



Number Awareness and Place Value Development

by Amy Thomas, 2016 CTI Fellow
Reedy Creek Elementary School

This curriculum unit is recommended for:
First Grade, Math

Keywords: brain breaks, classroom tools, manipulatives, Morning Meetings, number awareness, place value, subitizing

Teaching Standards: See [Appendix 1](#) for teaching standards addressed in this unit.

Synopsis: This unit is designed to help students build a solid foundation in number awareness, which will lead to a better understanding of place value. Students will learn by playing games with a partner, which will aid each student in building on his/her prior knowledge and deepening his/her understanding of place value. Students experience math in fun ways, games and a little competition, and build partnerships in a safe environment through morning meetings. This combination will build a solid foundation of number awareness needed to master many math concepts.

I plan to teach this unit during the coming year to 19 students in First Grade during Math.

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Amy Thomas

Introduction

I participated in Charlotte Teachers Institute (CTI) in 2015. I have determined that my overall experience was engaging and informative. I enjoyed the conversations and collaboration with Charlotte Mecklenburg Teachers from a variety of schools and grade levels. Of course, I decided to apply for several 2016 seminars! I was accepted as a fellow for FUNdamentals in Math. I want my students to be able to learn, understand and enjoy math concepts. I would like to continue my education as a teacher, but more importantly support my student's academic growth.

When I was in school I did not question math concepts. I memorized the math facts and formulas to get the right answer and pass the test, but I did not have a real understanding of how or why I was even solving a given problem. I believe math is more than just memorizing facts and formulas. My goal for this unit is for students to have fun while learning math. I know that all students can learn if the teacher models and students investigate a variety of strategies for solving math problems. I believe it is important for teachers to work with individual students, asking leading questions and being able to help guide students to find a strategy that he/she can use to be accurate and efficient when working on a math problem. I think students should be given an opportunity to work with partners to recall prior knowledge, ask questions, compare and contrast, and communicate their personal thoughts and ideas. I consider modeling to be an integral part of math. Models help students communicate effectively by drawing pictures or using manipulatives to show their thinking. Through their thinking, sharing, mistakes and successes comes learning, quick recognition and comprehension. During my seminar sessions, I am learning that confusion and errors come before grasping a concept. In this unit, I would like to build on number awareness skills to promote understanding of place value. Students must know and visualize what each number 0-9 means before introducing place value. Dr. Juanita Copley is a professor at the University of Houston. She explains that the ability to "recognize the numerosity of a group quickly" is called subitizing. "Subitizing is skill that young children should develop. Children begin to see a small set of two - five objects without counting. Later, the subitizer sees objects as groups of 10s and 1s, combined with the understanding of place value, is able to see the numerosity of large groups of numbers quickly."(1) Place value is the numerical value that a digit has by virtue of its position in a number. To understand the value of a number 0-9 is key. Then students can begin to combine the digits to create larger numbers, which can be added or subtracted from other numbers. In first grade, students should be

familiar with numbers up to 120. This understanding can then be transferred over into financial literacy. A child owes \$1.07 and pays with \$1.10. How much change will the child receive? This can be solved using the same adding and subtracting strategies taught in class.

I consider math manipulatives to be a crucial material for students. Over my 19 years in teaching first grade, it amazes me to see the use of various blocks, cubes or a number line to help students solve a problem. I have noticed students choose a specific strategy or manipulative to help solve a problem. The concern is that some strategies are more efficient or the child does not know how to use the manipulative to solve the specific problem. I have also observed that one way of solving a problem does not work for all students. Dr. Copley states, "manipulatives should be used by children to learn mathematics. The manipulatives should be stored in a way for easy access and view the materials as theirs and take ownership so mathematics can be taught effectively." (2) My goal is for students to use manipulatives, visualize math problems and gain a deeper conceptual understanding. Some manipulatives for this unit are cuisenaire rods/base ten blocks, 120's charts/number line, and ten frames.

Manipulatives, class discussions and modeling are major components in learning and understanding the essence of a problem that lead to solving the problem correctly. In my seminar, I learned that confusion and errors also influence a student's learning. With that being said, I think students need to work in a community that supports individuals academically and socially in a respectful community. Morning Meetings are an essential component in providing the class with an environment helps them feel comfortable to make mistakes and work tenaciously until not only the answer is correct, but full understanding of the procedures/ steps to solve a problem and which tool/manipulative to choose to best meet the students individual need. I use daily Classroom Morning Meetings for just this purpose. These characteristics will help students meet the "demands of daily life in the globally interconnected 21st century. (3)

"Students learn best when they are actively involved," according to Barbara Gross Davis, Assistant Vice Provost for Undergraduate Education at the University of California at Berkley. (4) According to Chris Biffle, "The more the teacher talks, the more students we lose." (5) Biffle uses language as well as gestures for his Teach-Okay strategy. Teach-Okay is a "core educational device". It allows students to repeat "coherent, well organized sentences" with hand signals or gestures what the teacher is teaching. This is also a "powerful language development skill English speakers and for students who do not hear English at home." (6) I enjoy listening to and watching my students participate in and use this strategy throughout the day. In the beginning, they really do not understand what they are teaching to each other. Now the class is helping me teach math vocabulary by repeating words and gestures.

In 1706, over 300 years ago, Benjamin Franklin was born. During his lifetime, he stated, "Tell me and I forget. Teach me and I remember. Involve me and I learn." It amazes me that he knew the importance of student involvement in his/her own education so many years ago. It is not enough for students to recall formulas, memorize math facts and rote count up to 120 or higher. This knowledge only shows that the child can remember and recall information. It is not until the student applies what is learned, and is actively involved in that learning that deeper levels of understanding and reasoning occur. When the student applies the formula to solve a problem, compares one formula to another and can support why the particular formula works for a specific problem, that is the moment when the student truly mastered the particular standard.

Demographics

Reedy Creek Elementary School is a neighborhood elementary school built in 1981. The staff serves approximately 840 students in pre-kindergarten through fifth grade. Approximately 10% of Reedy Creek students are white, 56.0% are African American, 3.9% are Asian/Pacific Islander, 24.7% are Hispanic and 4.9% are multi-racial. The student population is approximately 51% male and 49% female. Students identified as economically disadvantaged account for 65% of our total school population. Reedy Creek was identified as a Title I school this year. Students identified as gifted and talented account for 3.4% of our population and students with identified learning disabilities account for 9.2%. Students with Limited English Proficiency make up 10.4% of our total student population.

The overall 2013-2014 End-of-Grade composite was 49.9 percent. Our overall 2015-2016 End-of-Grade composite was 62.01 percent. This is an increase of 12.11 percentage points within three years. The staff, students, and parents worked hard to exceed growth last year.

Reedy Creek Elementary has an established and experienced staff. The staff includes 55 certified teachers and 18 instructional assistants. Our faculty is highly qualified with over a third of the staff holding master's degrees and/or National Board certification.

My first grade class has a total of 19 students, 7 boys and 12 girls. 8 students are black or African American, 10 are Hispanic or Latino and 1 is Asian. I teach 1 student that is hearing impaired, 9 English Language Learners (ELL), and 2 Exceptional Students (EC).

Rationale

I trust that demonstrating and practicing with manipulatives by both the teacher and students in a cohesive classroom environment, students will have a deeper understanding in math and grow socially with others. Through active involvement, repetition, manipulatives, errors and team work students will be able to build a solid foundation of number awareness that leads to an understanding of place value. Playing math games

with dice, cards, beads, and cubes are fun. I have observed my students laughing and making connections during math class. Students that need re-teaching or more practice in order to work independently, have the opportunity to work in a small group with the teacher or be partnered with a student who demonstrates independence with a particular standard.

Content Objectives

In this curriculum unit, students will work in a cohesive classroom environment through morning meetings, take frequent educational and fun brain breaks to foster an environment that will build number awareness and convey a sense of enthusiasm when counting, solving and exploring math problems. In order to strengthen math development, students will more than likely get confused. I have learned in my seminar that it is through that confusion that learning can take place. Refer to Appendix 1 for a list of the standards this unit will cover.

Teaching Strategies

Whole Brain Teach-Okay--Students are taught new vocabulary using words and hand gestures. The class practices the words and gesture/movement together. Teacher says, "Teach" and the students respond with "okay". Students partner up to teach, review and practice the new vocabulary repeating the words and gesture. A gesture is a hand movement that goes along with the verbal definition to activate more parts of the brain and aid in recall and understanding of vocabulary.

Morning Meeting--In order to provide an atmosphere that helps all students feel welcome and important in a safe environment, I start each day with a Morning Meeting. During this time, students have the opportunity to greet each other, share as an individual with the group or in small groups, play a class game, and review/introduce an academic concept (Connolly). Through cooperation in our class community, I have noticed students helping and supporting classmates.

Brain Breaks--I believe that both academic and fun breaks during the day are invaluable. Breaks allow students to get their wiggles out in a positive way and circulate oxygen around the body in a structured break. I use breaks during transition times and to refocus students if I notice they are off task during work time. Many educational and entertaining exercises can be found on YouTube and GoNoodle. Two of my favorite YouTube wiggles are Macarena Count to 100 by Dr. Jean and Jack Hartmann's Count to 120 and Exercise. There are silly dances on GoNoodle as well as activities to increase brain and body coordination.

Small Group Instruction--Based on data, teacher identifies about 3 students who need re-teaching or practice on a specific standard. While the class is working on the assignment

of the day, the teacher pulls a small group to support on the targeted standard. After reinforcing the skill, reassess to determine next steps.

Cool Conversations--Students participate in academic conversations. One student/teacher shares a statement/thought. Other students respond with their opinions by saying, "I agree/disagree because _____ or will you tell me more about that?" Students are willing to share their thoughts because we have a safe environment and acknowledge the fact that they can have a different opinion and still respect each other.

Assess Yourself--I believe it is important for students to check in with themselves and me as the teacher. In a safe environment, students rate themselves in class for academics and behavior by showing the number of fingers that represent their thoughts. I have a chart in the room with the numbers 1, 2, 3, 4. Level 1 means that the students need help from the teacher or classmate. If a student needs more practice with a skill that is a level 2. When a student works independently that is a level 3. A level 4 means that you are an expert and can teach others. (Appendix 2, Anchor Chart #2) This allows the teacher to complete a quick assessment on the student's perception or understanding of what is happening in class.

Classroom Activities

During the first week of school, students play with the all the class manipulatives/tools.

Connect: Last year, you used many materials/tools to help count and solve story problems. We will continue to use manipulatives to help us in the first grade.

Teaching Point: I have three rules for both safety and respect for the students to incorporate when learning through play. While building creations or cleaning up, students are not allowed to throw the blocks or touch a classmate's creation. At any time during math, students may cleanup their area and work with a different tub of materials without asking the teacher.

Active Engagement: Students build, create, count and name shapes while working with the class tools. Throughout the math block, the teacher discusses in a small group with an individual about shapes they might see, how many sides on a particular shape, counting a pile of blocks to know who has one to one correspondence and if he/she can rote count to a given number.

Link: Today and every day I want you to be like mathematicians that look for shapes in the world around you and notice how different pieces connect together in interesting ways.

Reflection: After students clean up the areas, ask one or two students to share about what he/she created, noticed about the blocks or a number of blocks that the student counted. After that, ask students to assess themselves. Students rate themselves at a level 1-4 on their ability to share the materials, work in a small group or clean up correctly.

Materials: Prepare tubs of tiles, wooden cubes, snap cubes, power polygons, pattern blocks, geometric shapes, K'nex and unifix cubes. Each tub should hold enough materials for four students to share.

Each day of the school year, students participate in a whole group calendar lesson. In addition to practicing the date, days of the week, and months of the year, the class rehearses counting and are in training for the concept of place value. After marking the date for the day, students also represent the date by earning a penny and add a tally mark to the chart. For example, if the date is the 16th display a dime, nickel and penny for sixteen cents and show sixteen tally marks. When five pennies are collected, practice trading for a nickel. When another five pennies are shown, trade for a nickel. The two nickels can then be traded for a dime. At the calendar, the class also keeps track of the total number of days in first grade. This number is represented with Cuisenaire rods on the calendar. Students practice four tens equals forty and three ones' equals three. Putting that information together means that forty plus three equals forty- three days of school. Observe the photograph in Appendix 2, Anchor Chart #1 for the layout of a large class calendar.

On the tenth day of school introduce the concept of James Tanton's Exploding Dots on YouTube in conjunction with the rods used to mark how many days of first grade on the calendar. Please refer to Appendix 2, Anchor Chart 1. The concept that in our base 10 system placement of each digit makes a difference in the value of the number is priority. Tanton demonstrates the process that once there are ten dots in the ones place, they explode and create one dot in the tens place. I suggest reviewing the Tanton model of exploding dots every tenth day and modeling how the ten ones are replaced with a ten rod at calendar.

Connect: Every day, we add one cube to our count of how many days we have been in first grade. Today we are going to observe what happens when we add the tenth cube.

Teaching Point: After viewing Tanton's exploding dots, model for students at calendar that when we drop in the tenth cube in the ones place, we take all ten cubes out and replace with a ten rod in the tens place because there can never be ten cubes in the ones place. Ten is a two-digit number.

Active Engagement: Allow each student a chance to touch, count and observe a ten rod.

Link: Today we learned that ten cubes cannot be in the ones place. The ten ones are like an explosion of cubes that comes together/fuse as a group of ten.

Reflection/Assessment: Yes/No Way - Teacher makes a statement for the students to respond chorally.

Teacher: "Ten ones' fuse/come together to make a ten rod."

Class Responds: "Yes!"

Teacher: "A ten rod can be put in the ones place."

Class Responds: "No Way!"

Teacher: "After nine comes the number eleven."

Class Responds: "No Way!"

Repeat with other questions about numbers or exploding dots.

Materials: large calendar, one ten rod for each student, James Tanton's YouTube video

Cuisenaire Rods, Dimes and Pennies and Individual Ten Frames - After experiencing Tanton's exploding/fusing dots, students will be ready to use ten frames, coins and rods to represent numbers. I recommend that students begin by creating numbers from eleven to nineteen. Place these materials in a tub for students to choose from during daily independent work time.

Connect: Yesterday we experienced ten ones exploding and fusing together to make a ten rod.

Teaching Point: Today I want to teach you how to use coins, ten frames or rods to show/represent a given number. The teacher models how to build the number nineteen with a complete ten frame and a group of nine ones. See Appendix 2, Anchor Chart 4 bottom half for an example.

Active Engagement: Children can work with a partner or individually to represent a given number. A child would show the number sixteen using one dime and six pennies with the coins. For the ten frames, use one full ten frame and a frame with six dots. This practice helps students with counting on. The student can put ten in his/her head, then point to the ones saying, "ten...eleven, twelve, thirteen, fourteen, fifteen, sixteen." The same process can use with the rods.

Link: Today we became mathematicians by building a number with our class tools.

Reflection: Ask students to assess themselves using the tools. If you could make your number by yourself, you are a level 3. If you were able to help your partner show a number, you are an expert and a level 4. If you needed the teacher or a partner to support you, then you are a level 2. The teacher scans the room to be certain that the student's thinking matches what the teacher observed during independent work time.

Assessment: Tell the class to put the number eleven in their heads and count on six more ones. Ask what number did you count on to? How did you know what number to count on to and when to stop? Have one or two students to share the strategy used for counting on.

Materials: Cuisenaire rods, coins, individual ten frames

Coloring it on the Hundred Chart (Cook) - Each student is given a hundred chart and chooses a light colored crayon. The teacher picks a specific mathematical skill, including but not limited to before/after, one more/one less, between, place value, or addition/subtraction. A variety of ideas are located in Marcy Cook's book. When all the clues are given, answered and colored the chart, the colored numbers will make a final picture like a tree, robot, letter or number. I like to pick the final picture based on a sound we are learning in class, the date for the day, holiday, or a particular season. The students are impressed that they can make connections to the final picture. This activity can be completed once every other week.

Connect: We have been counting forwards, backwards and learning how digits have to be in the correct place to show the exact value.

Teaching Point: Today I am going to call out a clue, discuss the answer with you as a class and color the targeted number that answers the question on the one hundred chart. The teacher can model by showing a hundred chart on the board using a projector or document camera and coloring along after the class discussion.

Active Engagement: Each student participates by discussing the answer to the clue in a small group and coloring the agreed upon number. Ask students to show how they got the answer by pointing to the numbers and counting on or back.

Link: Today and every day I want you to become a mathematician by using your counting skills to identify numbers on the one hundred chart.

Assessment: Collect the students completed charts to check that the final correct picture was colored.

Materials: one hundred chart and crayon for each student, clues for the picture and projector/document camera

Skillboard Math (Cook) - Partners are given numbered tiles marked with numbers from zero - nine and one skillboard to share. The skillboards and clues are provided in Marcy Cook's book based on a variety of mathematical concepts for primary grades. I have found it best for partners to receive numbers on different colored fun foam so the students and teacher can easily and quickly identify which tiles belong to each student. As the

teacher calls out a clue, the partners discuss the answer and place the correct tile on the corresponding spot on the skillboard. This can be a challenge because the clue might be based on place value, however the skillboard could be based on adding, number recognition or counting. Students must think carefully and translate the concepts of the clues to the skillboard to have matching numbers at the end. This lesson can be used once every two weeks.

Connect: As first grade mathematicians, we have been counting to a given number, identifying the number that is one more/less than the number, adding and subtracting.

Teaching Point: Today I am going to call out a clue. Partners will discuss the answer to my clue and cover that answer with the correct tile on the skillboard.

Active Engagement: Partners discuss the answer to each clue and each cover the answer on the skillboard with the tile that answers the clue.

Link: Today and every day we become mathematicians and thinkers when we are able to work with our tiles and answer the clues with our partners.

Assessment: Walk around the room to check that each partner has one tile not placed on the skillboard. That tile should match his/her partner and should match the two remaining spots on the skillboard.

Materials: number tiles from zero - nine for each student, one skillboard for each partner set, clues for the game

Early Communicating with Tiles (Cook) - Students are given number tiles from zero - nine. The teacher calls out a clue based on a variety of math concepts, such as vocabulary, number sense, logical thinking and problem solving. After the list of six to seven numbers is made I ask the students to look at the one digit and two digit numbers we created and identify the smallest and the largest number from the list. Next, I ask the students to recall the clue that was given to record a particular number. The students make connections to numbers by thinking in reverse. Repeat this game twice a month.

Connect: We have been working on number awareness and thinking about how digits are put to make numbers.

Teaching Point: Today we are going to make a list the numbers that answer my clues. The teacher participates on a document camera/projector with the students to create the correct list of numbers.

Active Engagement: Each student uses tiles to create the list of numbers needed to answer the clues.

Link: Today we were mathematicians comparing numbers that identified the largest/smallest number from the list.

Assessment: How do we know which of the numbers from the list was the smallest/largest number? Have students turn and talk to the person at their table. Listen in for the team that suggests looking at the tens place for the largest number. Ask that team to share the response.

Materials: number tiles for each student, clues for the students to answer

Extended lessons using Dimes and Pennies, Individual Ten Frames and Cuisenaire Rods - After representing numbers with the materials, students can compare two numbers using a greater than or less than symbol. Reference Appendix 2, Anchor Chart #3 for a sample comparison. These materials are in a tub for use during daily independent work time.

Lesson 1-

Connect: Now that you know how to make a model for a number, we are going to extend our thinking by comparing.

Teaching Point: Today I want to teach you that once you can represent numbers you can compare the numbers by looking at the tens and ones to figure out which number is greater.

Active Engagement: Students can work with a partner or individually. Students pick two number cards from a group of numbers one - one hundred twenty, represent that number with the chosen material and compare.

Link: Today we became mathematicians by comparing two numbers.

Reflection: Ask students to assess their ability in making a model and comparing.

Materials: dimes, pennies, ten frames, Cuisenaire rods, paper and pencil

Lesson 2 - Introduce this lesson as students are ready or March/April. Students should use numbers between eleven and nineteen.

Connect: Mathematicians, we have created and compared many numbers up to 120.

Teaching Point: Today I want to teach you how to represent the same number two different ways. Model five plus seven equals twelve with ten frames. Model that students can trade for a group of ten and the amount left over.

Active Engagement: Students draw two ten frames and find the sum. Next, students trade the ones for a complete ten frame and the amount left over. Please see Appendix 2, Anchor Chart 4 top half for a sample problem and solution.

Link: Today as mathematicians, we learned that sums can be represented in two different ways by trading.

Assessment: Check the students work samples.

Materials: dimes, pennies, ten frames, Cuisenaire rods, paper and pencil

Formal Assessment

Each child is tested individually by the teacher to determine the number a child comprehends. The teacher begins showing 4 cubes to the student. The teacher picks up 3 cubes and asks, "How many cubes are under my hand?" Repeat with all the combinations noting the strategy the child uses to solve the problem. Is the child counting on, counting all the cubes, guessing a random number or using a related fact? If the child understands answers correctly and counts on or uses related facts, repeat the process with 5 cubes. If the child guesses a number or counts all the cubes each time repeat the process with 3 cubes. When the teacher determines the number the child understands, the student will be given that number and the number one more to build combinations with manipulatives and work on subitizing up to 10 by the end of first grade. Each student should be assessed once in a two-week period.

Math Journal - Each week the teacher picks four standards the students have been working on in class or review to practice Monday - Thursday and assess on Friday. Begin by dividing paper into 4 sections by drawing a line down the middle and straight across the middle. The teacher posts the math journal questions on the board and the students have a notebook to write down individual answers. Students then get the journal checked by the teacher. Corrections are made one on one with the teacher, praises are given for hard workers and high fives are given to those that are progressing. On Friday, the journal can be checked and graded to see what standards the class has mastered as a whole or standards that a particular student needs to practice in a small group.

Informal Assessment

Yes/No Way- The teacher calls out a true or false statement about a math concept. An example might be to say, "A tally is a group of five." The class responds with, "Yes!" Then the teacher says, "When adding we get a smaller number." The responds, "No way!" Repeat with various math concepts and vocabulary. The teacher notes the class taking note of who looks around the room for support and who answers quickly.

Appendix 1: Implementing Teaching Standards

In this curriculum unit, students will work in a cohesive classroom environment through morning meetings, take frequent educational and fun brain breaks to foster an environment that will build number awareness and convey a sense of enthusiasm when counting, solving and exploring math problems. In order to strengthen math development, students will more than likely get confused. I have learned in my seminar that it is through that confusion that learning can take place.

Common Core Standards

Number and Operations in Base Ten

1.NBT.A.1 Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral. The students will rote count, count a specific number of objects or model/show a given number using manipulatives or drawing a picture.

1.NBT.B.2 Understand that the two digits of a two-digit number represent amounts of tens and ones. Understand the following as special cases:

- a. 10 can be thought of as a bundle of ten ones - called a "ten." The students will create and/or trade for 10 using Cuisenaire rods, dimes and pennies, or individual ten frames.
 - b. The numbers from 11-19 are composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones. The students will create a bundle of ten and count on using the ones to identify numbers in the teens.
 - c. The numbers 10, 20, 30, 40, 50, 60, 70, 80, 90 refer to one, two, three, four, five, six, seven, eight, or nine tens (and 0 ones). The students will count or represent numbers using bundles of tens with zero ones.
3. Compare two two-digit numbers based on meanings of the tens and ones digit, recording the results of comparisons with the symbols $>$, $=$, and $<$. The students will identify greater or less than by counting and comparing numbers or quantities up to 120.

Appendix 2: Anchor Charts

Anchor Chart #1--Whole Group Calendar

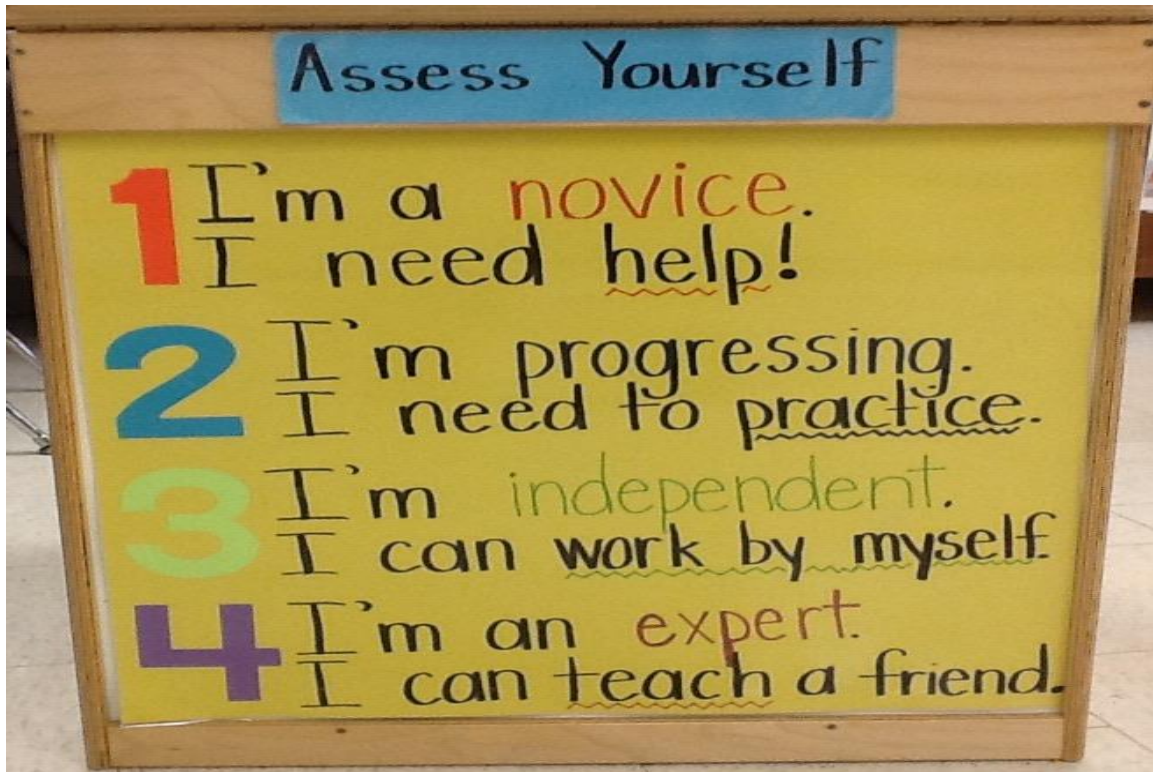


The cards behind the 27th - 29th state, "Yesterday was _____, Today is _____ and Tomorrow will be _____."

This date was Friday, October 28th. So the coins equal 28 cents and there are 28 tally marks.

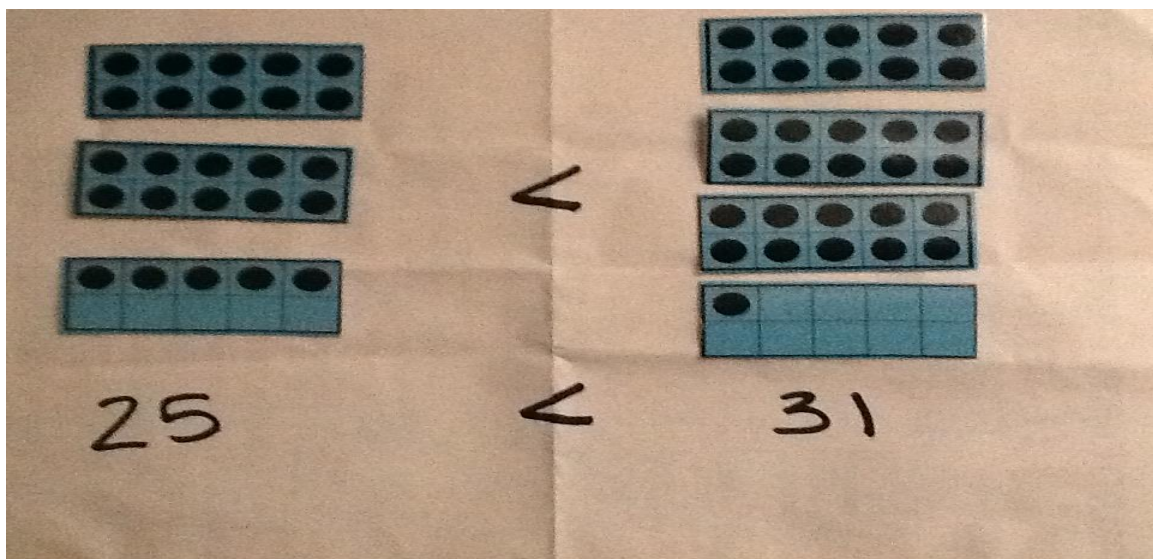
At this point, the students have been in school for 43 days. There are four groups of ten and three ones marked with cuisenaire rods and an equation $40 + 3 = 43$.

Anchor Chart #2--Assess Your Individual Progress and Understanding



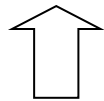
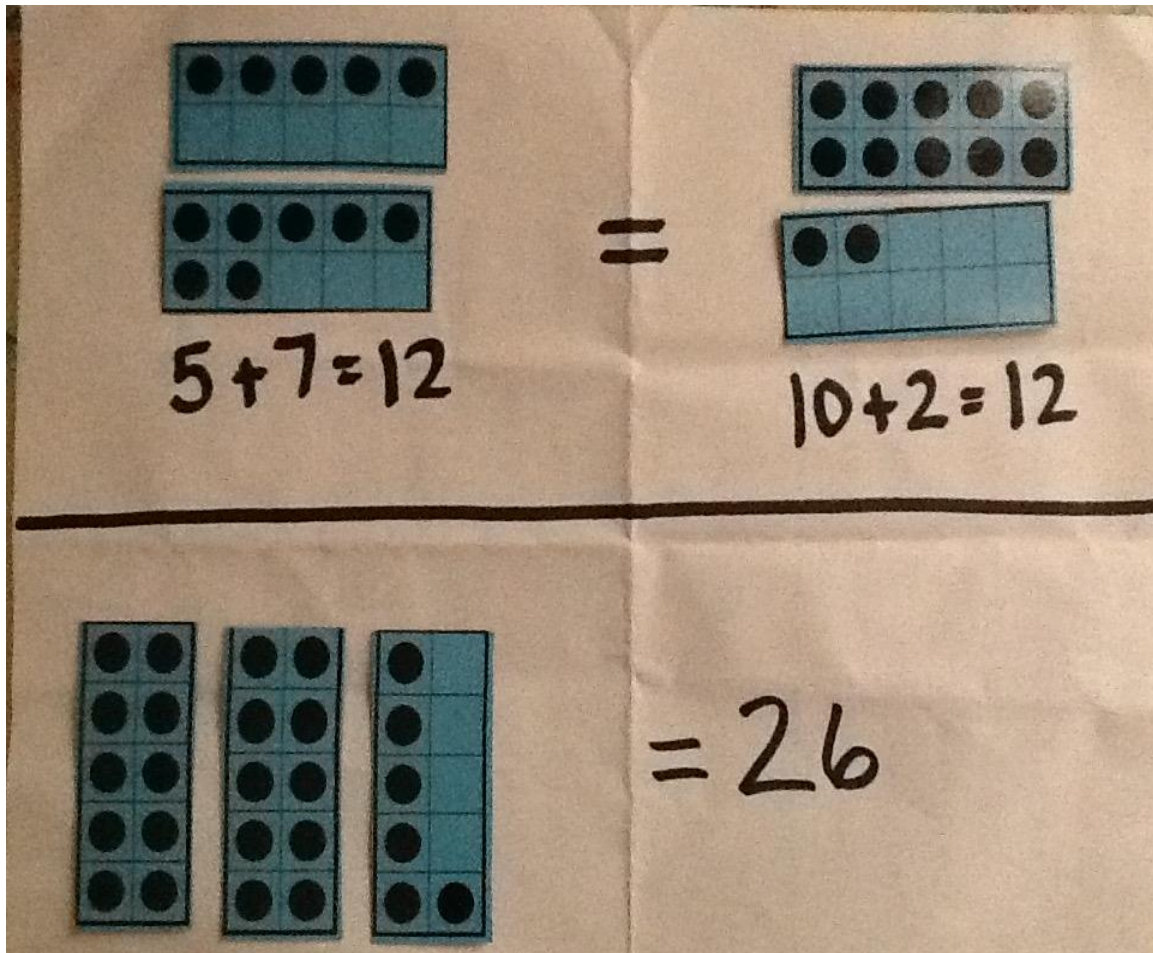
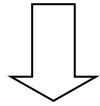
Anchor Chart #3--Individual Ten Frames

Comparing quantities with individual ten frames.



Anchor Chart #4--Individual Ten Frames

Trading to make a group of ten.



Representing numbers with ten frames and writing the correct number.

Notes

1. Copley, *The Young Child and Mathematics*, 54.
2. Copley, *The Young Child and Mathematics*, 28.
3. Kriete, *The Morning Meetings Book*, 5.
4. Biffle, *Whole Brain Teaching for Challenging Kids*, 45.
5. Biffle, *Whole Brain Teaching for Challenging Kids*, 47.
6. Biffle, *Whole Brain Teaching for Challenging Kid*, 46.

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Connolly, Melissa. *99 Activities and Greetings: Great for Morning Meeting-- and Other Meetings, Too!* Turners Falls, MA: Northeast Foundation for Children, 2004. Read to find games that help students follow rules and work as a team.

"Dr. Jean: Brain Breaks to Help Students Move and Learn." EdWeb. Accessed October 29, 2016. <http://home.edweb.net/webinar/dr-jean-brain-breaks-students-move/>. Energetic transitions to help students learn and get silly as needed throughout the day.

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money, and partner students will listen to a clue and work together to find the extra tile that matches their partner.

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Kriete, Roxann, and Lynn Bechtel. *The Morning Meeting Book*. Greenfield, MA: Northeast Foundation for Children, 2002. Starting each day with a classroom morning meeting involving a greeting, share time, group activity/game and academic message will promote a culture of caring and respect while learning.

Richardson, Kathy. *Understanding Numbers: Place Value*. Bellingha, WA: Math Perspectives Teacher Development Center, 2004. Teachers and students will understand place value as they combine and compare quantities.

Smith, Ron. *Cornerstones in Number: Place Value (ages 6-9)*. Carlton South, Vic.: Curriculum Corporation, 2007. Use manipulatives to understand and learn place value.

Resources for Students

Leedy, Loreen. *Mission--addition*. New York: Holiday House, 1997. Solve story problems with animal characters.

Pallotta, Jerry, and Rob Bolster. *Reese's Pieces Count by Fives*. New York: Scholastic, 2000. Have fun counting by fives on a construction site with Reese's Pieces!

Walton, Rick, and Cynthia Jabar. *How Many, How Many, How Many*. Cambridge, MA: Candlewick Press, 1993. Enjoy counting and recognizing numbers counting familiar objects.

