

# Assessment Unit Plan

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## Overview

### Standard:

2.OA.1 - Use addition and subtraction within 100 to solve one- and two-step word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.

### Objective:

1. I can use addition or subtraction rule to generate a number sequence; and to identify the rule for a given number sequence.
2. I can use addition or subtraction to generate a number sequence when using money; and to identify the rule for a given number sequence.
3. I can solve Frames-and-Arrows problems having two rules.

### Assessments:

Throughout the Frames-and-Arrows unit I will present the students with several different assessments and listed below are a few key assessments that I will use.

1. Pre-assessment – I will use entrance cards that will present to the students with a one rule frame and arrow problem and I will ask them to try their hardest and complete it. I will use this to see what students know about the frame-and-arrow topic. This will hopefully tell me how much detail I need to go into for these lessons. (Lesson 1)
2. Formative Assessments - Musical Chairs Frames-and-Arrows assessment – Each student will receive a blank frame-and-arrow problem and they will make up the rule and the first number in the sequence. One that is completed students will walk around the room and when the music stops they will go to the closest paper and fill in the first free frame and put their name under it. This can be used to see if students can walk up to a problem and figure out the number that would come next in the sequence. This assessment will also show me if students can identify a mistake and correct it in a sequence. If students perform this task poorly then I will go back and reteach the lesson so that students can get a better grasp. (Lesson 1)

White Board Frame-and-Arrow with Money assessment – On the document camera I will present the students with a one rule frame and arrow money problem and I will point to a box and I will ask them to write on their boards and tell me the money that should go in that box by following the rule. This

assessment will be used to see if students can build on their knowledge from the one rule frame and arrow problems by now adding money into the mix. It will also let me see what students are struggling so that I can go and help them individually and help them figure out where they are going wrong. (Lesson 2)

*Smart Basketball Activity* assessment – I will divide the class into two teams and everyone will have a piece of paper because for each question I will expect every student to try and answer it. The way that students will be selected to come up and record the answer is by drawing sticks with their names on it and points will be recorded in the smart board game. This assessment will assess all of the knowledge that was presented to the students in lessons one through three but mainly will focus on two rule frame and arrow problems. When I get the information needed I will see if the students look ready for the summative assessment by looking how they answered the questions. (Lesson 3)

3. Summative Assessment: Students will be presented with frames and arrow problems that work with both one and two rules and that also involve money. This test will tell me what students learned and what I may have to go back and reteach.

### **Accommodations**

These lessons will be taught in a self-contained general education classroom. In the lessons word selection is key so that the students understand what I am telling them about. Also in my lessons I will present different learning styles to help meet all students' needs.

### **Unit Sequence**

The Unit will be taught in about four days with days 1-3 being the content and day four being the summative assessment.

### **Affective Domain**

In this unit the teacher will encourage students to feel free to explore the world of plants/nature. It will be a positive environment where students will be able to share their ideas and seek the teacher help if they have any questions.

### **Technology**

In the lesson I will use the technology resources that I have in my classroom. For instance, I will use the document camera to model different activities and worksheets that the students will complete. I will also use the smart board to do a review activity with frames and arrows. I will also use a radio to play music for the musical frame and arrow game/assessment.

# Lesson Plans

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## Lesson One

### One Rule Frame and Arrow Problems

\*Before I start this unit I will present students with a pre assessment which is an entrance card that has a one rule frame and arrow problem to see what the students know about the subject and if they can try and complete the process.

#### I. Standard

1. 2.OA.1 - Use addition and subtraction within 100 to solve one- and two-step word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.

#### II. Objective

1. I can use addition or subtraction rule to generate a number sequence; and to identify the rule for a given number sequence.

#### III. Anticipatory Set

1. I will start off the lesson by drawing a pattern of shapes on the on the board. I will ask the students if they can tell me what shape will come next in the pattern. After we do a few I will then tell them that today we will be working patterns. But instead of using shapes we will use numbers from the rule box.

#### IV. Input

##### a. Task Analysis

1. I will start off the lesson with the anticipatory set.
2. Once we finish the anticipatory set and I announce what we will be doing today is when I will present and model how to complete a one rule frame and arrow problem. The rule will be add 2 and I will start at 5.
3. After I model that I will present students with more examples like add 5, subtract 3, and subtract 2. If I feel that students have a grasp on that then I will have them open their math journals to page 43 and try completing the problems on their own.
4. After students have time to try and complete some of the problems I will now bring the class back together and we will go through the problems and rethink any that we may have gotten wrong.

5. Once we finish going through the problems is when I will have the students put their math journals away. This is when I will explain the musical frame and arrows game to the students.
6. I will tell them that they will be presented with a blank frame and arrow box. I will tell them that they will make up a rule by adding or subtracting a number in 0 – 10.
7. After all students have made their rules I will tell them that they need to put a number in the first box so that students will know where to start.
8. Now that all students have that completed I will put the students desks in a circle and I will tell them to lay their paper on their desk and when the music starts they will begin walking around and when the music stops they will go to the closest paper and complete the rule.
9. This will be done till all of the boxes are filled.
10. Once it is completed students will put their desk back to where they belong and have a seat.
11. Now that students are back to their seats I would like to check and fix their frame and arrow boxes so that they are all correct if they needed to be changed.
12. Once they finish it they will hand it in and I will review it to see if I need to reteach the material.

#### b. Thinking Levels: Bloom's Taxonomy

1. Comprehension – I can understand that each frame and arrow has a rule that you must follow to get the answer.
2. Application – I can use the rule to solve the problem.
3. Synthesis – I can create a frame and arrow question.
4. Evaluation – I can judge if my fellow classmates completed my frame and arrow boxes correctly.

#### c. Learning styles

1. Number Smart – Using number sense to solve frame and arrow problems.
2. Music Smart – Incorporating music in to math in the musical frame and arrows game/assessment.

#### d. Accommodations

1. Word Usage – using word that students will understand to better help them grasp the concept

#### e. Differentiated Instruction

1. If students are having trouble I will pair them in partners for the journal work so that they can work together.

#### f. Method and Materials

1. Lecture, Demonstration, simulations
2. Worksheets, Journal, technology

#### IV. Modeling

1. I will show the students how to complete a one rule frame and arrow problem.
2. I will provide a visual so that students can see how to complete the problem.

#### VI. Checking for Understanding

1. I will present what I would like the students to do then I will ask them to help me out and fill in some of the boxes.
2. I will have students work on their own in the math journal and then I will go back through it and review and correct it.

#### VII. Guided Practice

1. I will first model for them and after I am done completing that I will have the students try the skill in their math journals.
2. Once the students show that they are really ready to try it on their own is when we will do the musical frame and arrow boxes.

#### VIII. Closure

1. For a wrap up I will have the students check their frame and arrow boxes to see if they are correct.

#### XI. Assessment

1. I will know if the students met the objective by looking in their math journals and by looking the frame and arrows that they made up.

#### X. Reflection

1. How did the students respond/perform?
  - a. Overall I would have to say that the students performed pretty well. When I presented them with the entrance card assessment for the most part the students did not really know what to do with the assessment. I told them to try their best and for the most part they did. As I introduced the lesson to them I really feel that they grasped it pretty quickly. But when I introduced them working bigger numbers they had a little harder of a time but they did understand the concept of what to do. I felt that the independent practice in the journal was good and really benefited from it. I really felt that going over the answers with them was very beneficial. At this point time was getting really close to the end but we managed to still fit everything in and the kids really loved playing the musical chair game.

2. Was the musical chair activity a good measurement?
  - a. I would have to say that the musical chair game was a very good one. The students really enjoyed playing it and I feel that they really grasped the concept from looking at the assessment. The only thing that I would change is I felt like the students may have needed more time to go through the answers that their classmates put down.

## Lesson 2

### One Rule Money Frame and Arrow

#### I. Standard

1. 2.OA.1 - Use addition and subtraction within 100 to solve one- and two-step word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.

#### II. Objective

1. I can use addition or subtraction to generate a number sequence when using money; and to identify the rule for a given number sequence.

#### III. Anticipatory Set

1. I will start off the lesson by reminding the students about how we added coins. I will present 50 cents on the board. Will than tell them what would happen if I added a dime to it. They already know that a dime is worth ten cents so they will tell me that it equal 60 cents. Then I will them what if we did it again. They will tell me it will be 70 cents. I will do this one more time. Then I will draw the frame and arrow boxes around it and putting the add ten in the rule box and link it to what we will be doing today.

#### IV. Input

##### a. Task Analysis

1. I will start with my anticipatory set.
2. Once we finish that I will present and model several different money rule frame and arrow problems like subtract three cents and add five cents.
3. After I feel that the students have a grasp on the concepts I will hand out white boards and markers to them. I will present the students with a frame and arrow problem that deals with money. I will point to the box and have the students identify on the white boards what they think should go in the box.
4. When I tell them to they will revel to me what they think should go in the box. I have one of the students tell me how they did this.
5. We will do this several times or until I feel that the students have grasped the concept. This will determine what students I may need to focus in on for extra help or if I should have the students work in pairs when I have them try the problems in their math journals.
6. Once we put away all of the white boards I will have the students open up their math journals to page 59 and complete the money frame and arrows.
7. Once the students have completed I will have them out them away.

#### b. Thinking Levels: Bloom's Taxonomy

1. Knowledge – I know how to add and subtract coins.
2. Comprehension – I understand how to add and subtract cents when they are in frame and arrow problems.
3. Application – I can use what I know about money and use it in frame and arrow problems.

#### c. Learning Styles

1. Number Smart – I can use numbers and add and subtract them
2. Visual/ Spatial – Presenting different frame and arrow problem on the board.

#### d. Accommodation

1. Word Usage – using word that students will understand to better help them grasp the concept

#### e. Differentiated Instruction

1. If students are having trouble I will pair them in partners for the journal work so that they can work together.

#### f. Method and Materials

1. Lecture, Demonstration, simulations
2. White Board, Markers, Journal, technology

#### V. Modeling

1. I will show the students how to add and subtract different one rule frame and arrow problems when working with money.
2. I will verbally tell the students how to complete the problem as well as providing a visual for them to look at.

#### VI. Checking for Understanding

1. When I am presenting students with a problem I will teach some and then I will stop and check and check to see if they understand what I am teaching them.
2. I will point to a frame and arrow box and have them show on their white boards what they think will go in the box.

#### VII. Guided Practice

1. We will review the new task as a class, then I will have the students will practice the skill on the white board, and then they will practice the skill on their own.

## VIII. Closure

1. I will close the lesson by having the students try the new skill on their own by completing the page in their math journal.

## X. Assessment

1. I will know if the students met the objective by looking in their journals and by see who was answering the questions right in the white board activity.

## XI. Reflection

1. How did the students perform and respond in the white board activity?
  - a. I really liked this activity because it really gave me the opportunity to see what all students were putting down. So this allowed me to see what students were struggling and as the class was thinking I was able to go up to those students and work with them individually and help sort out where they were stuck. For the next time I really need to stress to the students the importance of writing the cents sign because a lot of them were for getting to put it and if you don't put it in then the answer they put down is wrong.
2. How was my instruction received and what should be modified for subsequent lessons?
  - a. I feel overall my instruction was taken in well because the students had a pretty good background of what we were working with since we did it yesterday. Again I really need to stress to the students that they need to add the cent sign after their number when they are putting it in the bod. I also felt that journal practice was good. One thing that I might change for the next time that I do one of these lessons is have the students work on their own and then have them check their answers with a partner and then go over it as a class.

## Lesson 3

### Two Rule Frame and Arrows

#### I. Standard

1. 2.OA.1 - Use addition and subtraction within 100 to solve one- and two-step word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.

#### II. Objective

1. I can solve Frames-and-Arrows problems having two rules.

#### III. Anticipatory Set

1. I will start off the lesson by asking the students what they know about street signs. They will tell me about the signs they know. I will then tell them that when you see a sign it is rule and you have to follow it and that today we are going to have two rules or two street signs that you have to follow in our frame and arrow boxes.

#### IV. Input

##### a. Task Analysis

1. I will start off the lesson with my anticipatory set.
2. Now I will explain how to identify the two rules when you are presented with a two rule problem.
3. I will do this by telling them that under each rule is a dotted or a solid arrow and where there is a dotted arrow or a solid arrow in the frame and arrow problem you need to write that rule above it so that you know what to do between each box.
4. At this point I will model how I would do this and I would complete the first set of frame and arrows so that the students can fully see how they should complete it.
5. After that I will model another but this time I will add money into the rules so that the students can review how they did this in the last lesson.
6. If I feel that students have a grasp on the concept I will have them turn to journal page 68 and 69 and try and have them complete it.
7. After students have had time to complete the problems I will review them and go over any questions that the students may have.
8. If the students are ready this is when I will present them with smart basketball activity.
9. The class will be divided up into two groups and everyone will be given paper to record their answers.
10. I will start the game by spinning the spinner and then and dragging the ball on the board so we will know how much the question is worth and what the question is.
11. Once the question is presented all students will complete the question.

12. Once all students have completed the question I will draw a stick with a student's name on it and they will try and tell me what the correct answer is.
13. If they get it correct then their team will receive the points. This will be completed until all questions are answered.
14. I will close the lesson with a ticket out the door with a two rule frame and arrow question on it.

#### b. Thinking Levels: Bloom's Taxonomy

1. Knowledge – I know that each arrow has its own rule.
2. Comprehension – I understand that you must be aware what rule you are working with.
3. Application – I can use what I know about one rule frame and arrow boxes and apply two rule frame and arrow boxes.

#### c. Learning Styles

1. Number Smart – I can use numbers and add and subtract them
2. Visual/ Spatial – Presenting different frame and arrow problem on the board.

#### d. Accommodation

1. Word Usage – using word that students will understand to better help them grasp the concept

#### e. Differentiated Instruction

1. If students are having trouble I will pair them in partners for the journal work so that they can work together.

#### f. Method and Materials

1. Lecture, Demonstration, simulations
2. White Board, Markers, Journal, technology (Smart Board)

#### V. Modeling

1. I will show the students how to add and subtract different two rule frame and arrow problems.
2. I will verbally tell the students how to complete the problem as well as providing a visual for them to look at.

#### VI. Checking for Understanding

1. When I am presenting students with a problem I will teach some and then I will stop and check and check to see if they understand what I am teaching them.

#### VII. Guided Practice

1. We will review the new task as a class, then I will have the students will practice the skill on the white board, and then they will practice the skill on their own.

## VIII. Closure

2. I will close the lesson by having the students try the new skill on their own by completing a ticket out the door.

## X. Assessment

2. I will know if the students met the objective by looking in their journals and see what the students put down for the smart activity.

## XI. Reflection

3. How did the students perform and respond in the smart board activity?
  - a. I feel that the students really loved the assessment and I feel that it was very beneficial for me to use it because it should me what the students performed well at and what need work. I could tell this because I had the students mark which one that they got wrong.
4. How was my instruction received and what should be modified for subsequent lessons?
  - a. I felt that this lesson was a little rushed because there was a lot to fit in for just one lesson. I feel that the students received the information but I may want to go back and reteach it just so that I can make sure that the students have a good grasp on the material. I found from the data collected that some students had a hard time interchanging the rules so I really need to stress for them to write the rule above the arrow that they are working this. I feel that this minor change will help improve the students' scores so that they can be proficient in this task. Based on the data received from the responses I think that for next time I should put the activity on another day because it was a lot to take for the students but they did good enough that I feel that they are ready for final assessment.

# Scoring Guides

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## **Pre-assessment:**

### Entrance Card

- Students will be given an entrance card and will have a opportunity to earn six points. A passing grade will be considered 5/6 correct.

## **Formative Assessment:**

### Musical Frame and Arrows

- Students will receive a black frame and arrow worksheet. They will have an opportunity to earn up to 35 points. A passing grade will be given if they have all rules and frame and arrows boxes filled in correctly. The lowest grade students can receive is a 25/35.

### White Board Activity

- Overall answers by the class will provide me with feedback if the class is understating the concepts. It will let me decide if I should go back and reteach or if I should just help the individual students who are struggling.

### Journal Pages

- Journal pages allow students to try the skill on their own and it also frees me up so that I can help struggling students as well as lets me see if I need to go back and reteach if the class is really having a hard time with the concept that we are working with.

### Smart Board Activity

- Students will write down what they think the answers are for the smart board slide questions and once the answers are review they will mark if the questions they answered were right or wrong. I will review the material and see if students are ready for the summative assessment. I would like the class average to be at least a 70 or better.

## **Summative Assessment:**

### Final Assessment

- Students will receive a final assessment where they will have to solve one rule and two rule frame and arrow problems. The test will be worth 44 points. 31/44 is considered a passing grand and will help me determine if I need to go back and reteach the lesson.

# Reflection

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I would have to say that completing this unit was very beneficial to me. The reason for that is because it has allowed me to look at the data that I collected throughout the lesson and determine if I need to go back and reteach. For the most part the students performed rather well. There were a few students that would have like to do better but the nice thing about using *Everyday Mathematics* is it allows for lots of review in the math boxes. One thing that I might change for next time I might split up the three lessons into five lesson. I feel that this allows for better understanding because when I was teaching the lesson I felt a little rushed to get the material in.

When looking at the just the results alone the student performed well and showed me that they grasped enough of the concepts to keep moving on to the next lesson as planned. Overall I would have to say that I really enjoyed do this unit because it helped me think of ways that I could maybe do this in my other lessons a little better than I have been doing. I did really enjoy analyzing the data and trying to decide if I should move on with my lessons.