

## **Telling Stories through Addition and Subtraction**

**Regina Mulvena**

### **Introduction**

Kathleen H. Wilbur Elementary School is located in the Colonial School District in New Castle County Delaware. Our school serves grades K-5<sup>th</sup> with a total of over 1,100 students. Wilbur services students with special needs, as well as ELL students. We are also in our fourth year of offering the Spanish Immersion Program beginning in Kindergarten. Wilbur Elementary has an excellent staff dedicated to inspiring Wilbur students to excellence. Student success is our goal! In 2015, Wilbur was chosen as a National Model School through the International Center for Leadership in Education. We were also selected as a State of Delaware Recognition School by the Department of Education—one of 13 schools in the state.

### **Unit Goals**

During my six years as an elementary and kindergarten teacher, I've come to know that drawing is how my students "write." It is how they communicate their magnificent thoughts and ideas. Let's take a student that is coming to school for the first time. This student may have no preschool experience and no education prior to walking in the door on the first day. The expectation of that student putting thoughts to written words would be developmentally inappropriate. However, the chances of that students having experience with drawing or manipulating a crayon or marker, is more realistic. As soon as a small child picks up a crayon, they begin to draw. Children are by nature artists. They love to create art for loved ones or teachers. They take ownership of their work and are proud of what they have accomplished.

In the Common Core State Standards for Kindergarten, the expectation of writing with printed upper and lowercase letters go hand-in-hand with drawing and dictating to adults. It is not expected that students need to come in with writing skills. They development them throughout the year. As defined by the Common Core, drawing is writing, I want to be able to provide students the opportunities to use their imaginative drawings to aid them in their math concepts and practices. Kindergarten is all about learning those foundational skills and we do most of that learning through drawing. I want to give these students the means to develop basic algebraic equations through drawing cartoons or illustrations. My vision is to have the students create their own story problems through cartoons or drawings, rather than the teacher providing them with one. This will allow the students to use images and drawing to develop a better understanding

of addition and subtraction. This will provide me with evidence that they truly understand these concepts if and when they are developing their own problems and solving them independently.

## **Rationale**

The Common Core State Standards (CCSS) for Kindergarten states that students are expected to add and subtract within 10 before they enter first grade. With this skill, students are required to understand a variety of vocabulary words that have a great deal of meaning. These are required for them to thoroughly understand and comprehend what an operation is asking of them, and execute. There are many words that are needed to be understood before students can perform an algebraic operation, such as “equal”, “bigger”, “smaller”, “add” and “subtract” and understand the relationships between numbers<sup>1</sup>. These concepts can be extremely abstract for students of this age, therefore, we as teachers need to find strategies that help the student visualize and understand what these words and operations mean in order for them to make sense of what is being asked of them. The CCSS states that students need to show understanding of algebraic operations through mental math, drawing, manipulatives, or verbal explanations<sup>2</sup>. I see this as an opportunity to take what kindergarteners know which is drawing, and incorporate a reading skill, storytelling, and merge the two to help students gain and demonstrate their understanding.

Writing first started as markings or drawing, both random and/or intentional, and evolved into written words. As a Kindergarten teacher, the hardest skill to teach students is writing, especially at the beginning of the year. Therefore, we head straight to drawing, whether that be random lines and shapes or detailed illustrations. This gives students the freedom and comfort to express themselves without the pressure of putting letters and words to paper. This lends itself nicely to numbers as well. When we talk about counting and help understand the idea of one-to-one correspondence, drawing again is another key strategy we use. The idea of the numeral is a concept that takes time to understand but when you tie it to an illustration or image, you are giving the students a visual to help see the number and concept behind that number.

Same goes with understanding equations or ‘big kid number sentences’ as I like to call them. We begin the unit of addition and subtraction with storytelling and asking the students to draw what they hear. We show the students ways to illustrate the “addition” or “adding to” concept and the “subtraction” or “take away” concept by drawing more into the picture or crossing out some from the picture. We can do this process over and over again where students look for those keywords, “how many altogether?” or “how many are now left?”, which tells them ‘oh I am adding’ or ‘oh I am taking away’, but does this really show us that they truly understand the concept behind the operation? Let’s go back

to the idea of storytelling for a minute. Students are great storytellers, they love to make believe and come up with ideas and situations that parallel their life or their creative imagination. Now, let's take those three ideas, drawing, mathematical concepts and storytelling and allow students to draw their mathematical concepts to tell a story to show they comprehend the abstract ideas behind numbers. If my students are doing this at the end of the year, I will feel confident that they are ready to move on to more abstract mathematical concepts, because the basics of algebraic thinking has been instilled into them. This sequence of ideas will framework my unit turning story problems into comics. Let me help you visualize my idea.

Student learning will comprise of the understanding that parts of a whole is one interpretation of addition. They will understand that addition number sentences can be used to show parts of a whole and joining parts to make a whole is one interpretation of addition. Students will understand that addition number sentences can be used to show joining parts of a whole and by separating parts from a whole and comparison are two interpretations you have subtraction. Subtraction number sentences can be used to show separating parts from a whole or comparison subtraction situations. They will understand that addition and subtraction have an inverse relationship. It is important for them to understand the inverse relationship between addition and subtraction can be used to find subtraction facts; every subtraction fact has a related addition fact.

Student learning will be addressed through these four essential questions. Those being; what are some ways to think about addition and subtraction? How do we translate verbal ideas to the language of mathematics? How can we represent algebraic operations through visual images? How do we show the change in word problems through comics?

### **Learning Concepts**

Storytelling is a gateway into children's imagination where amazing things can happen! Just as Jane Wilburne states in her text about literature and math, idea that children can get lost in a world that exists only in words and can capture emotions and interests through illustrations and characters, is a powerful tool<sup>3</sup>. If we take the idea of storytelling and relate them to the mathematical elements, we can present math in a real and meaningful context. We often see storybooks used to help illustrate the math concept of counting, where each page shows a progression of counting with cardinality. Why not take this level of thinking to a more rigorous and higher level of thinking? Children's cognitive abilities are much more advanced than some give them credit for. I believe that children are able to handle more advanced content levels as long as it is presented in an engaging manner. For kindergarten, our big math concepts are counting and cardinality, operations and algebraic thinking, number and operations in base ten, measurement and data, and geometry. This unit is focusing on operations and algebraic thinking, or in kid

friendly words, adding and subtracting, or story problems that require students to write number sentences and find an answer. This is the biggest concept and last concept we teach before they enter first grade. It is extremely important that kindergarten students are able to add and subtract within 10 fluently in order to progress into more abstract and high order thinking math concepts. I see using comics as a storytelling tool for children. Through the panels, the students will tell a story, a short one, but it will have a beginning, middle, and end. Math and comic stories together will help them to demonstrate their understanding of addition and subtraction.

We focus on the idea of the operation, rather than number grabbing, to help students to understand the real meaning behind the problem. What is the story asking? What is happening within the story? When they understand the problem, or the *action* (what is happening?), rather than the numbers given, they are able to fully understand the operation. Typically, at this point, I pose a story problem the students and then draw to help solve the answer. I will use four strategies to help teach this unit. Those strategies are using vocabulary, illustrating/drawing, developing, and collaborating. Within those broad concepts, I will highlight new and unique ways to present and infuse the idea of mathematical elements and artist language.

### Vocabulary

Kindergarten is heavy on learning new vocabulary to help students understand the world around them. Kindergarten math is full of new terms that the student may have never heard of but they may be using each day. This section will be broken down by comparing mathematical terms to artist language and show the connections they hold to help students use comics as a tool. After reviewing

### *Story problems & storyboards*

We introduce the math term “equation” as a story problem. We ask the students to listen to a story and tell us what is happening, what are they asking. We also require them to develop their own story problems to better assess their understanding of equations. Story problems or equations, are both a sequence of either words or numbers that progress and have a result in the end. Whether it be the cat had 3 toys and 1 of those toys rolled away, how many are left, or  $3-1=?$ . On the flip side, a storyboard is also a progression of images that over each panel, tell a story sometimes with words and sometimes without. There is always a beginning and an end, just as story problems or equations. I want students to see the connection that there is a progression and an overall end or sum.

### *Operations & Transitions /action (what is happening)*

When we teach order and operation to our kindergarten students, we emphasize the idea that the operations is telling us if the number is getting BIGGER or smaller. We use different kinesthetic movements to help the students understand that the operations is very important. We teach the students that the operation is hidden in the problem and we need to listen for what they are asking. Once the story problem is presented and the students have had time to listen, we ask, “what are they asking? what do they want to know? how is our number changing? getting bigger or smaller? how do you know?”. We want the student to ignore the physical number for a moment and listen to how the story progressed, what events happened and how has that changed the number or beginning total. Now, moving on to the artistic word, transitions. Within comics, the transitions are what is happening between the panels, what don't we see happening or what action is visually missing. Transitions are full of interpretations from the viewers. For example, in one panel a boy could have a hose standing next to his friend, in the next panel the friend could be soaking wet. Well, did they show what happened? No. But does your mind automatically come up with a scenario for what happened between the panels? Yes. The boy sprayed his friend with the hose. I want the students to be able to transition from one panel to the other without the physical action being shown. If they understand the operations, then the transition will be built into the change in the sequencing panels.

#### *Change /larger or smaller & Panel (progression)*

Along with the transitions, there is change. The change will vary according to the operations being used. If we start with 10 apples and the boy eats 3, our original number has now decreased and gotten smaller, giving us a sum of 7. Therefore, to assist the students in a more visual progression of the operation, I want there to be a change in the size of the panel itself. So, in this particular problem, our panels would go from large to small to medium, because our first panel is the most, our second panel took a small amount away, leaving us with more than we took away but less than the total, giving us a medium size panel. Progression... it doesn't always change consistently & evenly, it changes according to what is happening.

#### *Sum or Difference & Outcome /Final Panel*

Every story has an ending, right? Just like every equation has an answer, or a sum/difference? How does our story problem end? What is the outcome? I want the students to be able to show in the last panel the answer. Comics have an ending, they have to conclude at some point. Therefore, I see this being where the students show the mathematical operations result, the answer. Of course, you won't see an equal sign because that is happening between panels, so you are left with the answer.

#### *Illustrating*

From the moment a child can hold a crayon, we have them drawing. Draw the sun, draw your family, or draw a card for your friend's birthday. They begin their understanding of writing by first drawing. They make personal connections within their drawing, they know what they drew, because they take ownership of their ideas and put them permanently down on paper. Within this unit, students will be visually representing vocabulary to demonstrate their understanding through the use of comic elements. The students will need to make connections to the vocabulary by drawing and illustrating what those words mean in a visual world. Just like they do when they draw a picture of their family, they can make an emotional connection that will hold a better understanding of the content being taught.

### Problem solving

Like mentioned before, writing starts with drawing. Writing first started as markings or drawing, both random and/or intentional, and evolved into written words. Drawing lends itself to be of importance when it comes to counting and one-to-one correspondence. We teach the students to first draw out what we hear in a story problem. Drawing is a tool that most students use to help make sense of the world around them, especially in math. Numbers are a visual representation of a quantity. Vice versa, drawing is a yet another way to show a number or quantity.

The students will be creating story problem using mathematical concepts and visual comic elements. Typically, we see students listening to a story problem then going back and writing the equation. Or in kindergarten, you see a student listening to a problem and then going back drawing what they heard, and then writing the equation. When these kindergarten students are drawing out their thoughts, you see the steps to find the answer within their drawings. See figure1 below. This strategy of drawing pictures is perfectly acceptable in kindergarten and would be considered correct if used. Although, I want my students to see the progression as a story to help engage and bring math to life.

Personally, math was my struggle because I had a hard time understanding what numbers were and how they worked. There was no emotional connection to them therefore I couldn't visualize what was happening. With the use of comic elements, I see students being able to find humor or connections with the images to help tell the story, help them see how the problem is progressing. See figure 2 below. Here, you see the problem broken into parts but still telling a story that they are in charge of filling in the blanks or transitions. What happened? The students become more engaged and excited and don't see the problem as scary, but as a story.

Problem: The dog had 5 bones.  
He ate 3 of those bones.  
How many bones does the dog have?

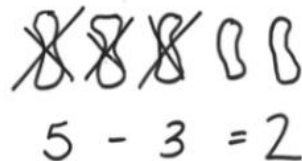


Figure 1

Problem: The dog had 5 bones.  
He ate 3 of those bones.  
How many bones does the dog have?



Figure 2

Go back and look at image 1 for a moment. This drawing a picture strategy can be extremely helpful for the student, although it comes with its downfalls. Most of the time a student gets a problem incorrect in kindergarten is because they do what we like to call 'number grab'. They hear two numbers and automatically they use addition to solve. Why? Well, adding numbers is much easier than subtracting. I foresee this new innovative strategy of storytelling in math as a way to eliminate that problem. If the students have to draw a story to correspond to the problem, then they are drawing each step at a time, like drawing a picture strategy, but this time, they have to identify the transition first in order to move on to the second panel. They are drawing the action, they are making the connection with the operation, therefore, are able to show the outcome in a more clear and visual way.

### Teaching strategies

Notice and Wonder

This is used in all content areas and can be adapted to meet the needs of all learners in the classroom. They will observe and share their ideas without any judgment or fear of having the 'wrong answer'. It gives students the opportunity to build curiosity and inquiry about what they are experiencing. Students will observe images, equations, sets, objects, or patterns. They then get the opportunity to discuss with peers or aloud what they have observed. From this point, students may share something they observed or what resonated with them or an element that they are inquiring about. This gives all students an opportunity to share and become part of the learning rather than being shown the learning. I see giving the students two panels where there is an event happening and they have to talk about what they see and what they are curious about. This will lend nicely into transition idea of what's missing. See figure 3 for example. I want them to be able to see that even though it does not show the boy spraying the girl with the hose, the fact that the boy had the hose in his hand

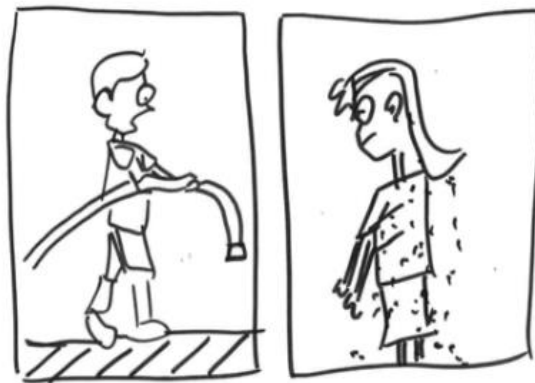


Figure 3

### Turn and Talk

This is a strategy we use very often in the classroom. Students are scaffolding ideas and formulating new ideas while talking to other peers. This gives the students an opportunity to share ideas without much risk of feeling wrong or being judged for their ideas. They can use language that they are familiar with while sharing out to others. Students are exposed to others perspectives and given time to use their verbal skills to engage in meaningful conversation.

### Odd One Out

We love this strategy in our kindergarten room! We use this tool a lot to help students analyze and understand unknown vocabulary words. With this tool, it can be used across



all content areas. We present students with a grid where there are 4 different boxes and within each box there would be an image, equation, video, or physical object preselected by the teacher. We present the information with three of the objects relating and one does not, being the 'odd one out'. Students then turn to partners to discuss why the one fits or does not fit and the reason why. The students share their thinking with their peers. They are then to come to a consensus as to with one if the Odd One Out. This allows for a lot of critical thinking and reasoning on the student's part. There is no wrong answer but there is an overall right answer when it comes to the content that the teacher is trying to present.

### Quiz Quiz Trade

This cooperative learning structure is a staple piece in our kindergarten room. This is where students are given the opportunity to stand up and move around, while working with multiple peers quizzing each other on learned/taught topics. The students first stand up, put their hand up, and pair up with a peer. The first partner, let's call them partner A, quizzes partner B by showing them their card. Partner B answers and partner A gives them praise or coaches them. This is a great opportunity for students to scaffold the content for their peers.

### Draw and Tell

Kindergarten is a world of creating and imagination. We begin to put those ideas into words and are expected to be writing those thoughts out on paper very soon into their first year of school. Most kindergarteners are not ready to write until midway through the year when letters and sounds have become more instilled and they are more proficient in the craft of writing. I use a tool to help students that do not have those writing skills but still are able to develop ideas, put those thoughts on paper. Draw and Tell is an app allows students to the opportunity to verbally and visually tell a story without requiring them to write words. The students draw pictures to retell a story or develop one from scratch, and attach a recording with their words. With this application, the students will be given comic panels and asked to illustrate a variety of vocabulary words introduces and that they will be expected to use within the unit. This will give me a better assessment of their understanding of the content in both mathematical and visual terms.

### Critical Thinking

If we give our students the right tools, the opportunities for them are endless. When we ask students to think, we are engaging their minds to make connections within the content. In order for our students to be problem solvers, they have to be given the chance to be challenged and create new pathways of knowledge that they may have never been asked to make. The students will be asked to create story problems in a new and

invigorating way, a way that is not a traditional way of learning. This will open up their minds to new ideas and different ways to think about the content of algebraic thinking.

## Literature

Literature and storytelling are infused into our entire educational lifetime of learning. We use stories to focus on classroom discussions of story elements and vocabulary. Stories are used to help students understand their own personal feelings or to understand another perspective. In this case, we are using stories to help make connections with mathematical concepts such as counting and algebraic operations. Literature will be used to show how scenarios change and evolve within the images, not just in the words. I want students to see how there is a progression to storytelling, just as there is in their math operations. This will help support the idea of the progression they will see in comic panels and how we may not always be given all the parts, therefore we need to infer what is happening. This will be done with picture books and counting books. Because there is not a direct storyline associated with those pieces of literature, either in print or in content, there is more of an opportunity for the students to use their own inferences to make connections to draw conclusions.

## Classroom Activities

Lesson 1: Let's explore our WORDS!

Essential Question: What is happening within the images? What is the cause and/or effect? How do I use pictures to help me figure out new word meanings?

Vocabulary: *Operations & Transitions /action (what is happening in the story); panels; progression/change*

Activating Strategy: Have the student look at different line styles that might express different emotions, such as an upward curved line. The students will have time to discuss by doing a turn and talk with their partners what they think of when they see that type of line, do they make any associations. This will cover 4 different line styles (upward curve, downward curve, zigzag, and sloped line). This conversation will allow students to see how lines can give off different emotions or feelings and represent different things to different people.

Lesson Plan: Before the lesson begins, the students will be in their teams of 2 and 4, which is differentiated by skill level. The skills levels are high performers converse with low to middle performers. The low performers converse with the middle to high performers. This allows students to have math talk conversations that are not one sided but interactive.

Show the students the images of the man holding a hose and the next panel of a woman dripping wet (see figure 4) and have them discuss what they see and ask what is happening. Discuss with the students how we don't see the woman getting sprayed with the hose but make the connection and inference that if she is wet, it must be from the man with the hose. Continue the conversation with the next series of images (see image 5), where there is a monster with a birthday hat on, then a birthday cake with candles, and finally a cake with not lit candles. Introduce the term panel, the boxes that the images are within. Panels hold the pictures and show a progression/change. Discussion in kindergarten can go in all different directions. I want the students to understand the meaning of panels and their job within the comic.



Figure 4

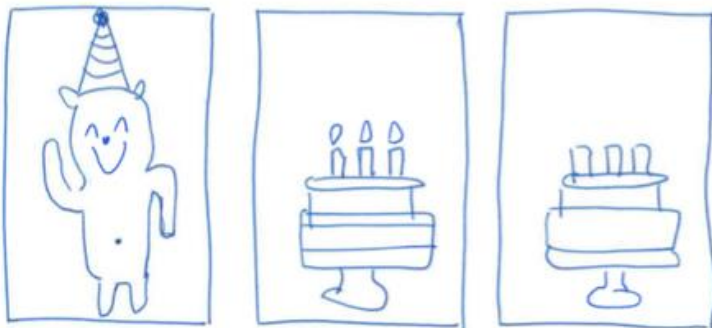


Figure 5

Next, show them a series of pages where there is a dog digging with one bone. Have them do a turn and talk and state what is happening. On the following slide, show them the two images where the dog is digging but now there is a panel with a bowl of bones. Have them do a turn and talk about what has happened in the story. Here we want them to be introduced the word ACTION (what is happening in the story? Am I using

addition/adding (making things bigger?) or am I using subtraction/subtracting (making things smaller?) Just like verbs, there are actions happening within these panels that we do not see). Give them students a few more examples of what this might look like within the panels. Make sure that the discussion leads to the conversation of addition being a progression that gets bigger and subtraction is a progression that gets smaller.

Lesson 2: What in the WORD are we talkin' about?

Essential Question: What is the connection between numbers and quantity?

Vocabulary: *Storyboards; Action (what is happening); Change /larger or smaller & Panel; Sum or Difference & Final or Last Panel*

Activating strategy: Start the lesson by showing the students a picture of a small apple and a big apple. Explain that today we are going to talk about the changes. Have the students look at the next slide of a large dog and a small dog, but this time in a box or panel. Ask the students to turn and talk to a partner about what happened to the dog from the first panel to the second. Then ask students if they notice any change in the size of the panel around the dogs.

Lesson Plan: During the lesson, the students will have at a series of boxes, which we call panels, of different sizes, small, medium, and large. The goal for the students is look at the size differences within the boxes and determine which numerals go where. Students place them in the boxes showing that the larger numeral would go in the largest box and the smallest numeral goes in the smallest box. The students are showing that they are making the connection between the numeral quantity and the size of the box. This shows a high level of critical thinking and allows students to use their understanding of comparing quantities.

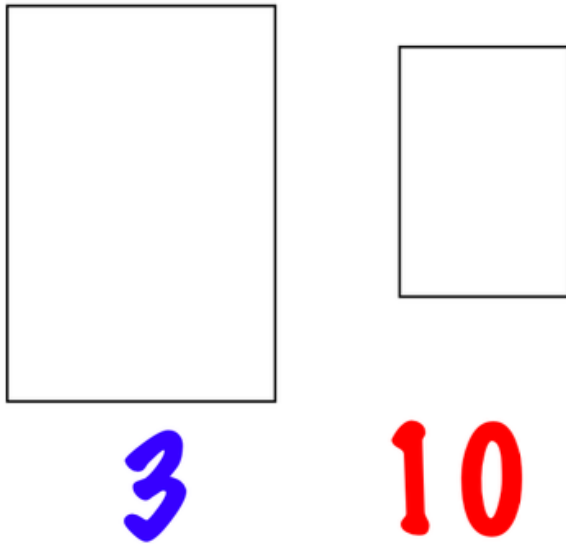


Figure 6

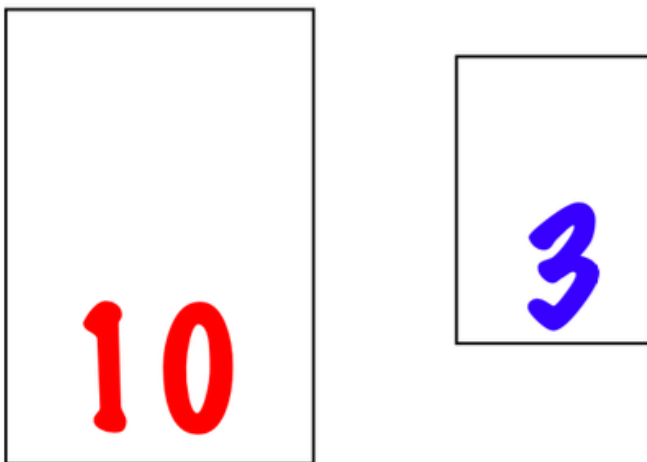


Figure 7

Lesson 3: What in the WORD are we talkin' about? Part 2

Essential Question: What is the difference between addition and subtraction? How do I use pictures to help me figure out new word meanings?

Vocabulary: *Story problems & storyboards; Operations & Transitions /action (what is happening); Change /larger or smaller & Panel (progression); Sum or Difference & Outcome /Final Panel*

Activating strategy: Revisit the panels and numeral slides from the previous lesson. Review how the size of the panel shows a progression and a change in quantity or size.

Lesson Plan: This lesson is an extension of the first two lessons and will focus on vocabulary taught and applied. During this lesson, the students will do an activity called Odd One Out (see figures 8,9 and 10). The students will be given a vocabulary word and a series of 4 images or graphics. The students will determine which images does not fit the vocabulary word. They will do a turn and talk with their partners to discuss which one they do not believe fits. Once they agree on an image that does not match the word, they will then flip to the corresponding box color and display to the teacher This will allow me to get a quick assessment of who understands the vocabulary words.

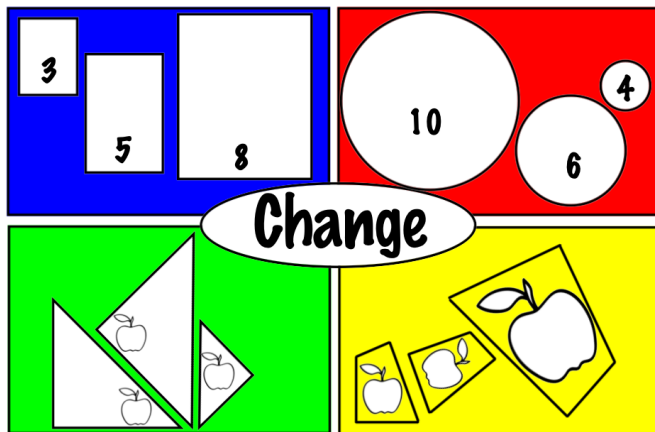


Figure 8



Figure 9

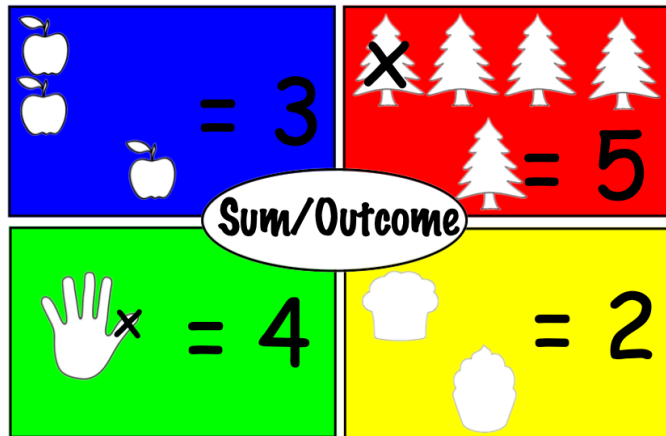


Figure 10

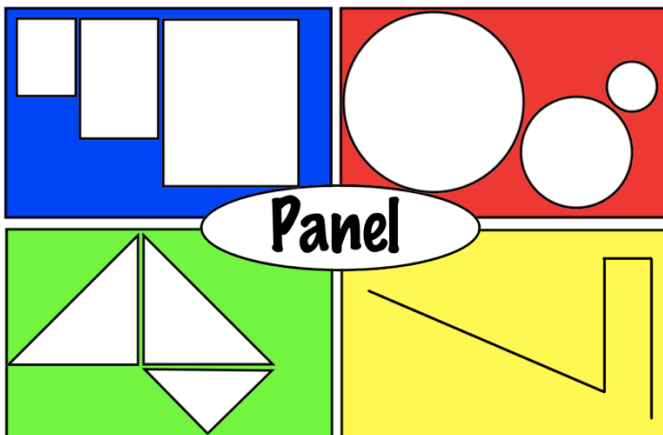


Figure 11

Lesson 4: Draw a WORD & Tell about it!

Essential Question: How can I show addition and subtraction with objects, fingers, mental images, drawings and sounds? How can I use drawings and objects to solve an addition or subtraction problem within 10?

Activating strategy: Review vocabulary taught by doing a Quiz, Quiz, Trade with images of each vocabulary word in different context. Each student gets a card and then will find a friend. The taller friend can quiz their partner first by asking them, what does my card show? The student then gives them praise or coaches them to help them with their understanding of the vocabulary. Once both partners have quizzed and been quizzed, they can high five and trade cards and find a new friend.

Lesson Plan: Using the app Draw and Tell the students will pick a vocabulary word they have learned and illustrate it with drawings and record their explanation. They can pick from the following word list:

- Panel
- Progression
- Action/Operation
- Sum/Outcome

Here I expect the students to create examples of what the word might look like, similar to the Odd Man Out activity. It is okay if they take an idea that I have already shared because they are also going to be asked to record their voice explaining what they made and how it shows the vocabulary word. Kindergarten responses can vary; therefore, I will be there to help coach and monitor understanding. I expect to hear a recording such as, “I made 3 circles and one is big, one is little, and one is in the middle. These are panels. I made the big one and put 6 inside because it the biggest”. This might take some time for them to use the language but it’s an opportunity for me to see who can recreate panels, show change, illustrate actions, and even how a sum.

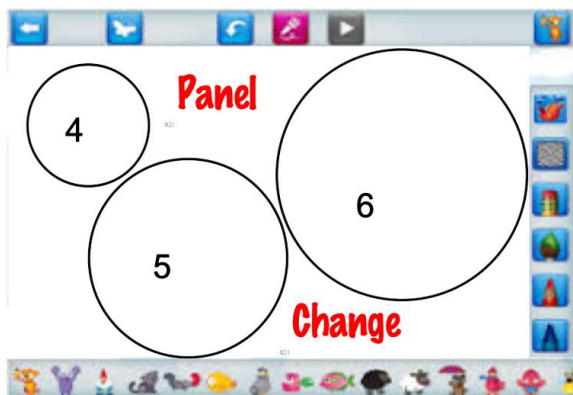


Figure 12



Lesson 5: Put it ALL together now!

Essential Question: How can I show addition and subtraction with objects, fingers, mental images, drawings and sounds? How can I use drawings and objects to solve an addition or subtraction problem within 10?

Lesson Plan: I want the students to take what they have learned and apply it within a comic. I will give them panels that are already made up that show a change in size; small, medium, and large. I want them to come up with a story to go along with the panels. I will give them the example in figure 13.

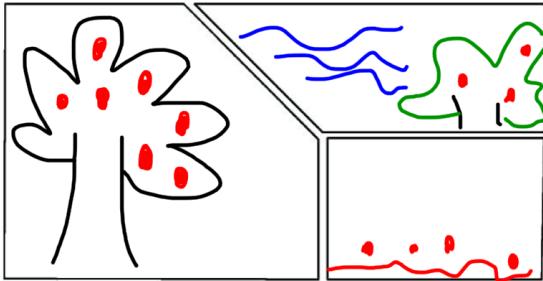


Figure 13

## Appendix

Our district and state also support the Common Core Standards. This unit addresses the following standards:

Counting and Cardinality

K.CC.A.3 – Write numbers from 0 to 20. Represent a number of objects with a written numeral 0-20 (with 0 representing a count of no objects).

Students will be demonstrating this standard in lessons 3 and 4.

K.CC.B.4 – Understand the relationship between numbers and quantities; connect counting to cardinality.

Student will be demonstrating this standard in all lessons.

K.CC.B.5 – Count to answer “how many?” questions about as many as 10 things in a scattered configuration; given a number from 1 – 20, count that many objects.

Students will be answering “how many?” in all lessons.

K.CC.C.6 – Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group, e.g., by using matching and counting strategies.

Students will be demonstrating this standard in lesson 2.

K.CC.C.7 – Compare two numbers between 1 and 10 presented as written numerals.

Students will be demonstrating this standard in lesson 2.

### Operations & Algebraic Thinking

K.OA.A.1– Represent addition and subtraction with objects, fingers, mental images, drawings<sup>1</sup>, sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations.

Students will be demonstrating this standard in lesson 5.

K.OA.A.2 – Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem.

Students will be demonstrating this standard in lesson 5.

## Resources

Hassinger-Das, B., Jordan, N., & Dyson, N. (2015). Reading Stories to Learn Math: Mathematics Vocabulary Instruction for Children with Early Numeracy Difficulties. *The Elementary School Journal*, 116(2), 242-264. doi:10.1086/683986

This article helped to illustrate the idea of comparing numbers in kindergarten.

National Governors Association Center for Best Practices, Council of Chief State School Officers. Common Core State Standards (Kindergarten Mathematics). National Governors Association Center for Best Practices, Council of Chief State School Officers, Washington D.C., 2010.

This website helps me focus on the Common Core State Standards that are being addressed in this unit.

Wilburne, Jane M., Mary P. Napoli, and Jane B. Keat. *Cowboys Count, Monkeys Measure, and Princesses Problem Solve: Building Early Math Skills Through Storybooks*. Baltimore, MD: Paul H. Brookes, 2011.

This book helped to enlighten me on how you can use math mathematics to tell stories, as well as used stories to illustrate mathematics.

## Endnotes

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<sup>1</sup> Hassinger-Das, B., Jordan, N., & Dyson, N. "Reading Stories to Learn Math: Mathematics Vocabulary Instruction for Children with Early Numeracy Difficulties."

<sup>2</sup> National Governors Association Center for Best Practices, Council of Chief State School Officers. "Common Core State Standards (Mathematics)."

<sup>3</sup> Wilburne, Jane M., Mary P. Napoli, and Jane B. Keat. "Cowboys Count, Monkeys Measure, and Princesses Problem Solve: Building Early Math Skills Through Storybooks."