week per child)	Pairs of children at laptops	Pairs of children will team up to play interactive games, including the Challenge and Easy Games of the week. The games allow children to practice using the math knowledge they're gaining in many different ways.
Hands-On Center Activities Center 1 (10 minutes per child)	Pairs or small groups of children	Pairs or small groups of children play a different variation of a tried-and-true math game every week. The games increase in difficulty over time and enable children to stretch their understanding of key math content.
Hands-On Center Activities Center 2 (10 minutes per child)	Pairs or small groups of children	Pairs or small groups of children try out one activity specifically to review math content from prior weeks. This repetition of math content over time helps foster learning.

Setting the Stage for Learning with Educational Media

In this guide, you will find scripts and activities to help you integrate educational media into your classroom. Before you begin the Math Curriculum Supplement, here are some tips for preparing yourself and your classroom to get the most out of technology as a tool for learning.

- Familiarize yourself with the media ahead of time. The more you know about the content of a video or interactive game, the easier it will be for you to interact with children while they watch and play, and actively support their learning.

- Introduce children to new technologies before you use them to present math content. Young children are often eager to touch and play with new technologies, but their enthusiasm may distract from learning. Providing a brief introduction to your new technological equipment—how it is used and when children will have the opportunity to use it—can help children get comfortable with new technologies and understand that they are tools for learning. Your coach will provide tips for introducing the interactive whiteboard and laptop computers to your class.

- Set up technologies where all children can see and hear. Ensuring that the interactive whiteboard is where all children can see comfortably will best allow them to engage with the videos and digital games. Use headphones with the laptops—we provide 2 headphones as well as a special hub for them for each computer. This will allow both children playing digital games to benefit from the game's instructions and feedback.

- Set clear rules for children's turn-taking and collaborative play. To make sure all children have the opportunity to participate in interactive game play on the IWB and on the laptops, use a system that gives all children a turn and helps them anticipate when they will get to play. Your coach will help you devise a system to keep track of computer use—for instance, a sticker chart—so each child can track the games they play and have the assurance they'll always get to play the challenge and easy games of the week. When they're using laptop computers in pairs, we recommend that they alternate who is in control of the mouse; every time a round of the game ends, the players can switch roles.

Learning with Video

Here are some tips for incorporating videos into your classroom.

- Establish a pre-viewing routine that prepares children to participate. Get ready to co-view the videos in a consistent manner every week so children will be ready to "tune in" by actively listening and learning while they watch. You might, for example, choose to settle your class on the rug with a song, introduce the topic of a video, and turn off the overhead lights to signal that the activity is about to begin.

- Model active viewing. When teachers, assistants, and other adults in the classroom focus their attention on the video, it signals to children that they should be watching and learning, too. Try to minimize the amount of other activity going on during video viewing to help maintain children's focus.

- Use "pause points" and questions to support children's learning. The videos provided with this supplement have built-in supports to help you maintain active viewing with your class. Each video has up to 4 "pause points" where we'd like you to pause the video, refer to this teachers' guide, and follow the prompts to review the math content onscreen, ask questions, explain challenging concepts, and practice using math skills with the class. Each pause point has a number (1 to 4); the prompts in the guide use the same number. Just before the pause point, you'll see a red dot flash on screen. This dot is just a cue to get ready to pause the video when the numbered pause point appears. Be sure to take advantage of these opportunities for active learning!

- Monitor and support children's engagement. Pay attention to behaviors that indicate children may be losing interest in the videos (e.g., turning around, playing with children next to them) and try to re-direct children's attention with your own interest and excitement. For example, instead of telling a child who is getting squirmy to "pay attention," try asking questions or making comments about on-screen events ("Oh, look! She's turning around and around in circles!"). Don't be afraid to talk over the video, especially when it comes to pointing out learning content!

Supporting Interactive Game Play

To have a meaningful learning experience with digital games, children need to understand three things:

- How to use the software and the computer (for example, how to click and make things happen within a game);
- The rules and goals of the game (for example, sorting all the objects that appear on the screen); and
- The target learning concepts that must be applied to complete the activity (for example, that all objects with the same number of sides have a similar attribute and can be sorted together).

The scripts included in this guide will help you present all of this information to the children. You will model playing an interactive game on the IWB with groups of children each week.

The games were designed to be age appropriate and brief, but we encourage you to provide support and explanation before children play the games independently. Also, we recommend that you:

- Observe children's progress while they play and ask questions to assess if they need help. To gauge whether children understand the interactive game and are practicing their math skills, watch them play and be alert for whether children are clicking purposefully or randomly. If children appear to be confused or off-task, ask them to explain what they are doing or to explain the rules to you, then follow up with targeted directions, prompts, or strategies to help them move forward. For example, if a child repeatedly groups unrelated objects together in a sorting game, you might ask, "Can you tell me which shape you're looking for?" and use the opportunity to review how many sides each shape has.
- Use interactive games as resources to start rich conversations about math and other things you are learning about in your classroom. Interactive games not only give children opportunities to practice their skills, but also provide them with concrete experiences they can talk about with teachers and peers to solidify their math learning. Don't be shy about asking children math questions related to what they are playing, just as you might make math connections while working with children in the block or art area. Simple questions like "How many are there?" and "What shapes do you see?" can help reinforce children's learning.

Study Schedule

In addition to using the Math Curriculum Supplement, your participation in the *Ready to Learn* study includes a few other steps:

- **Child Pre-Testing** (3-week window, Prep Weeks 1–3): Researchers will need to assess the early math skills of at least 8 children in your class. Testing will be scheduled in advance and will take a few days. Typically, we'll assess one child at a time. Our schedule includes a 3-week window for pre-testing.
- **Technology Installation** (2-week window, Prep Weeks 1–2): Tech support staff will contact you to schedule a one-day technology delivery and installation visit. They will arrange a convenient time to bring your IWB cart, 5 laptops, wireless Internet router, and all of the math teaching supplies you'll need.
- **Teacher Training** (4-week window, Prep Week 2–Intervention Week 2): Your instructional coach will contact you to schedule several training sessions spread out over 4 weeks, including the first two weeks you use the supplement with your class (Weeks 1 and 2 of Implementation). After those 4 weeks, your coach may visit you less often but will contact you by phone to offer consistent help.
- **Implementation** (10-week window, Intervention Weeks 1–10): You will use the supplement for 10 weeks, including your last 2 training weeks. During those 2 "ramp-up" weeks, your coach will provide in-class modeling and support and you will only offer some of the supplement's weekly activities to your class. Full implementation (using all media, technology, and activities) will last for 8 weeks. During implementation, researchers will visit your class to observe and see how the supplement is going. These visits are so we can adjust and improve the supplement for next year; you will not be evaluated during the *Ready to Learn* study. We will also ask you to send home parent surveys during implementation, complete weekly logs to keep track of supplement activities you're able to complete with your class, and complete a survey.
- **Child Post-Testing** (3-week window, Post-Intervention Weeks 11–13): After your class has completed implementation, researchers will return to post-test the children who were pretested. Post-testing should take about the same amount of time as pre-testing; we plan to finish post-testing within 3 weeks after you have finished implementation.
- **Post-Implementation** (app. 1-week window, Post-Intervention Week 11+): After your class has completed implementation, your coach will verify you have completed your logs, survey, and payment information. Tech support will schedule a visit to remove the IWB cart, wireless Internet router, and 2 of your class laptops. We will mail you a check for $300 to thank you for your participation in the project, as well as a $200 check to thank your center. Two laptops will remain in your classroom for your use after the intervention has concluded.

Study Schedule

Step	Window	Weeks
Child Pre-Testing	3 weeks	Prep Weeks 1–3
Technology Installation	2 weeks	Prep Weeks 1–2
Teacher Training	4 weeks	Prep Week 2–Intervention Week 2
Implementation	10 weeks	Intervention Weeks 1–10
Child Post-Testing	3 weeks	Post-Intervention Weeks 11–13
Post-Implementation	1+ weeks	Post-Intervention Weeks 11+

Sample Schedules

We realize you have many things to teach and that you'll need to fit the Math Curriculum Supplement into an already busy schedule. Keep in mind, the supplement will be most effective if you use a consistent schedule from week to week. Your coach will help you figure out how to schedule the activities into your week, as well as support you when holidays and other school closures occur. We recommend doing a little bit each day and include a recommended schedule below that spreads the activities over 4 days. We also include two alternate schedules below to help you and your coach plan for implementation.

Recommended Schedule

Monday	Tuesday	Wednesday	Thursday	Friday
Video Co-Viewing (25 minutes)	Guided Challenge Game Play (25 minutes)	Math Detective Journal with Easy Game Play (15 minutes per group)	Weekly Math Circle Routine with Guided Reading (25 minutes)	
Centers (10+ minutes)	Centers (10+ minutes)	Centers (10+ minutes)	Centers (10+ minutes)	

Alternate A

Monday	Tuesday	Wednesday	Thursday	Friday
Video Co-Viewing (25 minutes)	Guided Challenge Game Play (25 minutes)		Weekly Math Circle Routine with Guided Reading (25 minutes)	
Centers (10+ minutes)	Math Detective Journal with Easy Game Play (15 minutes per group)		Centers (10+ minutes)	
	Centers (10+ minutes)			

Alternate B

Monday	Tuesday	Wednesday	Thursday	Friday
Video Co-Viewing (25 minutes)	Guided Challenge Game Play (25 minutes)	Math Detective Journal with Easy Game Play (15 minutes per group)	Weekly Math Circle Routine with Guided Reading (25 minutes)	
		Centers (10+ minutes)	Centers (10+ minutes)	Centers (10+ minutes)

Using this guide

We have divided this guide into weekly units (10), each of which provides one or two activities for you to undertake each day of the week. Each activity is titled with some or all of the following information.

Activity Group
Activity Name (if applicable)
(minutes / approach)

Materials Required

Hands-On Center Activities

Number Act-Out

(25 minutes/ Whole Class)

Materials:

Student 0–10 number line (2)
0–6 number cards (2 sets)

or

Activity Group

Computer Center Activities

(10 minutes/3 times a week/ Pairs of children)

Materials:

Laptops
Headphones
Huff-Puff-a-Tron game
Ribbit game
Trapezoid sign
Pentagon sign
AB Pattern signs
ABB Pattern signs
AABB pattern signs

Huff-Puff-a-Tron ← Activity name

Short scripts are provided to help you lead students through the activities.

- **What you say** to the class is displayed in large type and marked with “.
- **What you do** is displayed by smaller text to the right.
- **How students might respond** is italicized to the right.

For Video Co-Viewing activities, the scripts correspond with specific pause points in the episode videos. We indicate these points with a number (such as **1**) that appears on the video and in the guide. You should pause the video and follow the corresponding script in the guide. See example script below.

What you say	What you do
“ We're going to be watching a short video. Our job is to find the math in it—can you help me do that?	Wait for students to respond yes. Encourage by nodding your head yes.
“ OK, time to be detectives—can anyone see the math here? Did you know that learning about shapes like circles or triangles is part of learning about math? Can you name these shapes?	Point to each shape on the screen and encourage (or help) all children to name each one.
“ What shape is that? Do you think there is a number that has that same shape? What is it?	*Zero, "o," circle.*

3 Pause

Student Response

Finally, background information on video resources and computer games are provided in callout boxes.

Callout Boxes

Episode Synopsis:

The Dirt on Dirt (Sid the Science Kid)

In an Earth Day themed episode, Sid wants to know what makes dirt so dirty. At school, Sid and his friends discover that dirt is really important to the Earth because it helps things grow, and it's also filled with tiny rocks, pieces of leaves, and even living things like bugs and worms!

Educational Objective: To introduce the concept of being a detective.

Partial Implementation Week

Objectives

Counting	• Children will learn to count objects to 5 • Children will learn about cardinality to 5 • Children will be introduced to 0-10 number line • Children will learn what the concept "altogether" means
Shape	• Children will learn to identify a circle, triangle, hexagon and square
Number Recognition	• Children will learn to identify numbers to 5.
Pattern	This skill is not addressed this week.

Episode Synopsis:

The Dirt on Dirt (Sid the Science Kid)

In an Earth Day-themed episode, Sid wants to know what makes dirt so dirty. At school, Sid and his friends discover that dirt is really important to the Earth because it helps things grow, and it's also filled with tiny rocks, pieces of leaves, and even living things like bugs and worms!

Educational Objective: To introduce the concept of being a detective.

Day 1

Video Co-viewing

(25 minutes/ Whole Class)

Materials:

Interactive Whiteboard (IWB)
Sid: The Dirt on Dirt video
Small Teacher 0 -10 Number line

“ We're going to be watching a short video. Our job is to find the math in it – can you help me do that?	Wait for students to respond yes. Encourage by nodding your head yes.
“ First let's figure out what math is. When I say math what do I mean? I mean numbers like 5, 1, and 6. Do you know any other numbers?	Give children a chance to respond. If no one offers a response, ask about additional numbers (i.e. What about 7, 3, and 5?)
“ Math can also mean counting like 1…2…3…4. It is also shapes like circles, triangles and squares and patterns like clap, clap, snap, clap, clap, snap. “ There are other things that are part of math, but we will focus on counting, numbers, shapes, and patterns. I'll stop the video at a few spots and we can talk about where we see math, OK?	Start video.
“ Can you see how many friends Sid has here? Let's count each of Sid's friends together and then think about how many friends there are altogether, including Sid. **1**	Give children a chance to think about this and then point to each child on the screen and count out loud with children.
“ That was great, there are 4 friends altogether. What about counting how many girls there are? And how about how many boys?	Give children a chance to think about this and then count girls, pointing to each girl, and boys, pointing to each boy.
“ That was great, you're all great counters! Let's see what happens next.	Resume video.
“ Did you know that we're going to be detectives too? Just like Sid and his friends. Do you know what a detective does? **2**	Give children a chance to offer some definitions, then guide the discussion by telling the group that a detective is someone who looks for information in order to answer a question or solve a problem.

Day 1

“ We are going to be math detectives, and we are going to be looking for information about math – what kinds of things do you think we’ll find?	Children may suggest a range of possibilities. Example responses such as numbers, counting, adding, and taking away are right.
“ Let’s keep watching to see if we can detect any math!	Resume video.
“ OK, time to be detectives – can anyone see the math here? Did you know that learning about shapes like circles or triangles is part of learning about math? Can you name these shapes? 3	Point to each shape on the screen and encourage (or help) all children to name them.
“ Circle, Triangle, Hexagon, Square. Good detective work.	Resume video.

Hands-On Center Activities

There are no hands-on center activities this week.

Computer Center Activities

There are no computer center activities this week.

Day 2

Guided Challenge Game Play

There is no guided challenge game play this week.

Hands-On Center Activities

There are no hands-on center activities this week.

Computer Center Activities

There are no computer center activities this week.

Day 3

Math Detective Journal with Easy Game Play

(15 minutes/ Small Group)

Materials:

Interactive Whiteboard (IWB)
Crystals Rule Game

There are no Math Detective Journal activities this week; only easy game play activities.

Game Description:

Crystals Rule

Help May by using different items to measure stones in her stone collection.

“ In the next few weeks, we're going to be exploring math in different ways. Today we're going to do math in a new way – by playing a game on the interactive whiteboard. Later you will play this same game on the computer. Have any of you played a game on a computer before?

Allow a moment for children to respond.

“ This game is called “Crystals Rule.” It features May from *Sid the Science Kid*. It is about counting and measuring things. As I show you how the game is played, please watch carefully so you'll know what to do when you play with a partner during computer center time. Some of you will have a chance to try out the game with a partner now.

As you demonstrate the game on the IWB you should be careful to:

1. Model sliding the measuring objects (e.g. paper clips) to estimate how many are needed
2. Count the number needed aloud
3. Help children realize that the number counted is the number of objects that they need altogether
4. Point out the two answer choices on the right side of the screen and help children realize that the one with the solution is the amount needed altogether
5. Make sure that at least two pairs of children have a chance to play the game together on the IWB

Day 3

“ When you play on the computer, you'll be working with a partner. You and your partner will use the mouse to move the objects and choose the right number. You will need to remember to count out loud to help you play the game. As you play the game, I will be walking around to see if you need help.

Hands-On Center Activities

There are no hands-on center activities this week.

Computer Center Activities

There are no computer center activities this week.

Day 4

Weekly Math Circle Routine With Guided Reading

There is no weekly math circle routine with guided reading this week.

Hands-On Center Activities

There are no hands-on center activities this week.

Computer Center Activities

There are no computer center activities this week.

Partial Implementation Week

Objectives

Counting	• Children will learn to count objects from 2–9 • Children will learn about number cardinality from 2–9 • Children will learn about one-to-one correspondence when counting • Children will learn what the concept "altogether" means
Shape	• Children will learn to identify a circle, triangle, hexagon, and square
Number Recognition	• Children will learn to make tally marks 1-4
Pattern	This skill is not addressed this week.

Day 1

Video Co-viewing

There is no video co-viewing activity this week.

Hands-On Center Activities

There are no hands-on center activities this week.

Computer Center Activities

There are no computer center activities today.

Day 2

Guided Challenge Game Play

(25 minutes/ Whole Class)

Materials:

Interactive Whiteboard (IWB)
Vegetable Harvest game

Game Description:

Vegetable Harvest

Gabriela's vegetables have grown and are ready to be picked! Help her collect and count them.

" Today we are going to play a new math game. Similar to the last time, I will show you how to play the game on the interactive whiteboard. Later, you will have the chance to play this same game, with a partner, on the computer.

" Today's math game is called "Vegetable Harvest." It is a game about counting and numbers. As I show you how the game is played please watch carefully so you'll know what to do when you play with a partner during computer center time. Some of you will have a chance to try out the game with a partner now on the interactive whiteboard.

As you demonstrate the game on the IWB you should be careful to

1. Follow the prompts within the game
2. Model counting the vegetables aloud and note the total number of each vegetable by saying, "There are X tomatoes altogether." Remind the children that "altogether" means the same thing as "in total," which is what the character says in the game.
3. Point out the answer choices on the right side of the screen and help children realize that the solution choice is also the amount needed altogether (in total)
4. Have a volunteer point to the IWB and say the number they think is the correct answer
5. Make sure that at least two pairs of children have a chance to play the game together on the IWB

Day 2

“ When you play on the computer, you'll be working with a partner. As you play, remember to say the number for each vegetable you count and then count all the vegetables to see how many you have altogether. Altogether means the same thing as “in total,” which is what the character says in the game. Make sure to take turns clicking on different vegetables.

Hands-On Center Activities

There are no hands-on center activities this week.

Computer Center Activities

There are no computer center activities today.

Day 3

Math Detective Journal with Easy Game Play

(15 minutes/ Small Group)

Materials:

Math Detective Journals
Teacher Journal pages 2.1- 2.2
Dry erase board
Dry erase markers
Crayons

There are no easy game play activities this week; there are only Math Detective Journal activities.

Math Detective Journal

“ Who remembers watching the Sid video “The Dirt on Dirt” last week? Raise your hand if you remember the Dirt on Dirt video. “ In that video Sid and his friends were science detectives. Does anyone remember what they did when they were detectives?	Allow a moment for children to respond.
“ A detective looks for information in order to answer a question or solve a problem. What did Sid and his friends look for?	Allow a moment for children to respond.
“ That’s right. They looked for information on dirt. “ Today we are going to be MATH detectives. We are going to be looking for information about math. What kinds of things do you think we’ll look for?	Allow a moment for children to respond.
“ Numbers like 5, 1, and 6. Do you know any other numbers? Who can name another number?	Allow a moment for children to respond.

Day 3

- What about 7, 3, and 5? Counting like 1, 2, & 3? Shapes like circles, triangles and squares and patterns like clap, clap, snap, clap, clap, snap?
- There are other things that are part of math but we will focus on counting, numbers, shapes, and patterns.
- As math detectives you will need a special book to hold the things you detect, collect, and learn about.
- I have a Math Detective Journal for each of you. Each will have your name on it and we will be using it for the next few weeks. It will always be in the classroom, ready to use.
- Today we will be detecting certain shapes.

Demonstrating the task: As you demonstrate the task, be sure to show the children the shape graphic: 
(Teacher Journal, p. 21)
Have the group:

1. Name each shape
2. Sky draw each shape as they name it
3. After they sky draw all the shapes, give them enough time to draw an example of each shape in their Math Detective Journal. They can use a single page to draw all four shapes, or draw an example of each on a single page

Once each child has an example of each shape drawn in their Math Detective Journal, have the group:

1. Count the shapes in their journal. They should end up with a count of 4
2. Then ask them to look up and count again as you model making tally marks on the appropriate Teacher Journal page [2.2] as they count. Make them aware that you are making a single tally mark for each shape – one shape, one tally mark: 
3. The children then count their own shapes again and make their own tally marks in their journals. Remind them (and help them if necessary) to make only one mark for each shape counted.

Children count up (4) and write the number of shapes (4) and the number of tally marks (4) in their journals.

Hands-On Center Activities

There are no hands-on center activities this week.

Computer Center Activities

There are no computer center activities today.

Day 4

Weekly Math Circle Routine With Guided Reading

There is no weekly math circle routine with guided reading this week.

Hands-On Center Activities

There are no hands-on center activities this week.

Computer Center Activities

(10 minutes/3 times a week/ Pairs of children)

Materials:

Laptops
Headphones
Crystals Rule Game
Vegetable Harvest Game

Computer Center Orientation

As the children learn to navigate the computer, walk small groups through using the laptop, including using the mouse, left clicking, using headphones, and turn taking. Classroom coaches will facilitate this training with teachers.

Crystals Rule

“ Remember, you and your partner will use the mouse to move the objects and choose the right number. You will need to remember to count out loud to help you play the game. As you play the game, I will be walking around to see if you need help.

During computer center time, as the children play the game, remind them to:

1. Help each other count the measurement objects onscreen (e.g., paperclips) aloud
2. Say how many measuring objects there are altogether before they make their choice
3. Point to the number of measuring objects they think is correct before they make their choice

Day 4

Vegetable Harvest

> Remember to say the number for each vegetable you count and then count all the vegetables to see how many you have altogether with your partner. Altogether means the same thing as "in total," which is what the character says in the game. Make sure to take turns clicking on different vegetables.

During computer center time, as the children play the game, remind them to:

1. Count the vegetables aloud
2. Name how many of each vegetable there are altogether

Full Implementation Week

Objectives

Counting	• Children will learn to count objects to 10 in forward and reverse order • Children will learn about the concept of one-to-one correspondence • Children will learn how to make tally marks to 5 when counting • Children will learn about cardinality to 6 • Children will learn to count numbers on a number line • Children will learn to compare sets of numbers
Shape	• Children will identify a circle and compare it to the number zero • Children will identify a triangle, hexagon, square, rectangle, and pentagon • Children will learn about what corners (angles) and curves are when identifying different shapes
Number Recognition	• Children will learn to identify numbers 0–10, with a focus on 1, 2, 5, 7, 9
Pattern	• Children will understand what a pattern is • Children will learn about simple AB, AABB, and ABB patterns

Episode Synopsis:

Let's Go Fly a Kite (Cat in the Hat)

Sally, Nick and the Cat are trying to fly a kite, but there's not enough wind. The Cat in the Hat takes them to Huff-Puff-Maguff where there's so much wind, their kite gets away from them! They chase the runaway kite, using the wind to help them. When they finally reach it, the breeze helps to cool them down!

Educational Objectives: Wind power can help us in different ways. Wind can make things work, move things, and cool us down.

Day 1

Video Co-viewing

(25 minutes/ Whole Class)

Materials:

Interactive Whiteboard (IWB)
Cat in the Hat: Let's Go Fly a Kite video
Small teacher 0–10 number line
AB Pattern signs
ABB Pattern signs
AABB pattern signs

" We're going to watch another video and, just like we did before, we're going to look for the math in it. Are you ready?	Start video.
1 " Does anyone remember when we watched a video two weeks ago about dirt with Sid? Do you remember that we used the word 'detective'?	Allow students a moment to think back to when you used the word 'detective' in the Sid the Science Kid video about dirt.
" When we watched the last video we called ourselves Math Detectives – do you remember that? Can you remember what a detective does? A detective searches for information to answer a question or solve a problem! " Now we're watching something new, but we still need to be math detectives while we're watching – can you see any math here?	Point to the image of the Cat and two children watching clouds.
" Did you know that learning about patterns is part of learning about math? What is a pattern? A pattern is an arrangement of repeated parts. The arrangement is predictable, meaning that once you read the pattern you can tell what is going to come next. Can you see any patterns here?	Allow the students a moment to name any patterns they see.
" Did you notice that the Cat in the Hat has a pattern on his hat? Red, White, Red, White. Do you see this pattern anywhere else?	Clap along as you describe the "Red, White, Red, White" pattern.
" Can you read this pattern by naming the pattern parts?	Help children to read: "Red, white, red, white" while pointing to the red and white stripes. Also, point out the kite and the telescope patterns. Resume video.

Day 1

“ 2 I wonder if anyone can see any math here? I see a chance to practice our counting! How many hands can you count? How many children? How many cats? How about how many fish? Is there anything else we could count here?	Give children a chance to locate something. Ask children to find the corresponding number on the number line.
“ Great math detecting! Let’s see what happens next.	Resume video.
“ 3 Did you hear that? The Cat said “a barrel roll;” does anyone know what that is?	Give students a moment to share their responses.
“ What shape did the kite make in the sky? Let’s see if we can trace it with our fingers. Can you try that?	Model tracing a large circle in the air.
“ What shape is that? Do you think there is a number that has that same shape? What is it?	*Zero, “o,” circle.*
“ Good job, the number is zero. The shape is a large circle, or the letter **“O.”** So a barrel roll must be when the kite flies in a circle! The kite is making a giant zero! Can you make a giant zero? Good job! Let’s find out what happens next.	Resume video.

Hands-On Center Activities

Simple Shape Concentration

(10 minutes/Pairs of children)

Materials:

Simple Shape Concentration Cards (2 sets)

“ It’s time to play a fun game called Shape Concentration! This game will help you remember the names of shapes and how they look.	Show children the shape cards and name each of the shapes as you show them.

Day 1

“ We will play this game in groups of two. When you and your partner get your cards, put them on the table with the shape picture facing down. When it is your turn, turn over any two cards so that the shape is facing up, and say the name of the shape out loud to your partner. Then think about if the shapes on your two cards match.	Model putting the cards face down on the table and then turn over two cards.
“ If you turn over two cards that match, you can pick up these cards and keep them in a pile in front of you. If you turn over two cards that don't match, turn them back around so that the shapes are face down, but try to remember where those shapes are for your next turn. Now it is your partner's turn.	Model finding a match and finding a set that doesn't match.

Hands-On Center Activities

Number Act Out

(10 minutes/Pairs of children)

Materials:

Small student 0–10 number line (2)
0–6 number cards (2 sets)

“ For this game, we will all need to use our imaginations because we are going to act out numbers! “ This game is called Number Act Out, and you'll get to play it with a partner. You and your partner will get a bunch of cards that have numbers written on them. To play the game, you will take turns picking up a card and then acting out the number on the card.	Select the number 3 card from the deck.
“ If I want to act out the number 3 for my partner, does anyone know what I could do? Maybe I could clap three times, or I could stamp my foot three times, or I could jump three times.	Listen to student responses and select one to act out.
“ After you act out your number, your partner then gets to guess what number is on your card—so you need to keep the number on the card to yourself while you think of something to do. If your partner guesses the right number, they can find the number on the number line.	Model locating the number 3 on the number line.

Day 1

Computer Center Activities

(10 minutes/3 times a week/ Pairs of children)

Materials:

Laptops
Headphones
Huff-Puff-a-Tron game
Ribbit game
Trapezoid Sign
Pentagon Sign
AB pattern signs
ABB attern signs
AABB pattern signs

Review Games

Crystals Rule
Vegetable Harvest

Huff-Puff-a-Tron

“ Remember, you and your partner should say out loud the names of the shapes you pick, and look for the alternating zigzag pattern. As you play the game, I will be walking around to see if you need help.

During computer center time, as the children play the game remind them to:

1. Look for trapezoids and pentagons as they play (make different motions for each like stand up, clap, or hop)
2. Look for AB zigzag pattern on shapes in the game

Day 1

Ribbit

“ Remember, you and your partner should count out loud, take turns adding and taking away frogs, and help each other count. As you play the game, I will be walking around to see if you need help.

During computer center time, as the children play the game, remind them to:

1. Take turns adding and subtracting frogs
2. Read the numbers out loud as they appear on the screen

Day 2

Guided Challenge Game Play

(25 minutes/ Whole Class)

Materials:

Interactive Whiteboard (IWB)
Huff-Puff-A-Tron game
AB pattern signs
ABB pattern signs
AABB pattern signs
Square sign
Trapezoid sign
Pentagon sign

Game Description:

Huff-Puff-a-Tron

Sally and Nick want to fly their kites, but where is the wind? Luckily, the Cat in the Hat has the Huff-Puff-a-Tron, which uses shapes to create wind. As the kites get bigger, the machine must be fed faster and faster to create more wind.

- “ Today we are going to play a new math game. Similar to the last time, I will show you how to play the game on the interactive whiteboard. Later, you will have the chance to play this same game, with a partner, on the computer.
- “ Today’s new math game is called “Huff-Puff-a-Tron.” It is a game about shapes and some patterns. As I show you how the game is played, please watch carefully so you’ll know what to do when you play with a partner during computer center time. Some of you will have a chance to try out the game now with a partner on the interactive whiteboard.

As you demonstrate the game on the IWB, be careful to:

1. Show the example signs with squares, trapezoids, and pentagons
2. Identify the sides and corners (angles) of each
3. Count the sides and corners (angles) with the children
4. Contrast squares and trapezoids, describing trapezoids as having four sides, but two of them lean outwards away from each other
5. Show AB pattern signs and review that patterns repeat
6. Identify AB patterns of zigzags on some shapes in the game

Day 2

“ When you play on the computer, you'll be working with a partner. Remember to say out loud the names of the shapes you pick, and to look for the alternating zigzag pattern. As you play the game, I will be walking around to see if you need help.

Hands-On Center Activities

Simple Shape Concentration

(10 minutes/Pairs of children)

Materials:

Simple shape concentration cards (2 sets)

Repeat Week 3, Day 1 hands-on center activity.

Hands-On Center Activities

Number Act Out

(10 minutes/Pairs of children)

Materials:

Small student 0–10 number Line (2)
0–6 number cards (2 sets)

Repeat Week 3, Day 1 hands-on center activity.

Day 2

Computer Center Activities

(10 minutes/3 times a week/ Pairs of children)

Materials:

Laptops
Headphones
Huff-Puff-a-Tron game
Ribbit game
Trapezoid Sign
Pentagon Sign
AB pattern signs
ABB pattern signs
AABB pattern signs

Review Games

Crystals Rule
Vegetable Harvest

Huff-Puff-a-Tron

Repeat Week 3, Day 1 computer center activity.

Ribbit

Repeat Week 3, Day 1 computer center activity.

Day 3

Math Detective Journal with Easy Game Play

(15 minutes/Small Group)

Materials:

Interactive Whiteboard (IWB)
Ribbit game
Math Detective Journals
Teacher Journal, pages 3.1–3.3
Dry erase board
Dry erase markers
Crayons
Rectangle sign

Math Detective Journal

"Remember last week we drew and counted shapes in our Math Detective Journals? You did such a terrific job that today we are going to add to our shape collection. Today we are going to draw a new shape and then count all the shapes we have in our Math Detective Journals. Once we've counted all the shapes, we are going to make a tally mark for each, and write the number of shapes and the number of tally marks we've counted. Let's get started.

Demonstrating the task: As you demonstrate the task, you should be careful to:

Revisit the previous week's shapes (Teacher Journal, p. 3.1). As children revisit the shapes in their journals, have them:

1. Name each shape.
2. Sky draw each shape as they name it, draw an example of each shape in their Math Detective Journal (if, for some reason, they didn't get to do that before), or trace over the previous journal drawing with their finger (if they already have a drawing in their journal).

Once each child has an example of each shape drawn in their Math Detective Journal, have the group:

1. Count the shapes up to 4 and back down to 0.

Show the group the new shape—a rectangle (Teacher Journal, p. 3.2).

1. Name the shape.
2. Sky draw a rectangle as they name it.
3. Have them draw an example of the rectangle in their Math Detective Journals.
4. Then ask them to look up and count all the shapes drawn in their journals.
5. As they count, model making tally marks on the appropriate Teacher Journal page (3.3). Focus their attention on how you represent "5" using tally marks:

Day 3

“ Now, instead of loose marks, we have a bundle that means *five*. We can tell at a glance that it is 5 once we get used to doing and seeing it.

6. The children then count their own shapes again and make their own tally marks in their journals. Remind them (and help them, if necessary) to make only one mark for each shape counted and that when they get to the fifth mark they make a bundle: 𝍸
7. Then count up to 5, and back down to 0.

Children write the number of shapes (5) and the number of tally marks (5) in their journals.

Easy Game Play:

Ribbit

George loves the sounds of frogs croaking in the pond. Help him control the number of frogs in his chorus with the + or – signs

“ Today we are going to play a new math game. Similar to the last time, I will show you how to play the game on the interactive whiteboard. Later, you will have the chance to play this same game, with a partner, on the computer.

“ Today's new math game is called “Ribbit.” It is a number game. As I show you how the game is played, please watch carefully so you'll know what to do when you play with a partner during computer center time.

As you demonstrate the game on the IWB, be careful to:

1. Model adding and subtracting frogs
2. Put 10 frogs on the screen
3. Lead choral counting 0–10 and 10–0

“ When you play on the computer, you'll be working with a partner. Remember to count out loud, take turns adding and taking away frogs, and help each other count. As you play the game, I will be walking around to see if you need help.

Day 3

Hands-On Center Activities

Simple Shape Concentration

(10 minutes/Pairs of children)

Materials:

Simple shape concentration cards (2 sets)

Repeat Week 3, Day 1 hands-on center activity.

Hands-On Center Activities

Number Act Out

(10 minutes/Pairs of children)

Materials:

Student 0–10 number line (2)
0–6 number cards (2 sets)

Repeat Week 3, Day 1 hands-on center activity.

Computer Center Activities

(10 minutes/3 times a week/ Pairs of children)

Materials:

Laptops
Headphones
Huff-Puff-a-Tron game
Ribbit game
Trapezoid sign
Pentagon sign
AB pattern signs
ABB pattern signs
AABB pattern signs

Review Games

Crystals Rule
Vegetable Harvest

Huff-Puff-a-Tron

Repeat Week 3, Day 1 computer center activity

Ribbit

Repeat Week 3, Day 1 computer center activity

Day 4

Weekly Math Circle Routine with Guided Reading

(25 minutes/Whole Class)

Materials:

Small teacher 0–10 number line
Small piece of paper or Post-it note to cover a number on the number line
Dry erase board
Dry erase markers
10 Little Numbers song lyrics
Large dice (2)
Busy Bugs book
AB pattern signs
ABB pattern signs
AABB pattern signs

Optional: Use web link (http://www.youtube.com/watch?v=dk9Yt1PqQiw) to stream audio/video of *10 Little Numbers* using the IWB

Number Line Time

“ Today we are going to work with numbers on a number line. Does anyone know what a number line is?	Hold up the number line and give children a chance to respond.
“ Numbers on a number line always go in order. The 1 comes after the zero, the 2 comes after the 1. Who can tell us what comes after the 2? After the 3? After the 4?	Point to the numbers on the number line.
“ First, we are going to work together to find the number 1 and the number 5 on the number line that I am holding up. Who thinks they can come up and point to these numbers? “ Now who thinks they can find a number that is MORE than the number 7? Does anyone want to come and try? “ How do we know that the number (child's name) is pointing to on the number line is more than 7?	*Because it is further away from zero; because it is closer to 10; because it is bigger than 7; because is further along the number line.*
“ Next, I am going to hide a number on our number line. Can anyone tell us what number is missing?	Place a small card or Post-it note over the number 2.

Day 4

“ That was really great. For this next part of our activity, we are going to count out loud together. We'll start with the number zero and go up until the number 5, and then start at the number 5 and go back down to zero while we look at our number line. I am going to keep track of how many numbers we say by making tally marks on the dry erase board.

“ The last thing we're going to do with our number line right now is try to point to a number that comes BEFORE the number 9. Who wants to try to do this?

“ How do we know that the number (child's name) is pointing to on the number line comes before 9?

Because it is closer to the zero; because it is further away from10; because it is smaller than 9; because it is not as far along the number line.

"10 Little Numbers" Song

“ Today we are also going to sing a song called "10 Little Numbers" together. The words are very simple. I will say them first. You will repeat them after me, and then we'll be ready to sing the song together.

As you sing along with the children, encourage them to count along, using their fingers.

"10 Little Numbers" Lyrics (to the tune of "10 Little Indians")

Verse 1

One little, two little, three little numbers
Four little, five little, six little numbers
Seven little, eight little, nine little numbers
Ten little numbers

Verse 2

Ten little, nine little, eight little numbers,
Seven little, six little, five little numbers
Four little, three little, two little numbers
One little number

Number Scene

“ For this next activity, we're going to use this big die to help us recognize arrangements that numbers may have. Someone is going to have a chance to roll the big die and the rest of us will try to name the number of dots. You will have only a very short time to see the dots on the face of the die, so you'll need to pay attention. Who wants to roll the die first?

Hold up the die and choose a child. The child that you choose comes up and rolls the die. You hold on to the second die. You briefly (for 5 seconds) show all the children the side that the die landed on.

Day 4

“ Now it is important for you all to try to remember the arrangement of dots I showed you, how many dots make up the arrangement, and the number that the dots count up to. Does anyone have any ideas? I'm going to keep track of all of your number ideas!	Children rely on their memories of the dot configuration they saw, and offer matching number values on the number line. You poll children to find out how many think the configuration is a particular number. You maintain a tally record on the small dry erase board. Once you are satisfied that the polling is complete, have everyone count the dots out loud.
“ Together, let's count the dots out loud. Okay, we've counted them all now … we have _____ dots altogether. Who wants to find this number on our number line?	Choose a child to find the number on the number line. Then, while displaying the die face, describe the configuration of dots using language similar to the descriptions below: 1. a single dot in the middle of the die face 2. two dots arranged on a diagonal at opposite corners of the die face 3. three dots in a row arranged on a diagonal, with two at opposite corners of the die face 4. four dots, one at each corner of the die face 5. five dots, one at each corner of the die face with a single dot in the middle 6. two rows of three dots along opposite sides of the die face
“ Now let's look at our tally marks and see how many of you were able to match the dots on the die to the right number. Who can tell me what the tally is for each number?	Choose a child to count the tally marks for each number selected. Congratulate the children who got it right.
“ Who wants a turn at rolling the next die?	The child that you choose comes up and rolls the die. You briefly (for 5 seconds) show all the children the side that the die landed on.
“ Is what I just showed you more or less than what we saw the first time the die was rolled? How do you know this?	Allow children a moment to respond.
“ Great thinking, everyone. Let's look at the number line together to see if we're right.	Point to the numbers on the number line, explaining which number is closer to zero and therefore less, and which is closer to the 10 and therefore more.

Day 4

Book Reading ("Busy Bugs")

“ Can you tell me what you see on this book cover?	Hold up the book cover so all the children can see it. Read the title.
“ This is a pattern. Do you know what it means when something is called a pattern?	Point out a pattern on the book cover—small brick, large brick, small brick, large brick. Allow students a moment to respond to your question. Offer a definition, such as a pattern is an arrangement of repeated parts. The arrangement is predictable—meaning that it happens over and over again. Once you read the pattern, you can tell what is going to come next.
“ Can you see another pattern on this book cover? Or can you find a pattern in the room? “ Now that we have looked at the cover and talked about what we see, can we predict what this book will be about? What do you think it will be about? “ Let's read and find out what happens.	
Pause at pages 12–13 “ Can you find the pattern in the flowers?	Ask them to say the pattern out loud (for example, “Red, red, blue, blue, red, red …”). Act out an AABB pattern with gestures (e.g., tap head twice then tap shoulders twice). Have children act out the pattern with you and see if they can predict what will come next.
Pause at pages 16–17 “ Can you find the pattern in the fireflies? What comes next in the pattern?	Tell the children that, continuing from the last firefly on page 17, the pattern is two fireflies with yellow eyes, one firefly with green eyes—this is an AAB pattern.
Pause at pages 24–25 “ Let's repeat the dance pattern the ants do in the book!	Act out by standing up and repeating the ant dance pattern: hop, hop, slide. Have children stand up and repeat the ant dance with you.
At the end of the book “ That was a great book! Remember that there are pattern games available during center time and on the computer.	

Day 4

Hands-On Center Activities

Simple Shape Concentration

(10 minutes/Pairs of children)

Materials:

Simple shape concentration cards (2 sets)

Repeat Week 3, Day 1 hands-on center activity.

Hands-On Center Activities

Number Act Out

(10 minutes/Pairs of children)

Materials:

Student 0–10 number Line (2)
0–6 number cards (2 sets)

Repeat Week 3, Day 1 hands-on center activity.

Computer Center Activities

(10 minutes/3 times a week/ Pairs of children)

Materials:

Laptops
Headphones
Huff-Puff-a-Tron game
Ribbit game
Trapezoid sign
Pentagon sign
AB pattern signs
ABB pattern signs
AABB pattern signs

Review Games

Crystals Rule
Vegetable Harvest

Huff-Puff-a-Tron

Repeat Week 3, Day 1 computer center activity.

Ribbit

Repeat Week 3, Day 1 computer center activity.

Week 4 Purple Week

Full Implementation Week

Objectives

Counting	• Children will learn to count objects to 10 in forward in reverse order • Children will learn to count numbers on a number line • Children will learn how to tally numbers greater than 5 • Children will learn about cardinality to 6 • Children will learn to compare different sets of numbers • Children will learn about the concept of one-to-one correspondence
Shape	• Children will identify triangle, hexagon, square , rectangle and pentagon
Number Recognition	• Children will identify numbers to 9 • Children will subitize numbers to 6
Pattern	• Children will learn about simple AB, AABB and ABB patterns

Episode Synopsis:

Finola's Farm (Cat in the Hat)

Nick and Sally are sitting down to breakfast, but have run out of milk. The Cat arrives to take them to Finola's Farm to have breakfast with Finola. First they learn how to milk a cow, and then they discover that cows' milk can be made into butter and cheese and—best of all—ice cream!

Educational Objectives: Cows' milk is good for drinking and also makes butter and cheese—and even ice cream.

Day 1

Video Co-viewing

(25 minutes/ Whole Class)

Materials:

Interactive Whiteboard (IWB)
Cat in the Hat: Finola's Farm video
AB Pattern signs
ABB Pattern signs
AABB pattern signs
Small teacher 0 -20 number line

" Just like we did last week, we're going to watch another video. Is everyone ready?	Start video.
" 1 Hmm, do you remember what we were looking for last week when we were detectives – what kind of detectives were we? Math detectives that's right!	Give children a chance to think and perhaps remember that they were math detectives. If they don't remember, remind them.
" What kind of math did we detect? Numbers! Yes, that's right. " Have you seen any math yet? I think there's some math here but it's hard to see. It might be easier to hear! " Do you remember that we read a pattern last week that was "Red, White, Red, White? Well, do you hear a pattern now?	Play back the section where the Cat and children say "moo moo, yah yah." Have children repeat this pattern.
" Ok, let's see if we hear math again.	Resume video.
" 2 Did anyone hear a pattern again? Was it the same pattern or did this one sound different? How was this different from the pattern that the Cat and children did before?	Have children repeat the first pattern (Moo moo, yah yah) and then the new pattern, "Moo moo moo, yah yah, yah yah."
" Hmm, is this pattern working? Is the cow moving? " Let's see what happens next.	Resume video.
" 3 Wow, so the Cat brought in some help, what are these little guys called? " How can you tell the difference between them? " Can you see they have numbers written on their shirts? What do they say: 1 and 2? " Are Thing 1 and Thing 2 getting the cow to move? I don't think so.	Resume video.

Day 1

“ OK math detectives, can you find some math here? I can see a counting activity. What could you count in this picture?	
“ How many is four? Can you show me with your fingers? Can you find the number 4 in the room?	
“ Great job! Now let’s see what happens next!	Resume video.

Hands-On Center Activities

Dominoes

(10 minutes/Pairs of children)

Materials:

Oversized Dominoes (2 sets)

“ Now we’re going to play Dominoes – has anyone ever played Dominoes before?	Allow children some time to respond and then hold up a domino.
“ The most important thing when you play Dominoes is to make sure that the number of dots on one side of a domino matches the number of dots on the domino that you put down on the table next to it.	Provide a physical demonstration with two dominoes so that children can see what you are describing.
“ What if I put a side with 2 dots next to a side with 1 dot……do they match?	Demonstrate putting a domino with 2 dots next to a domino with 1 dot. Give children a moment to think about this and respond. Then discuss the correct answer.
“ Let’s try playing and see if we can match all the dominoes. To make sure we are doing this right, let’s count the number of dots on each side of the domino out loud together.	Model putting a few dominoes together with the children.

Day 1

Hands-On Center Activities

What's in the Bag?

(10 minutes/Pairs of children)

Materials:

Opaque Fabric Bag
Pattern Blocks

" Now we're going to play a fun detective game. Each of you will have to use only your hands to tell us what shape something is. Has anyone ever used just their hands to tell what something is?	Allow children a moment to respond.
" I am going to put these shapes into a bag and then you will each have a turn to put your hand into the bag and feel a shape. Tell us what you feel. Is it round or does it have pointy edges? How many sides does it have? Hold on to the shape as you describe it and your partner tries to guess what it is. After your partner has had the chance to guess what shape you are holding, you can pull your shape out of the bag and show everyone.	Show and identify each shape as you're placing it into the bag.
" Let's try one together!	Put your hand in the bag and describe a shape, showing the shape to children after someone guesses correctly.

Day 1

Computer Center Activities

(10 minutes/Pairs of children)

Materials:

Laptops
Headphones
Vegetable Patterns game
Flower Garden game
AB Pattern signs
ABB Pattern signs
AABB pattern signs

Review Games:

Huff-Puff-a-Tron
Ribbit
Crystals Rule
Vegetable Harvest

Vegetable Pattern

" Remember, you and your partner should say out loud the patterns that you see, take turns and help each other as you play the game. As you play the game, I will be walking around to see if you need help.

During computer center time, as the children play the game remind them to:

1. Name AB and ABB patterns when they appear
2. Name the vegetables that fill in missing parts of the pattern

Flower Garden

" Remember, you and your partner should count each flower and say the number out loud, take turns playing the game and help each other as needed. As you play the game, I will be walking around to see if you need help.

During computer center time, as the children play the game remind them to:

1. Take turns clicking on the flowers
2. Count up aloud from the previous flower
3. Name how many flowers there are once they've all been counted (only up to 10)

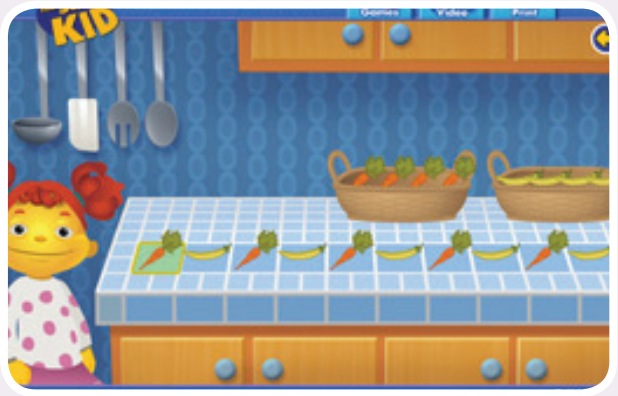
Day 2

Guided Challenge Game Play

(25 minutes/ Whole Class)

Materials:

Interactive Whiteboard (IWB)
Vegetable Patterns game
AB Pattern signs
ABB Pattern signs
AABB pattern signs



Game Description:

Vegetable Patterns

Gabriela's vegetables are ready to eat, but first, players must complete the pattern of vegetables on the kitchen counter.

- "Today we are going to play a new math game. Similar to the last time, I will show you how to play the game on the interactive whiteboard. Later, you will have the chance to play this same game, with a partner, on the computer.
- "Today's new math game is called "Vegetable Patterns." It is a game about counting and numbers. As I show you how the game is played, please watch carefully so you'll know what to do when you play with a partner during computer center time. Some of you will have a chance to try out the game now with a partner on the interactive whiteboard.

As you demonstrate the game on the IWB, be careful to:

1. Show examples of AB and ABB patterns
2. Model thinking aloud as you play
3. Have children complete patterns using vegetables in this game
4. Explain how to read the patterns in the game (e.g., by saying carrot, pea, carrot, pea)

- "When you play on the computer, you'll be working with a partner. Remember to say out loud the patterns that you see, take turns and help each other as you play the game. As you play the game, I will be walking around to see if you need help.

Day 2

Hands-On Center Activities

Dominoes

(10 minutes/Pairs of children)

Materials:

Oversized Dominoes (2 sets)

Repeat Week 4, Day 1 hands-on center activity.

Hands-On Center Activities

What's in the Bag?

(10 minutes/Pairs of children)

Materials:

Opaque Fabric Bag
Pattern Blocks

Repeat Week 4, Day 1 hands-on center activity.

Computer Center Activities

(10 minutes/Pairs of children)

Materials:

Laptops
Headphones
Vegetable Patterns game
Flower Garden game
AB Pattern signs
ABB Pattern signs
AABB pattern signs

Review Games:

Huff-Puff-a-Tron
Ribbit
Crystals Rule
Vegetable Harvest

Vegetable Patterns

Repeat Week 4, Day 1 computer center activity

Flower Garden

Repeat Week 4, Day 1 computer center activity

Day 3

Math Detective Journal with Easy Game Play

(15 minutes/ Small Group)

Materials:

Interactive Whiteboard
Flower Garden game
Math Detective Journals
Dry erase board
Dry erase markers
Crayons
AB Pattern signs
ABB Pattern signs
AABB Pattern signs

Math Detective Journal

“ Math detectives—today we are going to hunt for patterns. But before we hunt, let’s remember what a pattern is. I have a few examples of patterns that we can look at.	Pick an example from the pattern cards you have and hold it up for all the children to see.
“ Who can tell me something about the pattern you see?	Allow a moment for children to respond. Then provide more information.
“ There are different kinds of patterns. We can make patterns from all kinds of “stuff.” “ We can make color patterns, and number patterns and shape patterns and sound patterns. “ Patterns repeat and are predictable, meaning we can tell what the next part of the pattern will be based on what we see and read.	Read the pattern out loud.
“ Can someone read this pattern for us?	Show a second pattern sign example and select a child to read the pattern.

Day 3

“ Who knows what’s next in the pattern?

“ Well, you have done a really great job of talking about patterns. Now we’re going to look for some. We will hunt around the classroom and see what we can find. As you find one, try to read it to us and I will write it down on the board so we can count them later.

“ I want you to look around the room and see how many patterns you can find. I am going to start us off with…

Look for patterns on children’s clothes: a striped shirt, an alternating sequence of buttons on a child’s sweater, etc. Be sure to “read” and record the pattern you’ve found e.g., blue stripe, red stripe, blue stripe.

Give children a little time to identify the patterns in their classroom. Once a child has found one, ask them to point it out “read” it and then you will record it.

Once you have at least 6 different patterns, have the group count how many there are altogether. As they count have one of the children make a tally mark for each pattern counted: 

Remind the child to make only one tally mark for each pattern counted; how to use the “five bundle”; and decide what to do for the sixth tally.

Demonstrating the task: As you demonstrate the task, you should be careful to:

Quickly remind them of the shapes that they made in their journals earlier by having them name them (circle, triangle, square, hexagon, and rectangle)

“ Now you can make patterns in your Math Detective Journals.

Explain that they will draw their own patterns in their detective notebooks using a combination of shapes.

1. Have them make a simple AB pattern first and if there is time they can make examples of the other pattern types (AABB, ABB).

2. As you review what children are making have them “read” their patterns by naming the shapes that are included.

Day 3

Easy Game Play:

Flower Garden

Flowers are popping up everywhere! Help George keep track of how many there are by counting with him.

“ Today we are going to play a new math game. Similar to the last time, I will show you how to play the game on the interactive white-board. Later, you will have the chance to play this same game, with a partner, on the computer.

“ Today's new math game is called “Flower Garden.” It is a game about counting and numbers. As I show you how the game is played please watch carefully so you'll know what to do when you play with a partner during computer center time.

As you demonstrate the game on the IWB, be careful to

1. Model counting aloud while clicking on each closed flower
2. Note the number line at the bottom of the screen and that numbers are highlighted with each flower
3. Model recovering from errors, such as clicking on an open flower (which means it has already been counted)
4. Remember NOT to count clicks on already opened flowers, and instead model counting on from the previous correct flower
5. Ask how many flowers there are altogether, once all of them have been opened (only to 10)
6. Explain that the children will use the mouse to click on the flowers when they play the game on the computers
7. Remind the children to count each flower and say the number out loud

“ When you play on the computer, you'll be working with a partner. Remember to count each flower and say the number out loud, take turns playing the game and help each other as needed. As you play the game, I will be walking around to see if you need help.

Day 3

Hands-On Center Activities

Dominoes

(10 minutes/Pairs of children)

Materials:

Oversized Dominoes (2 sets)

Repeat Week 4, Day 1 hands-on center activity.

Hands-On Center Activities

What's in the Bag?

(10 minutes/Pairs of children)

Materials:

Opaque Fabric Bag
Pattern Blocks

Repeat Week 4, Day 1 hands-on center activity.

Computer Center Activities

(10 minutes/Pairs of children)

Materials:

Laptops
Headphones
Vegetable Patterns game
Flower Garden game
AB Pattern signs
ABB Pattern signs
AABB pattern signs

Review Games:

Huff-Puff-a-Tron
Ribbit
Crystals Rule
Vegetable Harvest

Vegetable Patterns

Repeat Week 4, Day 1 computer center activity.

Flower Garden

Repeat Week 4, Day 1 computer center activity.

Day 4

Weekly Math Circle Routine With Guided Reading

(25 minutes/Whole Class)

Materials:

Small 0–10 teacher number line
Small piece of paper or Post-it note to cover a number on the number line
Dry erase board
Dry erase markers
"Head, Shoulders, Knees, and Toes" lyrics
Large dice
I Spy Numbers book

Optional: Use web link to "Head, Shoulders, Knees, and Toes" (http://www.myvoxsongs.com/heads-shoulders-knees-and-toes.html) to stream audio/video using the IWB.

Number Line Time

" Today we are going to work with numbers on our number line again. Does anyone remember what a number line is?	Hold up the number line and give children a chance to respond.
" Remember that numbers on a number line always go in order. The 1 comes after the zero, the 2 comes after the 1. Who can tell us what comes after the 2? After the 3? After the 4?	Point to the numbers on the number line.
" On the number line, the numbers get bigger in this direction. The smallest number on this number line is 0 and the biggest is 10. The number 10 is the farthest away from the 0.	Slide your finger under the line, moving to the right.
" First, we are going to work together to find the number 3 and the number 8 on the number line that I am holding up. Who thinks they can come up and point to these numbers?	
" Now who thinks they can find a number that is LESS than the number 4? Does anyone want to come and try?	
" How do we know that the number (child's name) is pointing to on the number line is less than 4?	*Because it is closer to the zero; because it is farther from the ten; because it is smaller than 4; because it is not as far along on the number line.*

Day 4

“ Next, I am going to hide a number on our number line. Can anyone tell us what number is missing?	Place a small card or Post-it note over the number 0.
“ That was really great. For this next part of our activity, we are going to count out loud together. We’ll start with the number zero and go up until the number 8 and then start at the number 8 and go back down to zero while we look at our number line. I am going to keep track of how many numbers we say by making tally marks on the dry erase board.	
“ The last thing we’re going to do with our number line right now is try and point to a number that comes AFTER the number 6. Does anyone want to try and do this? “ How do we know that the number (child’s name) is pointing to on the number line comes after 6?	*Because it is further from the zero; because it is closer to the ten; because it is bigger than 6; because it is farther along on the number line.*

“Head, Shoulders, Knees and Toes” Song

“ Today we are going to sing a song called “Head, Shoulders, Knees and Toes” together.	Review song lyrics with children and then sing together.
“ Now let’s count the body parts named in the song. How many heads do you have? How many shoulders? How many knees? And how many toes?	

“Head, Shoulders, Knees, and Toes” Lyrics

Head, shoulders, knees and toes, knees and toes

Head, shoulders, knees and toes, knees and toes

Eyes and ears and mouth and nose

Head, shoulders, knees and toes, knees and toes

(Repeat, getting faster each time)

Day 4

Number Scene

“ Next, we're going to play with our large dice again! We're going to use this big die to help us recognize arrangements that numbers may have. Remember that someone is going to have a chance to roll the big die and the rest of us will try to name the number of dots. You will only have a very short time to see the dots on the face of the die so you'll need to pay attention. Who wants to roll the die first?

Choose a child to come up and roll the die. You hold on to the second die. You briefly (for 5 seconds) show all the children the side that the die landed on.

“ Now it is important for you all to try and remember the arrangement of dots I showed you, how many dots make up the arrangement, and the number that the dots count up to. Does anyone have any ideas? I'm going to keep track of all of your number ideas!

Children rely on their memory of the dot configuration they saw and offer matching number values on the number line. You poll children to find out how many think the configuration is a particular number. You maintain a tally record on the small dry erase board. Once you are satisfied that the polling is complete, have everyone count the dots out loud.

“ Together let's count the dots out loud. Ok, we've counted them all now…we have _____ dots altogether. Who wants to find this number on our number line?

Choose a child to find the number on the number line. Then, while displaying the die face, describe the configuration of dots using language similar to the descriptions below:

1. a single dot in the middle of the die face
2. two dots arranged on a diagonal at opposite corners of the die face
3. three dots in a row arranged on a diagonal at opposite corners of the die face
4. four dots one at each corner of the die face
5. five dots one at each corner of the die face with a single dot in the middle
6. two rows of three dots along opposite sides of the die face

“ Now let's look at the tally and see how many of you were able to match the dots on the die to the right number. Who can tell me what the tally is for each number?

Choose a child to count the tally marks for each number selected. Congratulate the children who got it right.

Day 4

“ Who wants a turn at rolling the next die?	A child that you choose comes up and rolls the die. You briefly (for 5 seconds) show all the children the side that the die landed on.
“ Is what I just showed you more or less than what we saw the first time the die was rolled? How do you know this?	Allow a moment for children to provide responses.
“ Great thinking, everyone. Let’s look at the number line together to see if we’re right.	Then point to the numbers on the number line, explaining which number is closer to zero and therefore less and which is closer to the ten and therefore more.

Book Reading (“I Spy Numbers”)

“ Can you tell me what you see here? Can you name any of the numbers you see?	Hold the book cover up so all of the children can see it.
“ What do you think this book will be about? Can you tell based on what you see on the cover? “ Let’s see what happens in this book.	Point to each number on the page right before you read it and ask children to repeat the number after you. Pause to allow the children to call out the number.

Pause at page 5 (the “3” page)

“ How many pigs can you count? Are there 3? Let’s do it together.

Pause at page 17 (the “9” page)

“ Let’s count some of the objects on this page. For example, dots on the die……are there 9?….let’s check. And steps on the ladder …..are there 9?....let’s count together.

At the end of the book

“ Do you think we can count all the way up to 9? Let’s try to do it together. 0, 1, 2, 3, 4, 5, 6, 7, 8, 9. Great job, now let’s try to count back down starting from 9: 9, 8, 7, 6, 5, 4, 3, 2, 1, 0. That was very good counting.

“ Just a reminder that we have number games available during center time and on the computer.

Day 4

Hands-On Center Activities

Dominoes

(10 minutes/Pairs of children)

Materials:

Oversized Dominoes (2 sets)

Repeat Week 4, Day 1 hands-on center activity.

Hands-On Center Activities

What's in the Bag?

(10 minutes/Pairs of children)

Materials:

Opaque Fabric Bag
Pattern Blocks

Repeat Week 4, Day 1 hands-on center activity.

Computer Center Activities

(10 minutes/Pairs of children)

Materials:

Laptops
Headphones
Vegetable Patterns game
Flower Garden game
AB Pattern signs
ABB Pattern signs
AABB pattern signs

Review Games:

Huff-Puff-a-Tron
Ribbit
Crystals Rule
Vegetable Harvest

Vegetable Patterns

Repeat Week 4, Day 1 computer center activity

Flower Garden

Repeat Week 4, Day 1 computer center activity

Week 5 Yellow Week

Full Implementation Week

Objectives

Counting	• Children will learn to count to 20 in forward and reverse order • Children will learn to count numbers on a number line • Children will learn how to taly numbers greater than 5 • Children will learn to compare sets of numbers
Shape	• Children will identify a triangle, rectangle and square • Children will learn about what corners (angles) and curves are when identifying different shapes
Number Recognition	• Children will identify numbers to 10
Pattern	• Children will learn to create their own simple AB, AABB and ABB patterns

Episode Synopsis:

Rocket Ride (Curious George)

The International Space Station's food supply has run out, and George is the only one who has the unique skills needed to fly the rocket and deliver the supplies. But George can't help being curious about what's in those interesting-looking containers. Before you know it, George has quite a mess to clean up before the supplies can be launched. Luckily, George's experience with cleaning his room and his knowledge of how shapes fit together helps him put it away in time to get the astronauts their supplies.

Educational Objectives: To introduce the idea that there are objects that orbit the earth: natural objects (the moon) and human-made objects (satellites).

Day 1

Video Co-viewing

(25 minutes/ Whole Class)

Materials:

Interactive Whiteboard (IWB)
Curious George: Rocket Ride video

	Start Video.
" 1 Wow, this is a pretty exciting adventure for a small monkey. Do you remember what his important job is?	Give students time to respond, or help them remember that George is taking food to the astronauts in the space station.
" So, what do you think "ignition" means and how is it helping George with his job? Have you ever heard that word before? " Did you see what happened after they said ignition? The rocket blasted off and you could see some fire and lots of smoke. That's because the rocket is powered by an explosion that happens when gas is set on fire, or when gas is ignited. So, when they said "ignition" they meant "set the gasoline on fire so the rocket can have power to blast off." " Now, let's go back to being math detectives—did you detect any math just now? " I heard some counting, but not regular counting, backwards counting! Let's do some backwards counting together and count down from 10: 10, 9, 8, 7, 6, 5, 4, 3, 2, 1, 0. Great job. What happened in the video clip after they counted down to 1? They said, "Ignition!" " Can you count down from 10 to 0 again?	Help children count backwards from 10 to 0.
" Great job counting backwards!	Resume video.
" 2 OK, math detectives, do you see any math here? " Did you notice these different shapes, let's name them: Square, Circle, Rectangle, and Triangle. " Good job. Let's see if these show up again in the video.	Resume video.

Day 1

“ 3 Oh no, what’s going on here? What happened when they reached 0, was George ready?	
“ Can you say “Zero”? Can you draw a Zero in the air? Can you draw lots of Zeros?	Sky write ‘zeros’ with children.
“ Let’s try a countdown to Zero, starting at 5: 5, 4, 3, 2, 1, 0 – Let’s all draw a 0 again. Good job drawing zeros!	
“ Do you think George will have another chance to drop supplies to the astronauts? Let’s find out!	Resume video.

Hands-On Center Activities

Dot Concentration

(10 minutes/Pairs of children)

Materials:

Dot Concentration Cards (2 sets)

“ Have you heard the word “concentration” before? Do you think you know what that word means?	Allow children a moment to respond.
“ When you concentrate, it means that your brain is working really hard on one thing. We’ve played a concentration game before—do you remember when we played the game where we had to match two of the same shapes? One of the things we had to do when we played that game was to pay attention to what was on the cards as we turned them over to see if they matched, or to remember where a card that we turned over was.	
“ We’re going to try a Dot Concentration game today. When it is your turn, turn over any two cards so that the dots are facing up, and think about if the number of dots on your two cards is the same. If they have the same number of dots, you can keep the cards with you until the end of the game. If you turn over two cards that don’t have the same number of dots, turn them back around so that the dot-side is face down, but try to remember where those card are for your next turn. Now it is your partner’s turn.	Model putting the cards face down on the table and then turn over two cards. Model finding a match and finding a set that doesn’t match.

Day 1

Hands-On Center Activities

Pattern Play

(10 minutes/Pairs of children)

Materials:

Clear Plastic Bin
Plastic Fruit
Counting Bears
Unifix Cubes
AB pattern signs
ABB pattern signs
AABB pattern signs

“ Do you remember what a pattern is? Let's see if there is a pattern somewhere in this room.

Help direct children to a pattern in the room—alternating stripes on a child or a teacher's shirt, a pattern on a poster or book jacket.

“ Now we're going to make our own patterns. We're going to use some of these things to make patterns on the table. I'm going to make a pattern to show you how it works: one piece of fruit, one counting bear, another piece of fruit, and another counting bear. This is called an A, B pattern. Let's see if you can make a pattern too.

“ I'll leave these pattern signs here to remind you about the different patterns we've talked about.

Day 1

Computer Center Activities

(10 minutes/3 times a week/ Pairs of children)

Materials:

Laptops
Headphones
Bubble Pop game
Blast Off game

Review Games

Vegetable Patterns
Flower Garden
Huff-Puff-a-Tron
Ribbit
Crystals Rule
Vegetable Harvest

Bubble Pop

" Remember, you and your partner should count out loud when you hear a bubble pop; take turns playing the game, and help each other count. As you play the game, I will be walking around to see if you need help.

During computer center time, as the children play the game, remind them to

1. Read the 1–10 as they appear on the screen to verify their counting
2. Count as they click on the bubbles

Blast Off

" Remember, you and your partner should count out loud, take turns playing the game, and help each other with the countdowns. As you play the game, I will be walking around to see if you need help.

During computer center time, as the children play the game, remind them to:

1. Take turns clicking on the numbers to complete the countdown
2. Read each number as they click it

Day 2

Guided Challenge Game Play

(25 minutes/ Whole Class)

Materials:

Interactive Whiteboard (IWB)
Bubble Pop game

Game Description:

Bubble Pop

George is having fun taking a soapy bath! Count bubbles as you pop them, either by clapping (requires a microphone) or by clicking.

" Today we are going to play a new math game. Similar to the last time, I will show you how to play the game on the interactive whiteboard. Later, you will have the chance to play this same game, with a partner, on the computer.

" Today's new math game is called "Bubble Pop." It is a game about counting and numbers. As I show you how the game is played, please watch carefully so you'll know what to do when you play with a partner during computer center time. Some of you will have a chance to try out the game now with a partner on the interactive whiteboard.

As you demonstrate the game on the IWB, be careful to:

1. Model playing by counting on with each cllck.
2. Encourage the children to try counting out loud every time they pop a bubble, and check the number inside the bubble to see if they are right.

" When you play on the computer, you'll be working with a partner. Remember to count out loud when you hear a bubble pop, take turns playing the game, and help each other count. As you play the game, I will be walking around to see if you need help.

Day 2

Hands-On Center Activities

Dot Concentration

(10 minutes/Pairs of children)

Materials:

Dot Concentration Cards (2 sets)

Repeat Week 5, Day 1 hands-on center activity.

Hands-On Center Activities

Pattern Play

(10 minutes/Pairs of children)

Materials:

Clear Plastic Bin
Plastic Fruit
Counting Bears
Unifix Cubes
AB Pattern signs
ABB Pattern signs
AABB pattern signs

Repeat Week 5, Day 1 hands-on center activity.

Computer Center Activities

(10 minutes/Pairs of children)

Materials:

Laptops
Headphones
Bubble Pop game
Blast Off game

Review Games:

Vegetable Patterns
Flower Garden
Huff-Puff-a-Tron
Ribbit
Crystals Rule
Vegetable Harvest

Bubble Pop

Repeat Week 5, Day 1 computer center activity

Blast Off

Repeat Week 5, Day 1 computer center activity

Day 3

Math Detective Journal with Easy Game Play

(15 minutes/ Small Group)

Materials:

Interactive Whiteboard (IWB)
Blast Off game
Math Detective Journals
Teacher Journal pages 5.1–5.4
Dry erase board
Dry erase marker
Crayons
Small student 0–20 number line (2)

Math Detective Journal

“ It’s time to be math detectives. Today we are going to be counting and looking at numbers on the number line. Let’s look at the number line and see what we know about it. Who can tell me what you see?	Allow a moment for children to respond.
“ That’s right! There are numbers on the number line. The numbers are in order. The biggest number is all the way at the right end of the line. The smallest is all the way at the left end of the line.	Use your finger to slide across the number line.

Day 3

“ Let’s begin by counting backwards from 10.

Demonstrating the task: As you demonstrate the task, you should be careful to:

Let children know that they will be counting out loud as you point to each number on the number line.

Have children count out loud backwards from 10. As they call out each number help them focus on the numeral on the number line.

1. Have children count backwards from 10 to 0
2. Have children count backwards from 10 to 7; then count forwards from 0 to 7
3. Have children count backwards from 10 to 6; then count forwards from 0 to 6
4. Ask children to tell you which number is bigger, 7 or 6?
5. Ask them how do they know? If they need help be sure to tell them about the location of the largest numbers on the number line (as you go up from 0 the numbers are getting bigger) and the location of the smallest numbers on the number line (as you count backwards the numbers are getting smaller)
6. Ask again which number is bigger, 7 or 6?
7. Have them sky write number 6, then have them sky write number 7
8. Call children up to locate 6, then 7, then 0, then 10 on the number line

“ Now it’s time for us to use our Math Detective Journals again.

Make sure each child has his/her Math Detective Journal

1. In their journals, have them turn to the next empty page
2. Tell them that they will be Math Detectives for numbers 6 and 7
3. Have a child point to number 6 then number 7 on the number line
4. On the first empty page, have each child write the number 6
5. On the next empty page, have each child write the number 7
6. Explain to them that they will be making their own page of “6.” That means that they are going to make 6 dots (like on the die), 6 tally marks (similar to what they’ve done counting shapes), and 6 of anything else they would like to draw using shapes, figures. or anything else they can think of. *Demonstrate using Teacher Journal page 5.1.*
7. Once they have finished their page of 6, they will be making their own page of “7” by making 7 dots, 7 tally marks (similar to what they’ve done counting shapes), and 7 of anything else they would like to draw using shapes, figures or anything else they can think of. *Demonstrate using Teacher Journal page 5.2.*

   Using Teacher Journal pages 5.3 and 5.4, have children compare a set of 6 to a set of 7 and identify which is larger and smaller; talk about how they know which is larger and which is smaller.

Day 3

Easy Game Play:

Blast Off

George is counting down to launch some rockets. Help him find the numbers, biggest to smallest. 5…4…3…2…1… Blast Off!

- “ Today we are going to play a new math game. Similar to the last time, I will show you how to play the game on the interactive whiteboard. Later, you will have the chance to play this same game, with a partner, on the computer.
- “ Today’s new math game is called “Blast Off.” It is a game about counting backwards from 10. As I show you how the game is played, please watch carefully so you’ll know what to do when you play with a partner during computer center time.
- “ You and your partner will take turns playing this game, and you will read the countdown numbers out loud together.

As you model the game on the IWB, be careful to:

1. Model playing, counting aloud as you play
2. Model recovering from clicking on the wrong number

- “ When you play on the computer, you’ll be working with a partner. Remember to count out loud, take turns playing the game, and help each other with the countdowns. As you play the game, I will be walking around to see if you need help.

Day 3

Hands-On Center Activities

Dot Concentration

(10 minutes/Pairs of children)

Materials:

Dot Concentration Cards (2 sets)

Repeat Week 5, Day 1 hands-on center activity.

Hands-On Center Activities

Pattern Play

(10 minutes/Pairs of children)

Materials:

Clear Plastic Bin
Plastic Fruit
Counting Bears
Unifix Cubes
AB Pattern signs
ABB Pattern signs
AABB pattern signs

Repeat Week 5, Day 1 hands-on center activity.

Computer Center Activities

(10 minutes/Pairs of children)

Materials:

Laptops
Headphones
Bubble Pop game
Blast Off game

Review Games:

Vegetable Patterns
Flower Garden
Huff-Puff-a-Tron
Ribbit
Crystals Rule
Vegetable Harvest

Bubble Pop

Repeat Week 5, Day 1 computer center activity.

Blast Off

Repeat Week 5, Day 1 computer center activity.

Day 4

Weekly Math Circle Routine With Guided Reading

(25 minutes/ Whole Class)

Materials:

Small teacher 0–20 number line
Small piece of paper or Post-it note to cover a number on the number line
Dry erase board
Dry erase markers
"10 Little Numbers" lyrics
Large Dice
Circle sign
Square sign
Rectangle sign
Round is Mooncake book

Optional: Use web link (http://www.youtube.com/watch?v=dk9Yt1PqQiw) to stream audio/video of "10 Little Numbers" using the IWB

Number Line Time

" Today we are going to work with numbers on a number line again. Does anyone remember what a number line is?	Hold up the number line and give children a chance to respond.
" Numbers on a number line always go in order. The 1 comes after the zero, the 2 comes after the 1. Who can tell us what comes after the 2? After the 3? After the 4?	Point to the numbers on the number line.
" On the number line, the numbers get bigger in this direction. The smallest number on this number line is 0 and the biggest is 20. The number 20 is the farthest away from the 0.	Slide your finger under the line, moving to the right.
" First, we are going to work together to find the number 2 and the number 10 on the number line that I am holding up. Who thinks they can come up and point to these numbers? " Now who thinks they can find a number that is MORE than the number 3? Does anyone want to come and try? " How do we know that the number (child's name) is pointing to on the number line is more than 3?	*Because it is further away from the zero; because it is closer to the ten; because it is bigger than 3; because it is further along on the number line.*
" Next I am going to hide a number on our number line. Can anyone tell us what number is missing?	Place a small card or Post-it note over the number 8.

Day 4

“ That was really great. For this next part of our activity, we are going to count out loud together. We'll start with the number zero and go up until the number 10 and then start at the number 10 and go back down to zero while we look at our number line. I am going to keep track of how many numbers we say by making tally marks on the dry erase board.

“ The last thing we're going to do with our number line right now is try and point to a number that comes BEFORE the number 7. Does anyone want to try and do this?

“ How do we know that the number (child's name) is pointing to on the number line comes before 7?

Because it is closer to the zero; because it is further from the ten; because it is smaller than the 7; because it is not as far along on the number line.

10 Little Numbers Song

“ Now we are going to sing our “10 Little Numbers” song together. Remember, I will say them first. You will repeat them after me and then we'll be ready to sing the song together.

As you sing along with the children encourage them to count along using their fingers.

10 Little Numbers (to the tune of 10 Little Indians)

Verse 1

One little, two little, three little numbers
Four little, five little, six little numbers
Seven little, eight little, nine little numbers
Ten little numbers

Verse 2

Ten little, nine little, eight little numbers,
Seven little, six little, five little numbers
Four little, three little, two little numbers
One little number

Number Scene

“ Now it's time to play our dice game! Does everyone remember how to play?

Choose a child. The child that you choose comes up and rolls the die. You hold on to the second die. You briefly (for 4 seconds) show all the children the side that the die landed on.

“ Now it is important for you all to try to remember the arrangement of dots I showed you, how many dots make up the arrangement, and the number that the dots count up to. Does anyone have any ideas? I'm going to keep track of all of your number ideas.

Children rely on their memories of the dot configuration they saw and offer matching number values on the number line. You poll children to find out how many think the configuration is a particular number. You maintain a tally record on the small dry erase board. Once you are satisfied that the polling is complete, have everyone count the dots out loud.

Day 4

“ Together let’s count the dots out loud. Ok, we’ve counted them all now … we have _____ dots altogether. Who wants to find this number on our number line?	Choose a child to find the number on the number line. Then, while displaying the die face, describe the configuration of dots using language similar to the descriptions below: 1. a single dot in the middle of the die face 2. two dots arranged on a diagonal at opposite corners of the die face 3. three dots in a row arranged on a diagonal at opposite corners of the die face 4. four dots one at each corner of the die face 5. five dots one at each corner of the die face with a single dot in the middle 6. two rows of three dots along opposite sides of the die face
“ Now let’s look at the tally marks and see how many of you were able to match the dots on the die to the right number. Who can tell me what the tally is for each number?	Choose a child to count the tally marks for each number selected. Congratulate the children who got it right.
“ Who wants a turn at rolling the next die?	A child that you choose comes up and rolls the die. You briefly (for 4 seconds) show all the children the side that the die landed on.
“ Is what I just showed you more or less than what we saw the first time the die was rolled? How do you know this? “ Great thinking everyone. Let’s look at the number line together to see if we’re right.	Then point to the numbers on the number line, explaining which number is closer to zero and therefore less and which is closer to the ten and therefore more.

Book Reading (“Round is Mooncake”)

“ Can you tell me about what you see on this book cover? Do you see any shapes? What are they? Do you think this cover can tell us something about what this story is about?	Hold the book cover up so all the children can see it. Read the title out loud.
“ Let’s find out what this story is about.	As you read the book to the children have the shapes available and be sure to hold up the shape that matches the shape mentioned in the book.

Day 4

Pause at Page 10

“ Do you know what shape is round like the moon, the lanterns and the rest of the objects we just read about?	Hold up the circle sign.
“ Do you know another word for a line that is shaped like this? The word is curve – this is a curved line and circles have curved lines, not straight edges.	Point to the curved line of the circle shape and the straight edge of the book.

Pause at Page 20

“ Can you see any curves on this shape?	Hold up the square sign.
“ This shape is a square and has only straight lines and angles. It does not have curves like the circle. Let’s count the sides of a square together: 1, 2, 3, 4. That was great counting!	Point to each side as you count.

At the end of the book, turn to page 17

“ Now can everyone count the number of kittens in the box?	
“ There are 3 kittens inside the box. How many kittens are outside of the box?	
“ There is one kitten outside the box. Which number is bigger, 3 or 1? How do we figure that out?	Give children a chance to respond.
“ There are a lot of ways to figure this out, you can look at the picture and point to the kittens that are inside and outside the box and see which number is bigger or you can count on your fingers, or you can use blocks or unifix cubes to help you count.	
“ Can you look at these two shapes and tell me what you see that is the same and what is different?	Hold up a rectangle sign and a square sign.
“ They both have 4 sides and 4 corners (angles) but are all the sides the same length? Which shape has longer sides? A rectangle always has two sides that are shorter and two that are longer. Which of these is the rectangle?	Point to sides and corners (angles).
“ A square has sides that are all the same size. Which is the square?	

Day 4

Hands-On Center Activities

Dot Concentration

(10 minutes/Pairs of children)

Materials:

Dot Concentration Cards (2 sets)

Repeat Week 5, Day 1 hands-on center activity.

Hands-On Center Activities

Pattern Play

(10 minutes/Pairs of children)

Materials:

Clear Plastic Bin
Plastic Fruit
Counting Bears
Unifix Cubes
AB Pattern signs
ABB Pattern signs
AABB pattern signs

Repeat Week 5, Day 1 hands-on center activity.

Computer Center Activities

(10 minutes/Pairs of children)

Materials:

Laptops
Headphones
Bubble Pop game
Blast Off game

Review Games:

Vegetable Patterns
Flower Garden
Huff-Puff-a-Tron
Ribbit
Crystals Rule
Vegetable Harvest

Bubble Pop

Repeat Week 5, Day 1 computer center activity.

Blast Off

Repeat Week 5, Day 1 computer center activity.