

Topic: Using Models and Algorithms to Solve Division Problems

Grade: 4

Subject: Math- division

Designed by: Jessica Kelley

Summary:

In my class I have 20 students. There are two students with learning disabilities who have trouble paying attention for an extended period of time. I also have three students who are gifted and need very little help, but can be a big help. My classroom is set up with an open carpet in the front of the room for lessons, and four groups of five desks behind the carpet area. In the front of the room I have a dry erase board and a smartboard, which is where I teach my lessons. Now onto the goals of this Unit Plan. This Unit plan is for students to understand the connections between multiplication and division. Once they understand the connections then that will help them find the quotient to the division problems. Another goal is for the students to be able to solve open ended word problems that involve division.

Content

Red 1: Stage 1, 2, 3; concept map; timeline

Yellow 1: Lesson 1

Green 1: Lesson 2

Blue 1: Lesson 3

Purple 1: Lesson 4

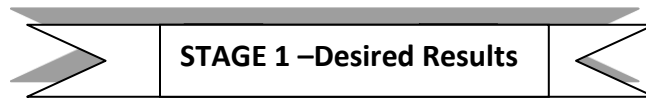
Red 2: Lesson 5

Yellow 2: Lesson 6

Green 2: Lesson 7

Blue 2: Lesson 8 & 9 (Review)

Purple 2: Lesson 10 (Test)



STAGE 1 –Desired Results

Topic- Using Models and Algorithms to Solve Division Problems

Established Goals:

1. Apply understanding of models of division place value, properties, and the relationship of division to multiplication.
2. Apply inverse operations to solve multiplication and division equations.
3. Find an accurate way to find quotients involving multi digit dividends.
4. For the students to be able to apply and understand the different relationships to the division and multiplication problems to help them evaluate them.

Standards:

Grade Level: 4

CC.2.1.4.B.2

Use place value understanding and properties of operations to perform multi-digit arithmetic.

CC.2.2.3.A.1

Represent and solve problems involving multiplication and division.

CC.2.2.3.A.2

Understand properties of multiplication and the relationship between multiplication and division.

CC.2.2.4.A.1

Represent and solve problems involving the four operations.

Big Ideas: Connections between multiplication and division. Solving open ended division problems.

Essential Questions: 1. How are patterns used to describe the relationship in the problems?

2. Can mathematics support effective communication?

3. Can you use the relationships in the problems to help you solve them?

4. Does anybody remember what the connection between division and multiplication is? Can you demonstrate it for me?

5. Can anybody demonstrate how to make an open ended word problem involving division? Can anybody demonstrate how to solve it?

Enduring Understandings:

The students will be able to apply their knowledge of strategies to help them be able to solve problems. They will understand the relationship between division and multiplication to help them find the problems.

Students will know:

-how patterns are used to describe relationships in mathematical situations

-different strategies and when they are appropriate for each task.

-mathematical representations and relationships

-how division and multiplication can support good communication

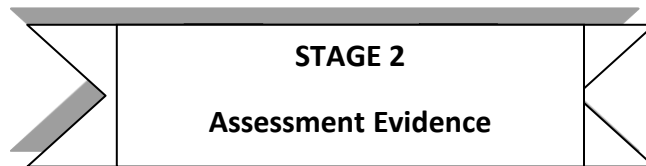
Students will be able to:

- Apply their understanding of relationships between division and multiplication to help them solve problems.

-use inverse operations to solve division problems

-apply a sufficient way to find the quotient of multi digit numbers

-use their knowledge of strategies and shown relationships to solve division and multiplication problems.



Performance Tasks:

Grocery store activity: You and your classmates go and grab a case of something. (case of gum, case of pop, case of juice, case of sponges, etc.). When you bring it up to the board you set up an open ended problem for the other students to evaluate on their whiteboards and for you to evaluate on the board. The first problem will be set up by the teacher, and then the students are expected to attempt to make an open ended problem. The individual who made the problem for their assessment has to evaluate the problem on the board in front of the class, the class is how they check themselves.

G- You will be able to read an open ended division question, and be able to correctly write out the formula. You will be able to find the quotient of an open ended division question on your whiteboards.

R- You and more class mates will be grocery shoppers.

A- You and your classmates will go to the back of the room individually and pick something from there so the teacher and your classmates will be able to make open ended questions, and you and your classmates can evaluate those problems and find the quotient.

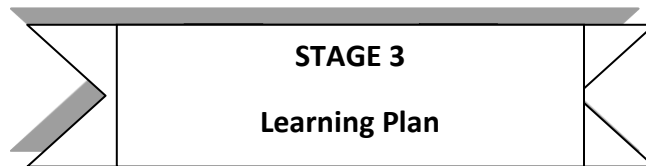
S- Use place value understanding and properties of operations to perform mulita-digit arithmetic. Represent and solve problems involving multiplication and division. Understand properties of multiplication and the relationship between multiplication and division. Represent and solve problems involving the four operations.

P- Your performance will be evaluated individually by the teacher on effort.

Other Evidence:

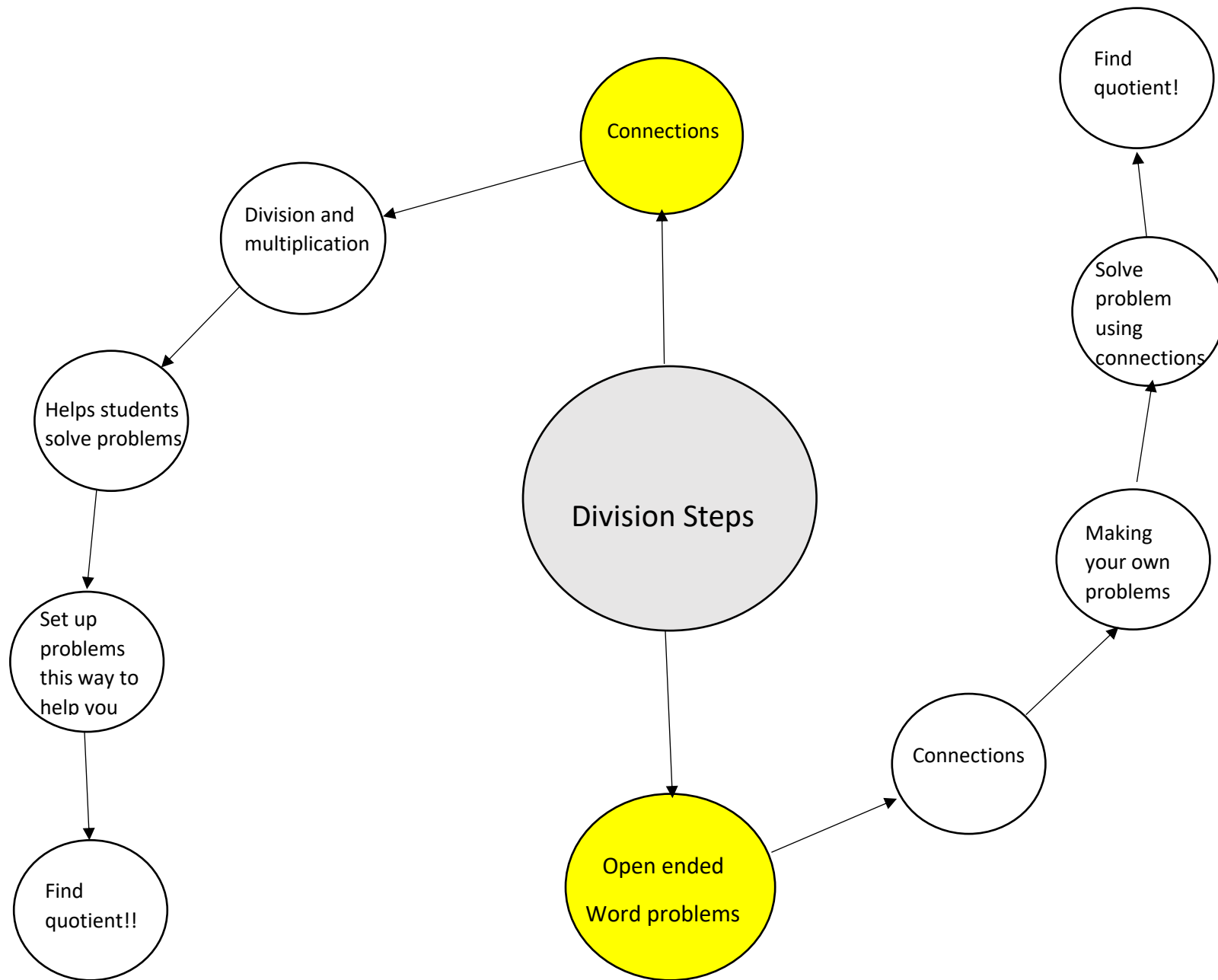
- Rubrics are made to help me evaluate their level of understanding and their level of effort
- Activities given will show me who understand the information and will help the students grasp the idea with other classmates that can help them
- Group activities that could definitely enhance their learning skills because they have more help and it'll help it click with them or with me individually when they need help
- Results from the game show me how well they all know it
 - During the individual and the group one.
- Their math journals have to be seen by me so I can approve of them before moving on with what we are going to do that day.
 - If they are not right I will tell them where they messed up and tell them to go and redo the answer
- Traditional Tests & Open ended responses
- Journal Prompts to check for understanding

Score	description
4	The student gives complete effort towards making the open ended question, and gives complete effort towards finding the quotient. The student also is very knowledgeable about the content.
3	The student gives almost all of their effort towards making the open ended question, but makes mistakes. This student also gives some effort towards finding the quotient, but makes a couple mistakes.
2	The student gives some effort towards making the problem and some towards finding the quotient. They also miss most of the problems and made mistakes making the problem.
1	The student gives little to no effort making the problem and finding the quotient. The student also misses all of the problems and doesn't know how to make the problem at all.



Learning Activities:

1. Division Game online in your groups of 3 (Math Monster Division-Learning Connections)
(http://www.mathplayground.com/math_monster_division.html)
 - a. Mental math- divide numbers by memory or through other efficient methods
 - b. E1, R, T
2. As an individual you will be given an ipad or laptop to play a division game on
<http://www.multiplication.com/games/division-games>
 - a. You get to choose which one you play, you just have to show me the results at the end (I will be observing)
 - b. E1, R, T
3. Review Session (2 days before the test) each person gets quizzed by their friends with connection cards by a partner, and I will call them each back individually to get quizzed by me (each problem will be asked based on their understanding)
 - a. E1, T
4. In their math binders I will give them all four numbers to write two open ended division questions. They will write the questions and glue on the numbers in the correct spots. Then they will be expected to write out the answers, their work in the journal, and write how they got that quotient.
 - a. R, E1, W
5. Grocery store activity to explain open ended problems.
 - a. H, T, O, R
6. Math Journal Prompts- Today I learned _____. I'm not sure about _____. I'm wondering about _____.
What is the connection between multiplication and division?
 - a. E2, W
7. Connection cards that will quiz you on connections between division and multiplication.
 - a. E1, R, E2, T
8. Activity for the students to make open ended questions and evaluating them.
 - a. R, E2, W,
9. Jeopardy game
 - a. E2
10. Whiteboards
 - a. E1, T, W



Student Teacher Candidate: Jessica Kelley
Lesson Subject(s)/Title: Division
Lesson Date(s): 4/24/17
Course & Grade(s): 4

INSTRUCTIONAL MATERIALS:

Math binder sheets, and math journals.

ESSENTIAL QUESTIONS/ SUBSIDIARY QUESTIONS:

How do you find the connections between multiplication and division?
What have you learned about the connections between multiplication and division?

PURPOSE:

To help the students understand the connections between multiplication and division to help them find the quotient.

SPECIFIC LEARNING OBJECTIVES: (clear, observable)

The students will be able to solve a division problem by knowing the connections between multiplication and division.

STANDARDS:

CC.2.3.A.1: Represent and solve problems involving multiplication and division.
SA: CC.2
EC: M03.B-O.1.1.1: interpret and/or describe products of whole numbers (up to and including 10 x 10)
CC.2.3.A.2: Understand properties of multiplication and the relationship between multiplication and division.
SA: CC.2
EC:M03.B-O.2.2.1: Interpret and/or model division as a multiplication equation with an unknown factor.
CC.2.2.4.A.1
SA: CC.2
EC: M04.B-O.1.1.1: Interpret a multiplication equation as a comparison. Represent verbal statements of multiplicative comparisons as multiplication equations.

DIFFERENTIATION STRATEGIES:

The learning disabled students: They will be able to visualize and have hands on activities in this lesson. These students will be checked most often when I'm walking around the room to check the answers that the students have written down.
The gifted students: They will have the same worksheet and go through the same activities as everyone else. They will probably get through the worksheet faster, so if they do get done faster than the other students and have them all right they will be given an iPad to play division and multiplication connection games.

ANTICIPATORY SET:

Division grid activity where the kids learn how to make the connections between multiplication and division involving grouping to help them figure out the quotient.

INPUT/ ACQUIRE NEW KNOWLEDGE:

and/or

APPLY/ DEEPEN NEW KNOWLEDGE:

Sensory Register	STM	LTM
Attention Recognition Perception	Focus Organization Rehearsal Visualization	Connections Elaborations Meaning

Facets of Understanding

1. Explanation
2. Interpretation
3. Application
4. Perspective
5. Empathy
6. Self-Knowledge

Multiple Intelligences

1. Linguistic [words]
2. Visual [pictures]
3. Mathematical [numbers & reasoning]
4. Kinesthetic [hands-on]
5. Musical [music]
6. Interpersonal [social]
7. Intrapersonal [self]
8. Naturalist [nature]

Multiple Exposures [4 x 2]

1. Dramatization
2. Visualization
3. Verbal

Complex Interactions

1. Discussion
2. Argumentation

Bloom's Taxonomy

1. Knowledge [Verbatim]
2. Comprehension [Own Words]
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Aspects of the Topic

1. Facts
2. Compare
3. Cause/Effect
4. Characteristics
5. Examples
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9 Effective Strategies

1. Similarities and Differences
2. Summarization and Note Taking
3. Reinforcing Effort and Providing Recognition
4. Homework and Practice
5. Nonlinguistic Representations
6. Cooperative Learning
7. Setting Objectives and Providing Feedback
8. Generating and Testing Hypotheses
9. Questions, Cues, and Advanced Organizers

The students' will acquire new knowledge through this when they learn the connections between multiplication and division. They will learn how to make those connections on their own and deepen their own knowledge. The students' will apply their new and deepened knowledge when they do the worksheet in their math binder. They will also get to apply their knowledge during their math journals closure.

CLOSURE/ASSESSMENT:

At their carpet spots I will ask them and we will have a discussion on "What have you learned about the connections between multiplication and division?"- Think pair share.

HOMEWORK: (Purpose- Preparation, Practice, Expansion)

none

EVALUATION/ASSESSMENT OF STUDENTS:

The math binder activity and division grid.

INSTRUCTIONAL PROCEDURES:

Time:

<p>The teacher will:</p> <ol style="list-style-type: none"> 1. Put the set up for a multiplication and division problem, and put two numbers in the equation. 2. Introduce the grid to the students, and explain the connections to division 3. Observe and check their answers and have someone go to the board and fill in the blanks. 4. Transition into the math binder activity and do 1-b with them on their whiteboards. 5. Give instructions that they go sit at their seats and do a similar worksheet to the division grid worksheet. They need four different colored pencils. 6. Observe while they do on the worksheet. 7. Check their work and have them put them in their math binders. 8. What have you learned about the connections between multiplication and division? Talk to a friend near you about this question. 9. Share with us? 	<p>The students will:</p> <ol style="list-style-type: none"> 1. Sit at their carpet spots. 2. Listen to Introduction 3. Grid Activity (On next sheet)- students separate apples into different groups during the activity. 4. Practice and ask questions by evaluating the problems on everyone's grids and the one on the board. 5. Somebody will volunteer and go to the board to put the problem up in the blanks. 6. Math Binder activity- Do the heart division grid at your desk. Use three different colored pencils to group the hearts. 7. Do the worksheet 8. Get it checked by the teacher and put it in the math binder. 9. Go to their carpet spots after I check their sheets. 10. Have a discussion with their friends about what they learned about the connections. 11. Share with their classmates what they learned today and what they understand about the connections between multiplication and division.
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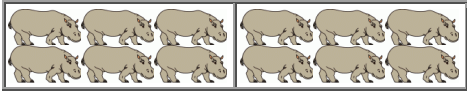



INSTRUCTIONAL PROCEDURES:

Time:

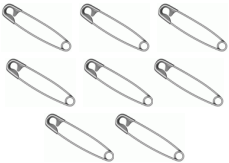

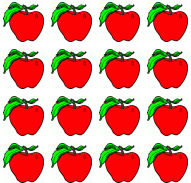
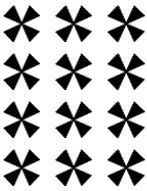
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<http://www.homeschoolmath.net/teaching/md/division-multiplication.php>

1. Fill in the blanks.

<p>a. Two <i>groups of 6</i> is 12.</p> <p style="text-align: center;">$2 \times 6 = 12$</p> <div style="text-align: center;">  </div> <p>12 divided into <i>groups of 6</i> is two groups.</p> <p style="text-align: center;">$12 \div 6 = 2$</p>	<p>b. Five <i>groups of 2</i> is ____.</p> <p style="text-align: center;">____ $\times 2 =$ ____</p> <div style="text-align: center;">  </div> <p>____ divided into <i>groups of 2</i> is ____ groups.</p> <p style="text-align: center;">____ $\div 2 =$ ____</p>
<p>c. One <i>group of 4</i> is 4.</p> <p style="text-align: center;">____ $\times 4 =$ ____</p> <div style="text-align: center;">  </div> <p>4 divided into <i>groups of 4</i> is one group.</p> <p style="text-align: center;">____ $\div 4 =$ ____</p>	<p>e. Five <i>groups of 1</i> is 5.</p> <p style="text-align: center;">____ $\times 1 =$ ____</p> <div style="text-align: center;">  </div> <p>5 divided into <i>groups of 1</i> is ____ groups.</p> <p style="text-align: center;">____ $\div 1 =$ ____</p>

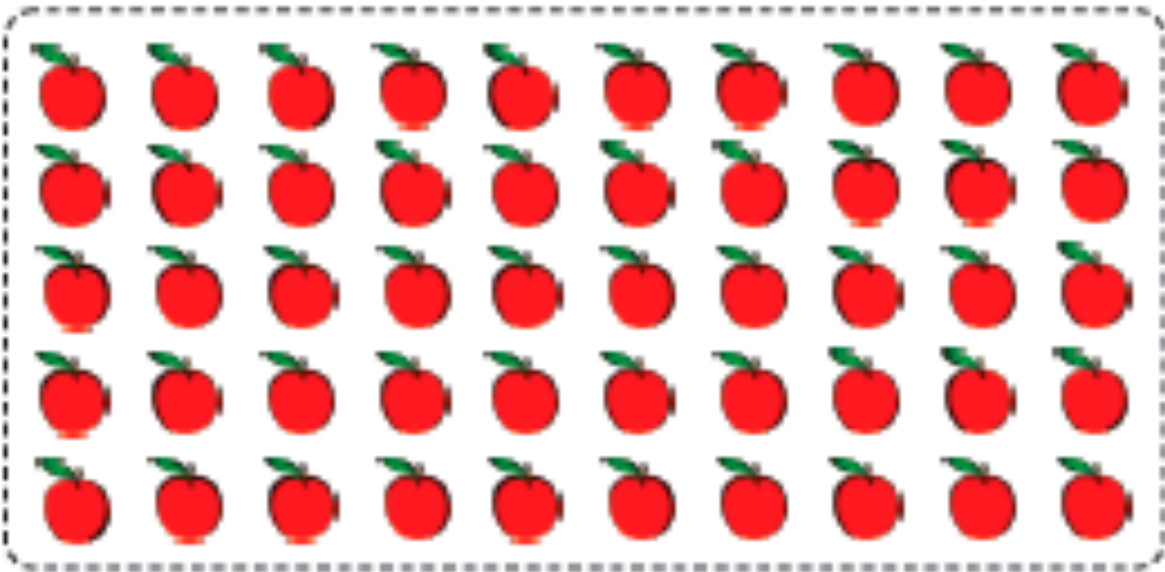
2. Make groups. Then write the division and multiplication facts that the pictures illustrate.

<p>a. Make groups of four.</p> <p style="text-align: center;">____ $\times 4 = 8$</p> <p style="text-align: center;">$8 \div 4 =$ ____</p> <div style="text-align: center;">  </div>	<p>b. Make groups of two.</p> <p style="text-align: center;">____ $\times 2 =$ ____</p> <p style="text-align: center;">____ $\div 2 =$ ____</p> <div style="text-align: center;">  </div>
<p>c. Make groups of four.</p> <p style="text-align: center;">____ $\times 4 =$ ____</p> <p style="text-align: center;">____ $\div 4 =$ ____</p> <div style="text-align: center;">  </div>	<p>d. Make groups of six.</p> <p style="text-align: center;">____ $\times 6 =$ ____</p> <p style="text-align: center;">____ $\div 6 =$ ____</p> <div style="text-align: center;">  </div>

3. For each division, think of the corresponding multiplication and solve.

<p>a. $14 \div 2 =$ ____</p> <p style="text-align: center;">____ $\times 2 = 14$</p>	<p>b. $18 \div 2 =$ ____</p> <p style="text-align: center;">____ $\times 2 =$ ____</p>	<p>c. $21 \div 7 =$ ____</p> <p style="text-align: center;">____ $\times 7 =$ ____</p>
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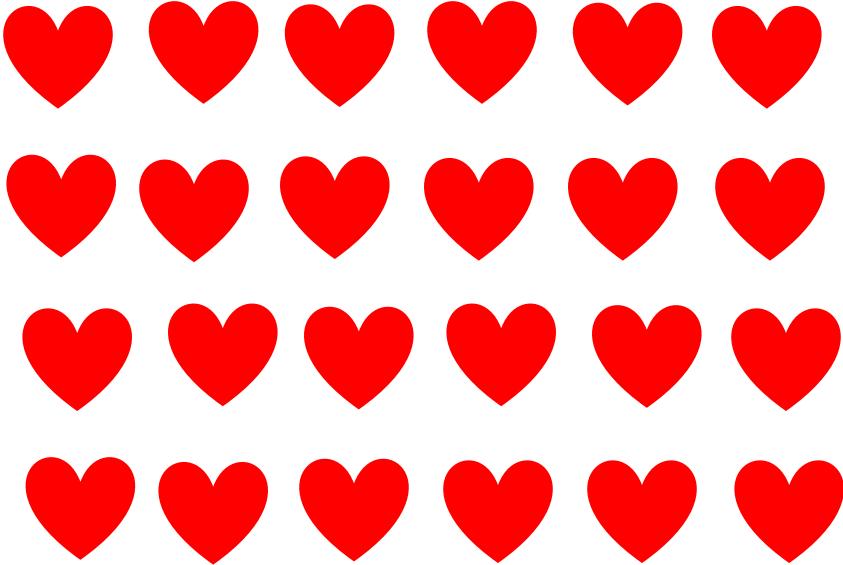
Division Groups



Total number of apples =

Q. No	48 ÷	Number of groups	= _____
1	6	6	
2	3	3	
3	9	12	
4	11	2	
5	7	8	
6	13	16	
7	4	4	
8	8	24	

Use a different colored pencil to group up numbers 1,2,3, and 4.



#	$24 \div$	Group up into groups of...	= _____
1		6	
2		4	
3		12	
4		3	

To the Substitute Teacher

1. Open up my computer and go into my documents and click on the “Long Division” folder.
2. Click on the “Apple Grid” and put it on the smartboard.
3. Go into my files behind my desk and go to “Long Division” and pull out the laminated Apple Grids for the students.
4. Tell the students to grab their dry erase markers and sit at their carpet squares.
5. Introduce the connection between division and multiplication.
6. Do the first problem with them, and if they need help do the second problem with them. After that they can do the next problem on their own.
7. Go over each problem individually and ask for volunteers to fill in the blanks after they do each problem.
8. Go into my files and go into my “Long Division” file. Pull out the heart grid for the students to put into their math binders.
9. Tell the students to go to their desk and fill out the sheet, and bring it to you to check. They need four different colored pencils for this activity, so pick two students to get out the colored pencils and put them on the desks.
10. After the students are done working on their worksheets they put them into their math binders and sit at their carpet squares.
11. After everybody is done have them discuss with a partner what the connection is between division and multiplication, and then as a whole group discuss the connections.

Student Teacher Candidate: Jessica Kelley
 Lesson Subject(s)/Title: Division
 Lesson Date(s): Day 2
 Course & Grade(s): 4

INSTRUCTIONAL MATERIALS:

iPads
 whiteboards & dry erase markers
 review problems
 Connection Cards
 Parent Signature Sheets

ESSENTIAL QUESTIONS/ SUBSIDIARY QUESTIONS:

Does anybody remember what the connection between division and multiplication is? Can you use the relationships in the problems to help you solve them? Can you demonstrate it for me?

PURPOSE:

For students to be able to solve division problems and to be able to use the connections that they have made between multiplication and division to solve them.

SPECIFIC LEARNING OBJECTIVES: (clear, observable)

For the students to be able to use their connections to solve the division problems.

STANDARDS:

CC.2.3.A.1: Represent and solve problems involving multiplication and division.
 SA: CC.2
 EC: M03.B-O.1.1.1: interpret and/or describe products of whole numbers (up to and including 10 x 10)
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 CC.2.2.4.A.1
 SA: CC.2
 EC: M04.B-O.1.1.1: Interpret a multiplication equation as a comparison. Represent verbal statements of multiplicative comparisons as multiplication equations.

DIFFERENTIATION STRATEGIES:

LD Students: They will get hands on and plenty of practice with other students that could help them. They will also have time to come to ask me questions if they need it, and if I see them and their team struggling then I will come and help them as a group to explain the connections and how to set up the problems with their small group.
 Gifted Students: You will be doing the same work as the other students, and have a lot of review. These students will be paired up with the students that need help, but not too much help (half and half strategy then take the top of each half to pair).

ANTICIPATORY SET:

Whiteboard Review activity with the problems I have on the whiteboard review sheet.

INPUT/ ACQUIRE NEW KNOWLEDGE:

Sensory Register	STM	LTM
Attention Recognition Perception	Focus Organization Rehearsal Visualization	Connections Elaborations Meaning

Facets of Understanding

1. Explanation
2. Interpretation
3. Application
4. Perspective
5. Empathy
6. Self-Knowledge

Multiple Intelligences

1. Linguistic [words]
2. Visual [pictures]
3. Mathematical [numbers & reasoning]
4. Kinesthetic [hands-on]
5. Musical [music]
6. Interpersonal [social]
7. Intrapersonal [self]
8. Naturalist [nature]

Multiple Exposures [4 x 2]

1. Dramatization
2. Visualization
3. Verbal

Complex Interactions

1. Discussion
2. Argumentation

Bloom's Taxonomy

1. Knowledge [Verbatim]
2. Comprehension [Own Words]
3. Application [Problem-Solving]
4. Analysis [Identify components]
5. Synthesis [Combine information]
6. Evaluation [Decisions]

Aspects of the Topic

1. Facts
2. Compare
3. Cause/Effect
4. Characteristics
5. Examples
6. Relationships

9 Effective Strategies

1. Similarities and Differences
2. Summarization and Note Taking
3. Reinforcing Effort and Providing Recognition
4. Homework and Practice
5. Nonlinguistic Representations
6. Cooperative Learning
7. Setting Objectives and Providing Feedback
8. Generating and Testing Hypotheses
9. Questions, Cues, and Advanced Organizers

and/or

APPLY/ DEEPEN NEW KNOWLEDGE:

The students will be using their knowledge on how to solve the problems. They will also do a lot of practice, and if they need help then they will get the help to deepen their knowledge. The students will also be given a review, so they will also deepen their knowledge with the review. The game will help them get engaged in the subject, but also help them deepen their knowledge and use their prior knowledge to solve them.

CLOSURE/ASSESSMENT:

Math Journal "These past two days I learned _____. I'm not sure about _____. I'm wondering about _____. What is the connection between division and multiplication?"

HOMEWORK: (Purpose- Preparation, Practice, Expansion)

Go over the connection cards

EVALUATION/ASSESSMENT OF STUDENTS:

The results of their division games will be given to me so that I can see where they are and if they need any help.

INSTRUCTIONAL PROCEDURES:

Time:

<p>The teacher will:</p> <ol style="list-style-type: none">1. Today we will be reviewing, so I was wondering if anybody remembers the connection between multiplication and division? Does anybody think that they can use these connections to help them solve the problems? Can anybody demonstrate?2. Now let's do a little review, can everybody go get their whiteboards and their dry erase markers. Then come back to the carpet please.3. Review with the problems on the review page on the smartboard. We are going to step it up and divide some bigger problems, are you guys ready?4. Now you guys are going to review more playing division games on the iPads. Before you guys get up to get them I will split you up into groups. First the rules are that after each game you must show me the results from your game. Secondly do your best and help each other with the problems if somebody needs help. Third of all, do not be afraid to come and ask me for questions. Now I will split you up into groups of 3. After I split you guys up you can pick any place in the room to work.5. Observe and help if they need it.6. Closure: I want the students to write	<p>The students will:</p> <ol style="list-style-type: none">1. Tell me the connection. The two numbers in the multiplication problem equal the divisor. Somebody then comes up to demonstrate with a problem.2. Go to get their boards and markers then come back to the carpet.3. Yes. Then they do the four problems for review on the review sheet.4. Listen to the instructions. Then they are split up into groups of 3. Lastly, the students will go and get their iPads and pick a spot in the room to work.5. Work on their review games on the website put on the board: http://www.mathplayground.com/math_monster_division.html6. The students show me their results and help each other find the problems.7. Write in their journals what they know, what they are wondering about, and what the connection between multiplication and division is.8. They listen to the instructions of the connection cards, get the connection cards and get the paper for their parents to sign.
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<p>in their Math Journals, "These past two days I learned _____. I'm not sure about _____. I'm wondering about _____. What is the connection between division and multiplication (this one can be an example)?"</p> <p>7. Introduce the connection Cards. You go over them with your parents and tell them the answer to the problem. You have to get your parents to sign off on the sheet I give you to say that you guys went over the connection cards.</p>	
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Whiteboard Review Activity

$49 \div 7 = \underline{\hspace{2cm}}$

$7 \times \underline{\hspace{2cm}} = 49$

$55 \div 11 = \underline{\hspace{2cm}}$

$11 \times \underline{\hspace{2cm}} = 55$

$42 \div 6 = \underline{\hspace{2cm}}$

$6 \times \underline{\hspace{2cm}} = 42$

$100 \div 10 = \underline{\hspace{2cm}}$

$10 \times \underline{\hspace{2cm}} = 100$

Key:

1. 7

2. 5

3. 7

4. 10

Review Game online

1. The students must show you their results so you can see if they need help.
2. The students who are working together must help each other.

http://www.mathplayground.com/math_monster_division.html

Parent Signature Sheet

Today _____, my son/daughter went over their connection cards twice.

They had trouble with:

They did a good job at:

Parent/Guardian Signature _____

Substitute Teacher

1. Ask the students if anybody remembers the connection between multiplication and division.
2. Ask if anybody thinks that they can use these connections to help them solve the problems. (hand raises)
3. Ask: Can anybody demonstrate?
4. Review the problems on the review page on the smart board (this will be in my Division Unit Plan file on my computer labeled: Unit Plan Day 2 Review Problems.
5. They then will get split up into groups of three. Give each group an iPad and put the link on the board for their division game: http://www.mathplayground.com/math_monster_division.html
6. The students must give you their result on their games.
7. You write their results down next to their name on the evaluation sheet in the file cabinet. The file will be named "Division Unit Plan: Lesson 2 Division Game Evaluation"
8. Tell the students to get out their math journals and fill in the blanks (write the sentences on the board) "These past two days I learned _____. I'm not sure about _____. I'm wondering about _____. What is the connection between division and multiplication (this one can be an example)?"
9. Introduce the connection cards to go over with their parents. You pass out the connection cards to each student and the parent sign off sheet. The connection cards and the parent sign off sheet are in the cabinet also.

10. Go over two of the connection cards together then tell the students that for homework they have to go over these with their parents and they must sign off on the sheet that they went over them with you.

Student Teacher Candidate: Jessica Kelley
 Lesson Subject(s)/Title: Division Review
 Lesson Date(s): Day 3
 Course & Grade(s): 4

INSTRUCTIONAL MATERIALS:

iPads
 Connection Cards
 Whiteboards and markers.

ESSENTIAL QUESTIONS/ SUBSIDIARY QUESTIONS:

Can anybody tell me what they learned from their connection cards last night, and why?

PURPOSE:

For the students to review what they have learned about the connections in game form, so they are more engaged.

SPECIFIC LEARNING OBJECTIVES: (clear, observable)

For the students to review and refresh their memories on the connections between multiplication and division.

STANDARDS:

CC.2.3.A.1: Represent and solve problems involving multiplication and division.
 SA: CC.2
 EC: M03.B-O.1.1.1: interpret and/or describe products of whole numbers (up to and including 10 x 10)
 CC.2.3.A.2: Understand properties of multiplication and the relationship between multiplication and division.
 SA: CC.2
 EC:M03.B-O.2.2.1: Interpret and/or model division as a multiplication equation with an unknown factor.
 CC.2.2.4.A.1
 SA: CC.2
 EC: M04.B-O.1.1.1: Interpret a multiplication equation as a comparison. Represent verbal statements of multiplicative comparisons as multiplication equations.

DIFFERENTIATION STRATEGIES:

LD students: The students will have individual work time to see how they are working alone. I will also be observing them to make sure they know their information. The students will be able to come and ask me for help if they need it. I will be observing these students the most, but I will also be going all around the room to see how everybody is doing. I will stop if I see someone struggling, or if their results are not what we are looking for.
 Gifted Students: These students will be doing the same games. They still have to show me their results to make sure they are still doing well with the subject.

ANTICIPATORY SET:

Review the questions the students had on the information they did not know in their journals.

**INPUT/ ACQUIRE NEW KNOWLEDGE:
 and/or**

APPLY/ DEEPEN NEW KNOWLEDGE:

The students will be reviewing their knowledge on how to divide by using connections between division and multiplication. They will also be deepening their knowledge with practice and by asking me questions.

CLOSURE/ASSESSMENT:

Review any questions and go over the connection cards with the class.

Sensory Register	STM	LTM
Attention Recognition Perception	Focus Organization Rehearsal Visualization	Connections Elaborations Meaning

Facets of Understanding

1. Explanation
2. Interpretation
3. Application
4. Perspective
5. Empathy
6. Self-Knowledge

Multiple Intelligences

1. Linguistic [words]
2. Visual [pictures]
3. Mathematical [numbers & reasoning]
4. Kinesthetic [hands-on]
5. Musical [music]
6. Interpersonal [social]
7. Intrapersonal [self]
8. Naturalist [nature]

Multiple Exposures [4 x 2]

1. Dramatization
2. Visualization
3. Verbal

Complex Interactions

1. Discussion
2. Argumentation

Bloom's Taxonomy

1. Knowledge [Verbatim]
2. Comprehension [Own Words]
3. Application [Problem-Solving]
4. Analysis [Identify components]
5. Synthesis [Combine information]
6. Evaluation [Decisions]

Aspects of the Topic

1. Facts
2. Compare
3. Cause/Effect
4. Characteristics
5. Examples
6. Relationships

9 Effective Strategies

1. Similarities and Differences
2. Summarization and Note Taking
3. Reinforcing Effort and Providing Recognition
4. Homework and Practice
5. Nonlinguistic Representations
6. Cooperative Learning
7. Setting Objectives and Providing Feedback
8. Generating and Testing Hypotheses
9. Questions, Cues, and Advanced Organizers

HOMEWORK: (Purpose- Preparation, Practice, Expansion)

No homework

EVALUATION/ASSESSMENT OF STUDENTS:

The results of their division game online will be written down and that shows me their progress on the information.

INSTRUCTIONAL PROCEDURES:

Time:

<p>The teacher will:</p> <ol style="list-style-type: none">1. Review with the class what they had questions on in their journals by using problems to show the students.2. Can anybody tell me what they learned from their connection cards last night and why?3. I will give each student an iPad and put the website on the board for them to practice on. The students must give me their results after each game they play so I see where they are at.4. Observe.5. Closure: Review what the students had trouble with, then review the connection cards with them one last time.	<p>The students will:</p> <ol style="list-style-type: none">1. Sit at the carpet and pay attention to the answers to the questions they had.2. The students share what they learned, maybe it helped them with understanding the connections more or it helped them in a different way.3. Get an iPad and type in the website on them. They get to choose the game they play on the website.4. Practice, practice, practice. Give the teacher their results after each game.5. Review with the teacher, ask questions, and go over the connection cards by using whiteboards to figure out the problems.
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Individual Division Games

1. The students will practice their abilities with this game individually and show me their results.
2. If the student is having trouble with the game I will go over and help the students with the problems to deepen their understandings.

<http://www.multiplication.com/games/division-games>

Name	Game 1	Game 2	Game 3	Game 4	Game 5
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					

Substitute Teacher

1. Review with the students the questions that they had in their math journals the day before (I will write down on a separate sheet connected to this the questions that the students had which depends on the class).
2. Ask them: “Can anybody tell me what they learned from their connection cards last night and why?”
3. The activity with the division game is in my “Division Unit Plan: Unit Plan Day 3 Individual Game”
4. Give the instructions to the students and tell them that they must give you the results to all of their games.
5. Write their results down on the evaluation in the Division Unit Plan folder also that is named “Unit Plan Day 3 Individual Game Evaluation”
6. Observe them and answer questions
7. Review what the students have questions on or you noticed that they had trouble with.
8. Review the connection cards with them all together.

Student Teacher Candidate: Jessica Kelley
 Lesson Subject(s)/Title: Open Ended Division problems
 Lesson Date(s): Day 4
 Course & Grade(s): 4

INSTRUCTIONAL MATERIALS:

Math Binder Review Sheet
 Open ended paragraphs
 Math Journals

ESSENTIAL QUESTIONS/ SUBSIDIARY QUESTIONS:

Can anybody use their knowledge of division to help me solve this problem?

PURPOSE:

For the students to be able to solve division problems that are in open ended form while using their prior knowledge to set up a problem to solve.

SPECIFIC LEARNING OBJECTIVES: (clear, observable)

For the students to be able to set up a problem based off of the open ended problems, and for them to be able to solve those problems by using their prior knowledge.

STANDARDS:

Standard: CC.2.2.4.A.1

SA: CC.2

EC: M04.B-O.1.1.2: Multiply or divide to solve word problems involving multiplicative comparison, distinguishing multiplicative comparison from additive comparison

EC: M04.B-O.3: Solve multi-step word problems posed with whole numbers using the four operations. Answers will be either whole numbers or have remainders that must be interpreted yielding a final answer that is a whole number. Represent these problems using equations with a symbol or letter standing for the known quantity.

Standard: CC.2.2.3.A.1

SA: CC.2

EC:M03.B-O.1.2.1: Use multiplication (up to and including 10 x 10) and/or division (limit dividends through 50 and limit divisors and quotients through 10) to solve word problems in situations involving equal groups, arrays, and/or measurement quantities.

DIFFERENTIATION STRATEGIES:

LD Students: These students will be learning new things while they are able to use their prior knowledge to solve the problems. I will have an example on the board of how to solve a problem so they have a visual and can use clues to figure out how to set up the problems that the whole class is doing. Also, during the first couple problems the equations will already be set up for them so they understand what number goes in what spot before they have to figure out the problem on their own.

Gifted Students: These students will be asked to demonstrate on the board their answers to the problems that we are doing on the whiteboard during the lesson.

ANTICIPATORY SET:

Math Binder Review to refresh their memory of what they had learned the days before. They will get problems to find answers to in their journals while having them connect their prior knowledge to the problems, because I will not have the connection problem underneath the division problem today. The students will get to review how they make the connections on their own with finding the quotient.

INPUT/ ACQUIRE NEW KNOWLEDGE:

and/or

APPLY/ DEEPEN NEW KNOWLEDGE:

The students will deep their new knowledge when they are learning how to set up the division problems based on the open ended questions. The students will get to use their prior knowledge

Sensory Register	STM	LTM
Attention Recognition Perception	Focus Organization Rehearsal Visualization	Connections Elaborations Meaning

Facets of Understanding

1. Explanation
2. Interpretation
3. Application
4. Perspective
5. Empathy
6. Self-Knowledge

Multiple Intelligences

1. Linguistic [words]
2. Visual [pictures]
3. Mathematical [numbers & reasoning]
4. Kinesthetic [hands-on]
5. Musical [music]
6. Interpersonal [social]
7. Intrapersonal [self]
8. Naturalist [nature]

Multiple Exposures [4 x 2]

1. Dramatization
2. Visualization
3. Verbal

Complex Interactions

1. Discussion
2. Argumentation

Bloom's Taxonomy

1. Knowledge [Verbatim]
2. Comprehension [Own Words]
3. Application [Problem-Solving]
4. Analysis [Identify components]
5. Synthesis [Combine information]
6. Evaluation [Decisions]

Aspects of the Topic

1. Facts
2. Compare
3. Cause/Effect
4. Characteristics
5. Examples
6. Relationships

9 Effective Strategies

1. Similarities and Differences
2. Summarization and Note Taking
3. Reinforcing Effort and Providing Recognition
4. Homework and Practice
5. Nonlinguistic Representations
6. Cooperative Learning
7. Setting Objectives and Providing Feedback
8. Generating and Testing Hypotheses
9. Questions, Cues, and Advanced Organizers

when they are setting the problems up and when they are finding the quotient of the problem. The students will deepen their knowledge by practicing the problems and having visuals.

CLOSURE/ASSESSMENT:

Math Journals "Today I learned _____. I'm not sure about _____. I'm wondering about _____."

HOMEWORK: (Purpose- Preparation, Practice, Expansion)

One word problem "Max' dad buys a 24 pack of Dr. Pepper that cost him \$6. How much money does each can in the 24 pack cost?"

EVALUATION/ASSESSMENT OF STUDENTS:

Observations of how the students are doing with the lesson, and the practice problems. Can anybody use their knowledge of division to help me solve this problem?

INSTRUCTIONAL PROCEDURES:

Time:

<p>The teacher will:</p> <ol style="list-style-type: none">1. Pass out the Math Binder worksheets.2. Observe, help, and check the binder worksheets.3. Tell the students to go sit at the carpet after you check their sheet and it's all right.4. Pull up the first open ended question and go over it with them. Can anybody use their knowledge of division to help me solve this problem? (this problem does not have the problem set up yet to show the students how to do it) (this one stays on the board for a visual)5. The second open ended question is pulled up, and has a problem set up for practice.6. The third problem does not have the problem set up, the students have to figure it out.7. The fourth problem is pulled up, and they do this one by themselves also.8. Last problem is pulled up.9. Now I will put on the board what the students need to put in their math journals when they get back to their seats. "Today I learned _____. I'm not sure about _____. I'm wondering about _____."10. For homework you guys have one word problem to show your work and answer, "Max' dad buys a 24 pack of Dr. Pepper that cost him \$6. How much money does each can in the 24 pack cost?" (on a piece of paper given to everybody)	<p>The students will:</p> <ol style="list-style-type: none">1. Fill out the Math Binder worksheets and show the teacher their results.2. Whenever they are done they get their whiteboards and markers, and go sit at the carpet.3. They pay attention to the first problem and do it with the teacher. One person volunteers to help the teacher with the problem.4. The students solve the problem and look to see how the problem is set up based on the paragraph.5. One person volunteers to write the work up on the board of problem two.6. The students do the problem on their whiteboards without the problem set up for them. They get to use the visual to figure out how the problem is set up. After they do the problem someone volunteers to come up and write the work on the board.7. The students set up the problem to solve on their whiteboards and someone volunteers to write their work and answer on the board.8. Students do the fifth problem by themselves, and someone volunteers to put their work and their answer on the board.9. They go back to their seats and put away their dry erase marker and whiteboard. Then they pull out their math journal and fill in the blanks to the statements on the board.10. Puts the paper in their homework folder to turn in the next day.
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Review Problems

$$28 \div 14 = \underline{\quad}$$

$$14 \times \underline{\quad} = 28$$

$$36 \div 12 = \underline{\quad}$$

$$12 \times \underline{\quad} = 36$$

Answers: 2 & 3

Grade 4 Math Word Problems Worksheet

Read and answer each question. Show your work!

Division Word Problems # 1

1. You have 24 cookies and want to share them equally with 6 people. How many cookies would each person get?

2. You are reading a book with 120 pages. If you want to read the same number of pages each night, how many would you have to read each night to finish in 10 days?

3. A cereal box holds 18 cups of cereal. Each serving is 2 cups. How many servings are in the whole box?

4. A box of books weighs 42 pounds. Each book weighs 3 pounds. How many books are there in the box?

5. Sue's mother made 75 cookies. She put the cookies in bags, with 3 cookies in each bag. How many bags could she fill up?

Answers

1. $24 \div 6 = 4$
Each person gets 4 cookies.
2. $120 \div 10 = 12$
You have to read 12 pages.
3. $18 \div 2 = 9$
There are 9 servings.
4. $42 \div 3 = 14$
There are 14 books.
5. $75 \div 3 = 25$
She can fill 25 bags.

Word Problem Homework Sheet

1. Max's dad buys a 24 pack of Dr. Pepper that costs him \$6.
How much money does each can in the 24 pack cost?
Show your work.

Substitute Teacher

1. Pass out the Math Binder Worksheets (in Division Unit Plan under “Unit Plan Day 4 Review Problems”)
2. Observe, help, then after they are done they bring it to you to check for answers.
3. Have the students sit at the carpet after you check their sheets. Tell them to bring their whiteboards and dry erase markers.
4. Go over the first open ended question with them, while they are doing it on their whiteboards also. Ask: Can anybody use their knowledge of division to help me solve this problem? (Go over with them and if somebody steps up help them if they need it. Leave this on the board for a visual)
5. Second problem has the visual set up and has a problem set up for the students to see which numbers go where. They evaluate it and someone comes to the board to fill in the blanks and put the answer on it.
6. Third problem does not have any problem set up, the students have to make it up and do the problem on their whiteboards, then someone volunteers to put it on the board. (Repeat for 4-5)
7. Tell the students to go back to their seat and put their whiteboard and dry erase marker away, then take out their math journals.

8. In their math journals they write “Today I learned _____ . I’m not sure about _____ . I’m wondering about _____ .”
9. For homework the students have one problem that is in the file also under “Unit Plan Day 4 Homework Problem”

Student Teacher Candidate: Jessica Kelley
 Lesson Subject(s)/Title: Open ended division problems
 Lesson Date(s): Day 5
 Course & Grade(s): 4

INSTRUCTIONAL MATERIALS:

Whiteboards and dry erase markers
 Homework problem and review problem from day 4
 Grocery materials (on different sheet)
 colored pencils

ESSENTIAL QUESTIONS/ SUBSIDIARY QUESTIONS:

Does anybody know how this connects to real life?
 Can anybody give me an example of how you connect open ended division problems to real life?

PURPOSE:

For students to be able to connect open ended division questions to real life. For students to understand how to set up a problem based off of an open ended question given to them.

SPECIFIC LEARNING OBJECTIVES: (clear, observable)

For students to be able to set up a problem based off an open ended question that is given to them by using their prior knowledge of solving a division problem.

STANDARDS:

Standard: CC.2.2.4.A.1
 SA: CC.2
 EC: M04.B-O.1.1.2: Multiply or divide to solve word problems involving multiplicative comparison, distinguishing multiplicative comparison from additive comparison
 EC: M04.B-O.3: Solve multi-step word problems posed with whole numbers using the four operations. Answers will be either whole numbers or have remainders that must be interpreted yielding a final answer that is a whole number. Represent these problems using equations with a symbol or letter standing for the known quantity.
 Standard: CC.2.2.3.A.1
 SA: CC.2
 EC:M03.B-O.1.2.1: Use multiplication (up to and including 10 x 10) and/or division (limit dividends through 50 and limit divisors and quotients through 10) to solve word problems in situations involving equal groups, arrays, and/or measurement quantities.

DIFFERENTIATION STRATEGIES:

LD Students: These students will get the hands on and visual activities that they need to help them understand how to set up the problems, and seeing the connection to real life will spark their interest in learning the information. These students will get to check their understanding and review the problem in their math journals before doing the performance assessment at the "grocery store". That will help them understand the information before they do the performance assessment which will help them prepare. The closure with the students sharing with a partner and the whole class at what they understand will help them realize what they need help with and it will help me understand where they are and what they need help with.
 Gifted Students: These students will be guided to pick the higher level problems to find the quotient for. They will be told to grab the big packs of the pop cans so they can show and help the other students understand how to set up the problems by giving visuals.

ANTICIPATORY SET:

Whiteboard homework review and review of anything the students said they didn't know in their math journals and their problem in their journal.

**INPUT/ ACQUIRE NEW KNOWLEDGE:
 and/or**

Sensory Register	STM	LTM
Attention Recognition Perception	Focus Organization Rehearsal Visualization	Connections Elaborations Meaning

Facets of Understanding

1. Explanation
2. Interpretation
3. Application
4. Perspective
5. Empathy
6. Self-Knowledge

Multiple Intelligences

1. Linguistic [words]
2. Visual [pictures]
3. Mathematical [numbers & reasoning]
4. Kinesthetic [hands-on]
5. Musical [music]
6. Interpersonal [social]
7. Intrapersonal [self]
8. Naturalist [nature]

Multiple Exposures [4 x 2]

1. Dramatization
2. Visualization
3. Verbal

Complex Interactions

1. Discussion
2. Argumentation

Bloom's Taxonomy

1. Knowledge [Verbatim]
2. Comprehension [Own Words]
3. Application [Problem-Solving]
4. Analysis [Identify components]
5. Synthesis [Combine information]
6. Evaluation [Decisions]

Aspects of the Topic

1. Facts
2. Compare
3. Cause/Effect
4. Characteristics
5. Examples
6. Relationships

9 Effective Strategies

1. Similarities and Differences
2. Summarization and Note Taking
3. Reinforcing Effort and Providing Recognition
4. Homework and Practice
5. Nonlinguistic Representations
6. Cooperative Learning
7. Setting Objectives and Providing Feedback
8. Generating and Testing Hypotheses
9. Questions, Cues, and Advanced Organizers

APPLY/ DEEPEN NEW KNOWLEDGE:

The students will get to deepen their understanding by connecting the division problems with real life to help them. These students will deepen their knowledge by applying their knowledge of setting up the problem within an open ended problem for them and their classmates to answer. The students will get to set up the problems and find the quotient.

CLOSURE/ASSESSMENT:

Think Pair Share- students will share what they have learned about how to make an open ended question with the two numbers I put on the board together. Then each pair will share with the class the problem they made.

HOMEWORK: (Purpose- Preparation, Practice, Expansion)

none

EVALUATION/ASSESSMENT OF STUDENTS:

The students will be evaluated on the performance assessment since they are all doing it individually. They will be evaluated by the rubric given behind the lesson.

INSTRUCTIONAL PROCEDURES:

Time:

<p>The teacher will:</p> <ol style="list-style-type: none"> 1. Open up the lesson by going over the homework problem that the students did for class on the whiteboard. 2. Collect the homework from the tables 3. Go over the problem with the students to check their answers 4. Tell the students to come sit at the carpet with their whiteboards and their dry erase markers. 5. "Can anybody connect open ended division problems to real life?" If so can you give me some examples? 6. Give an example by going into the "grocery store" in the back of the room and picking out a pack of something and make and do the problem with the students. Explain to the students that there will be decimals in these problems, and show them with the open ended problem. 7. Call on volunteers to go back to the room to grab an item each person from the "grocery store". Remind them that they will be evaluated on their performance. The students have to fill in the word problem by setting the numbers up in it on the board. "At the grocery store _____ bought a _____ pack of _____. It cost me \$_____. How much did each individual item cost me?" 8. Closure: Think Pair Share- Find a partner and make a problem together based on the two numbers put on the board "24 and 6" 	<p>The students will:</p> <ol style="list-style-type: none"> 1. Be sitting at their desk using a colored pencil to correct their mistakes, to check their understanding. 2. Pass in their homework to the center of their group desks. 3. Put the journals in the center of their table for the teacher to collect from them. 4. Get the whiteboards and dry erase markers and sit at the carpet. 5. Each student volunteers. Each student goes and picks up a pack/item from the back of the room and makes a problem for them and the other students to evaluate on their whiteboards. The students set up the problem on the board and the individual who picked up the item and made the problem does the problem on the whiteboard in front of the class. The class is how they check themselves. 6. Make a problem with your partner based on the numbers given on the board 24 and 6. 7. Share with the whole class.
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9. Then they share their problems with the whole class.	
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Grocery Store Materials

1. 24 pack of Pepsi \$6
2. 12 pack of mountain dew \$3
3. 15 pieces in a pack of gum \$1
4. Variety pack of bagged chips \$7
5. 12 pack of yogurt for \$6
6. 30 pack of goldfish \$10
7. 12 pack of chips ahoy/ nutter butter/oreo variety pack \$5
8. 18 pringles snack pack \$6
9. 32 variety pack of baked crispy stix \$9
10. 4 pack of yogurt for \$3
11. 48 colored pencils for \$7
12. 20 pack of pencils for \$4
13. 60 packs of pens for \$5
14. 50 pack of colored pencils \$7
15. 6 pack of iced tea \$15
16. 4 pack of peperoni party pizzas \$5
17. 3 pack of tape for \$4
18. 2 pack of tape for \$9
19. 5,000 pack of staples for \$3
20. 2,500 sheets of paper for \$20
21. 6 pack of tissues for \$5
22. 2 pack of shampoo and conditioner for \$6
23. 2 pack of ketchup for \$7
24. 2 pack of mustard for \$4
25. 100 ponytails for \$5
26. 6 headbands for \$3
27. 24 slices for \$5

Performance Assessment Open Ended Problem

1. Student goes back to the “grocery store” in the back of the room and sets up the problem in the front of the room based on the pack they have chosen.
2. The problem is fill in the blank where they fill in this passage:
 - a. “At the grocery store _____ bought a _____ pack of _____. It cost me \$_____. How much did each individual item cost me?”
3. After they fill in the blank the student must find the quotient of the problem.
4. The other students also find the quotient on their whiteboards. They cannot show it until the student doing the problem on the board is completely done. I will go around and look at their answers and tell them where they missed so they can fix it.

Score	description
4	The student gives complete effort towards making the open ended question, and gives complete effort towards finding the quotient. The student also is very knowledgeable about the content.
3	The student gives almost all of their effort towards making the open ended question, but makes mistakes. This student also gives some effort towards finding the quotient, but makes a couple mistakes.
2	The student gives some effort towards making the problem and some towards finding the quotient. They also miss most of the problems and made mistakes making the problem.
1	The student gives little to no effort making the problem and finding the quotient. The student also misses all of the problems and doesn't know how to make the problem at all.

Substitute Teacher

1. Go over the homework problem with the students that is in the file cabinet under the Division Unit Plan “Unit Plan Day 4 Homework Problem”. Tell the students to correct their homework with a colored pencil.
2. Collect the homework.
3. Have the students come to the front of the room with their whiteboards with their dry erase markers and sit on the carpet.
4. Follow the directions from the “Unit Plan Day 5 Grocery Store Activity” in the file cabinet. The materials needed are in the back of the room that are listed in the file cabinet on the document name “Unit Plan Day 5 Grocery Store Materials”
5. Closure: a think-pair share. In this think pair share put two numbers on the board and the students need to make a problem with a partner based on the numbers on the board (24 & 6). Then they share with the whole class.

Student Teacher Candidate: Jessica Kelley
 Lesson Subject(s)/Title: Open Ended Division Review
 Lesson Date(s): Day 6
 Course & Grade(s): 4

INSTRUCTIONAL MATERIALS:

2 bowls of numbers
 Math Binders
 Math Journals

ESSENTIAL QUESTIONS/ SUBSIDIARY QUESTIONS:

Do any of you remember the connection to real life we made with division yesterday?
 How did that help all of you learn how to make word problems?
 How did making the word problems help you all understand how to solve word problems?

PURPOSE:

For the students to keep doing open ended questions so they get more practice.

SPECIFIC LEARNING OBJECTIVES: (clear, observable)

For the students to be able to use their prior knowledge from the past couple days to help them solve these open ended questions.

STANDARDS:

Standard: CC.2.2.4.A.1

SA: CC.2

EC: M04.B-O.1.1.2: Multiply or divide to solve word problems involving multiplicative comparison, distinguishing multiplicative comparison from additive comparison

EC: M04.B-O.3: Solve multi-step word problems posed with whole numbers using the four operations. Answers will be either whole numbers or have remainders that must be interpreted yielding a final answer that is a whole number. Represent these problems using equations with a symbol or letter standing for the known quantity.

Standard: CC.2.2.3.A.1

SA: CC.2

EC:M03.B-O.1.2.1: Use multiplication (up to and including 10 x 10) and/or division (limit dividends through 50 and limit divisors and quotients through 10) to solve word problems in situations involving equal groups, arrays, and/or measurement quantities.

DIFFERENTIATION STRATEGIES:

LD Students- These students will get more hands on experience and more practice. They will get to make their own problems and evaluate a friends twice. If they need help I will be in the back of the room for them to come and ask me questions. I will also be going around to make sure the students are doing well, and if I see that they are struggling then I will stop.

Gifted Students: These students will get more practice with this information also. They get random numbers so they have the same opportunities as the other students to make problems and evaluate other students.

ANTICIPATORY SET:

Go over any questions the students have and then move onto the "Fishbowl Activity"

INPUT/ ACQUIRE NEW KNOWLEDGE:

and/or

APPLY/ DEEPEEN NEW KNOWLEDGE:

The students will be practicing their understanding of making and evaluating problems. This will deepen their knowledge with more practice. The students will be also using their new knowledge by making and evaluating those problems. Practice right now is what is needed for the students to really help them understand the information more.

CLOSURE/ASSESSMENT:

Sensory Register	STM	LTM
Attention Recognition Perception	Focus Organization Rehearsal Visualization	Connections Elaborations Meaning

Facets of Understanding

1. Explanation
2. Interpretation
3. Application
4. Perspective
5. Empathy
6. Self-Knowledge

Multiple Intelligences

1. Linguistic [words]
2. Visual [pictures]
3. Mathematical [numbers & reasoning]
4. Kinesthetic [hands-on]
5. Musical [music]
6. Interpersonal [social]
7. Intrapersonal [self]
8. Naturalist [nature]

Multiple Exposures [4 x 2]

1. Dramatization
2. Visualization
3. Verbal

Complex Interactions

1. Discussion
2. Argumentation

Bloom's Taxonomy

1. Knowledge [Verbatim]
2. Comprehension [Own Words]
3. Application [Problem-Solving]
4. Analysis [Identify components]
5. Synthesis [Combine information]
6. Evaluation [Decisions]

Aspects of the Topic

1. Facts
2. Compare
3. Cause/Effect
4. Characteristics
5. Examples
6. Relationships

9 Effective Strategies

1. Similarities and Differences
2. Summarization and Note Taking
3. Reinforcing Effort and Providing Recognition
4. Homework and Practice
5. Nonlinguistic Representations
6. Cooperative Learning
7. Setting Objectives and Providing Feedback
8. Generating and Testing Hypotheses
9. Questions, Cues, and Advanced Organizers

Math Journal: "what did you learn in the past couple of days? What do you need help on?"

HOMEWORK: (Purpose- Preparation, Practice, Expansion)

none

EVALUATION/ASSESSMENT OF STUDENTS:

The math journals will help me check their understanding. I will also be evaluating their math binders when the day is over so I see if they need any help with those more. I will review with that individual student if they are having consistent trouble with those problems.

INSTRUCTIONAL PROCEDURES:

Time:

<p>The teacher will:</p> <ol style="list-style-type: none">1. Introduce the activity that we are going to do that day, and tell them to take out their math journals for the activity. (See "Fishbowl Activity" on the activity sheet behind the lesson for instructions)2. Do the activity twice.3. Observe and make sure their names are on the problems they evaluate so you can check them later.4. Tell the students to put their binders in the center of the table.5. Math Journals: "What did you learn in the past couple of days? What do you need help on?" (on math journal sheet)6. Tell the students after they are done to put their journals in the center of the table.	<p>The students will:</p> <ol style="list-style-type: none">1. Take out their math binders and pick the numbers out of the hat.2. Make the open ended problem.3. Swap problems with your friend.4. Put your name on the problem you are evaluating.5. Give your friend back their math binder.6. Repeat.7. Put math binders in the center of the table for the teacher to collect.8. Take out math journals and answer the questions on the board: "What did you learn in the past couple of days? What do you need help on?"9. Put their journals in the center of their tables.
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Fishbowl Activity

1. Each student picks out of a bowl/hat of numbers. They pick two numbers.
2. Each student makes an open ended division problem based off of those two numbers.
3. After they are done with making their problem they swap with someone at their table.
4. They evaluate the problem they got from their friend and put your name next to the problem you evaluated.
5. They give back the problem.
6. Repeat from #1.

Numbers:

24

30

45

12

4

5

7

8

10

11

44

55

32

36

6

2

3

50

100

Math Journal Questions

1. What did you learn in the past couple of days?
2. What do you need help with?

Substitute Teacher

1. Go into “Division Unit Plan Lesson 6 Fishbowl Activity” in my file cabinet.
2. Cut out the numbers on the sheet.
3. The instructions are also on that sheet.
4. Tell the students these go in their math binders.
5. Read the students the instructions.
6. Go around and have the students pick two numbers and write them down, then put the numbers back in the bowl for other students.
7. The closure questions are also in that Unit Plan file.
8. Put those on the board and have the students put their answers in their math journals.

Student Teacher Candidate: Jessica Kelley
 Lesson Subject(s)/Title: Last Day for Open Ended Division
 Lesson Date(s): Day 7
 Course & Grade(s): 4

INSTRUCTIONAL MATERIALS:

Instructions
 Grocery Store Materials used 2 days before
 Math Journals
 Whiteboards
 Dry erase markers
 iPads

ESSENTIAL QUESTIONS/ SUBSIDIARY QUESTIONS:

Can somebody from each table demonstrate how to make a problem based on the item and the price they choose from the middle of the table?

PURPOSE:

For the students to practice and review the open ended division word problems.

SPECIFIC LEARNING OBJECTIVES: (clear, observable)

For the students to be able to make problems and find the quotient based on the item and the price given to them. For the students to accurately be able to find the quotient to the problems.

STANDARDS:

Standard: CC.2.2.4.A.1

SA: CC.2

EC: M04.B-O.1.1.2: Multiply or divide to solve word problems involving multiplicative comparison, distinguishing multiplicative comparison from additive comparison

EC: M04.B-O.3: Solve multi-step word problems posed with whole numbers using the four operations. Answers will be either whole numbers or have remainders that must be interpreted yielding a final answer that is a whole number. Represent these problems using equations with a symbol or letter standing for the known quantity.

Standard: CC.2.2.3.A.1

SA: CC.2

EC:M03.B-O.1.2.1: Use multiplication (up to and including 10 x 10) and/or division (limit dividends through 50 and limit divisors and quotients through 10) to solve word problems in situations involving equal groups, arrays, and/or measurement quantities.

DIFFERENTIATION STRATEGIES:

LD Students: These students will get more hands on, visual practice. There will be an example up on the board for the students to follow to set up their problems and answer the question.

Practicing this information constantly will help them understand the information more.

Gifted Students: These students will be getting the same hands on and visual practice. I will call on one of these students to come and put the visual on the board if they raise their hand. They can help others at their table and be examples for how to do the problems right.

ANTICIPATORY SET:

The students will be using their math journals to make two problems each. Then they will find the answers to the questions that they have made.

INPUT/ ACQUIRE NEW KNOWLEDGE:

and/or

APPLY/ DEEPEN NEW KNOWLEDGE:

These students will exercise their thoughts and keep practicing for the exam that is coming up in three days. Practice deepens the understanding, especially when the students are making their

Sensory Register	STM	LTM
Attention Recognition Perception	Focus Organization Rehearsal Visualization	Connections Elaborations Meaning

Facets of Understanding

1. Explanation
2. Interpretation
3. Application
4. Perspective
5. Empathy
6. Self-Knowledge

Multiple Intelligences

1. Linguistic [words]
2. Visual [pictures]
3. Mathematical [numbers & reasoning]
4. Kinesthetic [hands-on]
5. Musical [music]
6. Interpersonal [social]
7. Intrapersonal [self]
8. Naturalist [nature]

Multiple Exposures [4 x 2]

1. Dramatization
2. Visualization
3. Verbal

Complex Interactions

1. Discussion
2. Argumentation

Bloom's Taxonomy

1. Knowledge [Verbatim]
2. Comprehension [Own Words]
3. Application [Problem-Solving]
4. Analysis [Identify components]
5. Synthesis [Combine information]
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Aspects of the Topic

1. Facts
2. Compare
3. Cause/Effect
4. Characteristics
5. Examples
6. Relationships

9 Effective Strategies

1. Similarities and Differences
2. Summarization and Note Taking
3. Reinforcing Effort and Providing Recognition
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5. Nonlinguistic Representations
6. Cooperative Learning
7. Setting Objectives and Providing Feedback
8. Generating and Testing Hypotheses
9. Questions, Cues, and Advanced Organizers

own questions and figuring out the answers of their own problems. The students will be using their new knowledge and applying it to making the problems and finding the quotient.

CLOSURE/ASSESSMENT:

Whiteboard Review problems on the board. (On a different sheet)

HOMEWORK: (Purpose- Preparation, Practice, Expansion)

Look over connection cards to prepare for the connections review tomorrow.

EVALUATION/ASSESSMENT OF STUDENTS:

I will check the problems and answers that each student made to make sure the numbers are placed in the right spot and are being evaluated correctly.

INSTRUCTIONAL PROCEDURES:

Time:

<p>The teacher will:</p> <ol style="list-style-type: none">1. Ask the students if they remember what we did two days ago with the grocery store activity.2. Today we are going to do a little review with the items that were in the back of the room at our tables. On our tables we have a variety of different items that we are familiar with.3. We are going to pick an item, make a problem in your math journals, and then find the quotient to that problem. After you are done bring it to me so I can check the problem. Then trade items with a friend and repeat.4. First I would like somebody to show everybody how you are supposed to set up a problem based on an item, can I have a volunteer? Check it to make sure it is right and correct it if anything is missing or is incorrect for the students to use as a visual.5. Observe the students while they do the problems, check their problems and answers, tell them to sit at the carpet when they are done and the first two-three people done get to play division games on the iPad while they wait.6. Closure problems on their whiteboards. (on separate sheet)	<p>The students will:</p> <ol style="list-style-type: none">1. Answer the question with saying that they made problems based on the items that were in the back of the room.2. Go to their seats and see the items in the center of the table.3. The volunteer takes an item and brings it up to the whiteboard at the front of the room. Makes a problem, finds the quotient, and shows everybody. (this problem stays on the board).4. Everybody sees the problem and uses it as a visual in the activity.5. Everybody takes out their math journals for the activity and starts.6. Take an item.7. Make a problem8. Find the quotient.9. Show the teacher so they can check the answer and the problem.10. Trade items with a friend.11. Make a problem.12. Find the quotient.13. Show the teacher so they can check the answer to the problem.14. Go to the carpet with their whiteboards and the first 2-3 students done get to play division games on their iPads using one of the links given in previous lessons and stage 3 division problem links.15. Closure problems on their whiteboards.
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Grocery Store Review Game

1. Get your math journals out.
2. Pick an item in the center of the table.
3. Make a problem based on how many individual items are in the packs of things and the price.
4. Find the quotient to the problem.
5. Have the teacher check your problem and the quotient.
6. Repeat one more time.

Review Problems

1. A train traveled 130 miles in 2 hours. The same distance was traveled each hour. How far did the train travel each hour?
 - a. The train traveled _____ miles each hour.
(answer: 65)
2. Tina earned \$132 babysitting in 6 months. She earned the same amount each month. How much did Tina earn babysitting each month?
 - a. Tina earned \$_____ each month. (answer: 22)
3. The school chorus has 108 members. How many rows of 12 members can be formed?
 - a. _____ rows of 12 members can be formed.
(answer: 9)

Substitute Teacher

1. Ask the students if they remember what we did two days ago in the grocery store activity.
2. Grocery store materials are in the back of the room in a bin with “Unit Plan Grocery Store Materials” on it.
 - a. Put those in the middle of the each desk.
3. Ask the students if somebody can give an example with one of the items in the center of their table on the whiteboard.
4. After she is done check it and correct it if needed, keep it on the board for a visual, and tell the students to grab their math journals.
5. Tell the students they need to pick an item from the center of their table, make a problem, then find the answer to that problem. After the students are done they must come and get it checked and cleared by you before they trade items with a friend and make another one.
6. After the students are done the first 2-3 to be done, based on how many students are getting done at a time, can play a division game from http://www.mathplayground.com/math_monster_division.html or <http://www.multiplication.com/games/division-games>
7. Then have them come to the carpet, bring their whiteboards and dry erase markers, and go over the review problems in the file “Division Unit Plan” under “Unit Plan Day 7 Review Problems”

8. Tell them their homework is to go over their connection cards.

Student Teacher Candidate: Jessica Kelley
 Lesson Subject(s)/Title: Review Day for Connections
 Lesson Date(s): Day 8
 Course & Grade(s): 4

INSTRUCTIONAL MATERIALS:

Connection Cards
 iPads
 Whiteboards
 Dry erase markers

ESSENTIAL QUESTIONS/ SUBSIDIARY QUESTIONS:

Can you demonstrate how to evaluate this problem?

PURPOSE:

For the students to review connections for the test I two days.

SPECIFIC LEARNING OBJECTIVES: (clear, observable)

For students to understand the connections between the division and multiplication, and be able to use their knowledge of connections to help them find the quotient to problems.

STANDARDS:

CC.2.3.A.1: Represent and solve problems involving multiplication and division.
 SA: CC.2
 EC: M03.B-O.1.1.1: interpret and/or describe products of whole numbers (up to and including 10 x 10)
 CC.2.3.A.2: Understand properties of multiplication and the relationship between multiplication and division.
 SA: CC.2
 EC:M03.B-O.2.2.1: Interpret and/or model division as a multiplication equation with an unknown factor.
 CC.2.2.4.A.1
 SA: CC.2
 EC: M04.B-O.1.1.1: Interpret a multiplication equation as a comparison. Represent verbal statements of multiplicative comparisons as multiplication equations.

DIFFERENTIATION STRATEGIES:

Each student (LD and gifted) will be evaluated and given problems to stretch their thoughts. The students will get hands on activities that will help them practice including division games online on the iPad, connection cards, and individual whiteboard review.

ANTICIPATORY SET:

Ask if the students have any questions, and then have them split into two groups. One group goes to the iPads for 15 minutes and the other students go to connection cards for 15 minutes.

**INPUT/ ACQUIRE NEW KNOWLEDGE:
 and/or**

APPLY/ DEEPEN NEW KNOWLEDGE:

The students will apply their prior knowledge in the connection cards and in the division games on the iPads. They will be evaluated individually on their understanding of how to evaluate a division problem. The students will get a lot of practice and deepen their knowledge that way.

CLOSURE/ASSESSMENT:

Review the connection cards together. Ask thumbs up, thumbs down, and thumbs to the side of how much they know this information.

HOMEWORK: (Purpose- Preparation, Practice, Expansion)

Sensory Register	STM	LTM
Attention Recognition Perception	Focus Organization Rehearsal Visualization	Connections Elaborations Meaning

Facets of Understanding

1. Explanation
2. Interpretation
3. Application
4. Perspective
5. Empathy
6. Self-Knowledge

Multiple Intelligences

1. Linguistic [words]
2. Visual [pictures]
3. Mathematical [numbers & reasoning]
4. Kinesthetic [hands-on]
5. Musical [music]
6. Interpersonal [social]
7. Intrapersonal [self]
8. Naturalist [nature]

Multiple Exposures [4 x 2]

1. Dramatization
2. Visualization
3. Verbal

Complex Interactions

1. Discussion
2. Argumentation

Bloom's Taxonomy

1. Knowledge [Verbatim]
2. Comprehension [Own Words]
3. Application [Problem-Solving]
4. Analysis [Identify components]
5. Synthesis [Combine information]
6. Evaluation [Decisions]

Aspects of the Topic

1. Facts
2. Compare
3. Cause/Effect
4. Characteristics
5. Examples
6. Relationships

9 Effective Strategies

1. Similarities and Differences
2. Summarization and Note Taking
3. Reinforcing Effort and Providing Recognition
4. Homework and Practice
5. Nonlinguistic Representations
6. Cooperative Learning
7. Setting Objectives and Providing Feedback
8. Generating and Testing Hypotheses
9. Questions, Cues, and Advanced Organizers

none

EVALUATION/ASSESSMENT OF STUDENTS:

Each student will be evaluated individually on the problems that they are given. They get two problems, and if they split they will get a third problem. These students will use their whiteboards to find the quotient to each problem.

INSTRUCTIONAL PROCEDURES:

Time:

<p>The teacher will:</p> <ol style="list-style-type: none">1. Is there any questions that any of you guys have about the connections between any of the connection cards?2. Split the class in to two groups. One goes to iPad division games and the other group goes over the connection cards together for 15 minutes.3. One person is getting called back at a time to review for the test with me. (call each person back one at a time and give them 2-3 division problems).4. After 15 minutes tell the students to switch stations.5. Closure is a class connection card review on the carpet.	<p>The students will:</p> <ol style="list-style-type: none">1. Ask questions if they have any.2. Go to the station that you are given, whether it be iPads where you can go anywhere in the room or the connection cards where you can go to a place in the room with your partner.3. One person at a time comes to the back of the room and finds the quotient to each problem given to them on their whiteboards with their dry erase marker.4. Switch stations after 15 minutes.5. Individuals still go back and evaluate the problems.6. Answers the questions together while sitting at the carpet.
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Division Games on iPad

1. http://www.mathplayground.com/math_monster_division.html
2. <http://www.multiplication.com/games/division-games>

Name	Problem #1	Problem #2
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		

Key: "v" if they get it right or an "X" if they miss it

Individual Review Problems

1. $72 \div 9 = \underline{\hspace{2cm}}$

$9 \times \underline{\hspace{2cm}} = 72$

2. $130 \div 2 = \underline{\hspace{2cm}}$

$2 \times \underline{\hspace{2cm}} = 130$

Optional:

3. $132 \div 6 = \underline{\hspace{2cm}}$

$6 \times \underline{\hspace{2cm}} = 132$

Parent Signature Sheet

Today _____, my son/daughter went over their connection cards twice.

They had trouble with:

They did a good job at:

Parent/Guardian Signature _____

Substitute Teacher

1. Ask the students if the students had any questions about the connections between any of the connection cards.
2. Split them up into two groups (one group gets iPads for division games on two website, the other group goes over connection cards)
 - a. <http://www.multiplication.com/games/division-games>
 - b. http://www.mathplayground.com/math_monster_division.html
3. Bring the students back individually and give them two problems to do on their whiteboards and write down if they missed or got the answers correct on the sheet behind this.
4. After 15 minutes tell the groups to switch and keep calling the students back individually.
5. Go over the connection cards with the class.

Student Teacher Candidate: Jessica Kelley
 Lesson Subject(s)/Title: Review day for Open Ended and Connections
 Lesson Date(s): Day 9
 Course & Grade(s): 4

INSTRUCTIONAL MATERIALS:

Jeopardy Math Game
 Whiteboards
 Dry erase marker
 Homework sheet
 Connection cards
 Review Problem

ESSENTIAL QUESTIONS/ SUBSIDIARY QUESTIONS:

Does anybody remember the connection between multiplication and division?
 Does anybody remember how division connects to real life situations?

PURPOSE:

For the students to review and practice to get them ready for their test tomorrow.

SPECIFIC LEARNING OBJECTIVES: (clear, observable)

For students to understand the connections between division and multiplication. For the students to be able to use their knowledge of the connections to find the quotient to an open ended word problem.

STANDARDS:

Standard: CC.2.2.4.A.1

SA: CC.2

EC: M04.B-O.1.1.2: Multiply or divide to solve word problems involving multiplicative comparison, distinguishing multiplicative comparison from additive comparison

EC: M04.B-O.3: Solve multi-step word problems posed with whole numbers using the four operations. Answers will be either whole numbers or have remainders that must be interpreted yielding a final answer that is a whole number. Represent these problems using equations with a symbol or letter standing for the known quantity.

Standard: CC.2.2.3.A.1

SA: CC.2

EC:M03.B-O.1.2.1: Use multiplication (up to and including 10 x 10) and/or division (limit dividends through 50 and limit divisors and quotients through 10) to solve word problems in situations involving equal groups, arrays, and/or measurement quantities.

CC.2.3.A.1: Represent and solve problems involving multiplication and division.

SA: CC.2

EC: M03.B-O.1.1.1: interpret and/or describe products of whole numbers (up to and including 10 x 10)

Standard: CC.2.3.A.2: Understand properties of multiplication and the relationship between multiplication and division.

SA: CC.2

EC:M03.B-O.2.2.1: Interpret and/or model division as a multiplication equation with an unknown factor.

Standard: CC.2.2.4.A.1

SA: CC.2

EC: M04.B-O.1.1.1: Interpret a multiplication equation as a comparison. Represent verbal statements of multiplicative comparisons as multiplication equations.

DIFFERENTIATION STRATEGIES:

We are all doing a review game, but each group will have a variety of different leveled students, and the students can help each other find the answers to the problems.

Sensory Register	STM	LTM
Attention Recognition Perception	Focus Organization Rehearsal Visualization	Connections Elaborations Meaning

Facets of Understanding

1. Explanation
2. Interpretation
3. Application
4. Perspective
5. Empathy
6. Self-Knowledge

Multiple Intelligences

1. Linguistic [words]
2. Visual [pictures]
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5. Musical [music]
6. Interpersonal [social]
7. Intrapersonal [self]
8. Naturalist [nature]

Multiple Exposures [4 x 2]

1. Dramatization
2. Visualization
3. Verbal

Complex Interactions

1. Discussion
2. Argumentation

Bloom's Taxonomy

1. Knowledge [Verbatim]
2. Comprehension [Own Words]
3. Application [Problem-Solving]
4. Analysis [Identify components]
5. Synthesis [Combine information]
6. Evaluation [Decisions]

Aspects of the Topic

1. Facts
2. Compare
3. Cause/Effect
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5. Examples
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1. Similarities and Differences
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6. Cooperative Learning
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8. Generating and Testing Hypotheses
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ANTICIPATORY SET:

<http://www.superteachertools.us/jeopardyx/jeopardy-review-game.php?gamefile=2196824#.WQktU9LytPY>

INPUT/ ACQUIRE NEW KNOWLEDGE:

and/or

APPLY/ DEEPEN NEW KNOWLEDGE:

Practice connections and open ended word problems by using their prior knowledge to help them find the quotient to each problem. The students will apply their knowledge when they are finding the quotient using the connections to help them find the answers to the problems.

CLOSURE/ASSESSMENT:

Thumbs up or thumbs down to see if the students are ready for the test and go over any questions the students have. Ask the students if they need to go over the connection cards one more time, if they say yes go over three of them. Then do one open ended problem.

HOMEWORK: (Purpose- Preparation, Practice, Expansion)

Connection cards and two word problems.

EVALUATION/ASSESSMENT OF STUDENTS:

The team with the most points in jeopardy gets one bonus point on the test the next day.

INSTRUCTIONAL PROCEDURES:

Time:

<p>The teacher will:</p> <ol style="list-style-type: none">1. Ask the students two questions: Does anybody remember the connection between multiplication and division? Does anybody remember how division connects to real life situations?2. Split the students up into four different groups. Bring your dry erase markers and whiteboards.3. Give the instructions from the Jeopardy Game Sheet attached. Then pull up the game.4. Review: Ask if the students want to go over the connection cards (if yes go over three, if no don't)5. Go over one more open ended word problem.6. Have the students give a thumbs up or thumbs down to see if they are ready for the test.	<p>The students will:</p> <ol style="list-style-type: none">1. Says the connections (the answer to the division problem is the number multiplied by the divisor to get the dividend) and gives the connections to real life situations (grocery store)2. Go sit with their group for the jeopardy game. They also bring their whiteboards and dry erase markers.3. Group 1 finds the answer to whichever number they chose4. Group 2 repeats5. Group 3 repeats6. Group 4 repeats7. Then repeat with each group until the game is over.8. Thumbs up or down to see if they are ready for the test.9. Yes or no
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Jeopardy Game Problems

- $48 \div 4 = \underline{\hspace{2cm}}$ $4 \times \underline{\hspace{2cm}} = 48$ (answer: 12)
- $36 \div 3 = \underline{\hspace{2cm}}$ $3 \times \underline{\hspace{2cm}} = 36$ (answer: 12)
- $54 \div 6 = \underline{\hspace{2cm}}$ $6 \times \underline{\hspace{2cm}} = 54$ (answer: 9)
- $124 \div 2 = \underline{\hspace{2cm}}$ $2 \times \underline{\hspace{2cm}} = 124$ (answer: 62)
- $132 \div 6 = \underline{\hspace{2cm}}$ $6 \times \underline{\hspace{2cm}} = 132$ (answer: 22)
6. Atomic fireballs come in packages of 5. Andrea ate 20 Atomic Fireballs. How many whole boxes did she eat and how many Atomic Fireballs does she have left? (answer: 4)
7. The school chorus has 108 members. How many rows of 12 can be formed? (answer: 9)
8. A hospital order 213 new blankets. The blankets will be delivered in 3 equal shipments. How many blankets will be in each shipment? (answer: 71)
9. Tina earned \$132 babysitting in 6 months. She earned the same amount each month. How much did Tina earn babysitting each month? (answer: \$22)
10. A factory filled 9,342 bottles in 3 hours. The same number of bottles were filled each hour. How many bottles were filled each hour? (answer: 3114)

Jeopardy Game Instructions

1. There are only two sections: Connections and Open Ended Word Problems. They get to use their whiteboards and dry erase markers.
2. There will be a cycle of which group gets to try to answer the questions. One group gets to answer the question first one round, and then the next group gets to go, and so on.
3. If the group misses the question the next group gets to try to give the correct answer.
4. Whoever gets the answer correct first in the cycle gets the points.

<http://www.superteachertools.us/jeopardyx/jeopardy-review-game.php?gamefile=2196824#.WQktU9LytPY>

Open Ended Word Problems Homework

1. The school chorus has 108 members. How many rows of 12 can be formed?

Answer: 9

2. Tina earned \$132 babysitting in 6 months. She earned the same amount each month. How much did Tina earn babysitting each month?

Answer: \$22

Review Word Problem

1. There are 6 items in the pack of tea. The pack of tea cost \$15. How much does each individual item cost in the pack?

Substitute Teacher

1. Ask the students two questions: Does anybody remember the connection between multiplication and division? Does anybody remember how division connects to real life situations?
2. Go to the jeopardy game (link in “Division Unit Plan” under “Unit Plan Day 9 Jeopardy Game” on my laptop in the Math folder).
3. Read the students the instructions on the sheet connected to the lesson plan.
4. Split the students up into four groups of five.
5. Have them use their whiteboards and dry erase markers for the jeopardy game in their groups.
6. After the game is over have them come to the carpet.
7. Ask the students if we need to go over the connection cards or not. If not don't go over them. If they say yes or at least half say yes then go over three.
8. Then go over the open ended word problem connected to the sheets that is labeled “Review Problems”
9. Ask thumbs up or thumbs down if the students are ready for the test.
10. Tell them to go over their connection cards and do the two problems (that you pass out the papers for in my file that is labeled “Division Unit Plan” under “Unit Plan Day 9 Open Ended Word Problems Homework”

Student Teacher Candidate: Jessica Kelley
 Lesson Subject(s)/Title: Division Test Day
 Lesson Date(s): Day 10
 Course & Grade(s): 4

INSTRUCTIONAL MATERIALS:

Exam
 Review Problems

ESSENTIAL QUESTIONS/ SUBSIDIARY QUESTIONS:

Does anybody have any questions about the connections between multiplication and division?
 Does anybody have any questions on open ended division problems?

PURPOSE:

For the students to correctly answer the questions on the test.

SPECIFIC LEARNING OBJECTIVES: (clear, observable)

For the students to test their understanding on connections between multiplication and division.
 For the students to use their prior knowledge of connections to help them find the quotient to the word problems.

STANDARDS:

: Standard: CC.2.2.4.A.1

SA: CC.2

EC: M04.B-O.1.1.2: Multiply or divide to solve word problems involving multiplicative comparison, distinguishing multiplicative comparison from additive comparison

EC: M04.B-O.3: Solve multi-step word problems posed with whole numbers using the four operations. Answers will be either whole numbers or have remainders that must be interpreted yielding a final answer that is a whole number. Represent these problems using equations with a symbol or letter standing for the known quantity.

Standard: CC.2.2.3.A.1

SA: CC.2

EC:M03.B-O.1.2.1: Use multiplication (up to and including 10 x 10) and/or division (limit dividends through 50 and limit divisors and quotients through 10) to solve word problems in situations involving equal groups, arrays, and/or measurement quantities.

CC.2.3.A.1: Represent and solve problems involving multiplication and division.

SA: CC.2

EC: M03.B-O.1.1.1: interpret and/or describe products of whole numbers (up to and including 10 x 10)

Standard: CC.2.3.A.2: Understand properties of multiplication and the relationship between multiplication and division.

SA: CC.2

EC:M03.B-O.2.2.1: Interpret and/or model division as a multiplication equation with an unknown factor.

Standard: CC.2.2.4.A.1

SA: CC.2

EC: M04.B-O.1.1.1: Interpret a multiplication equation as a comparison. Represent verbal statements of multiplicative comparisons as multiplication equations.

DIFFERENTIATION STRATEGIES:

LD Students: The students will get as much time as they need to take the test. They will have connection problems with blanks in them to help them see the connection to figure out the problems.

Gifted Students: If they are done earlier than the other students they will get to sit in their seats quietly.

ANTICIPATORY SET:

Sensory Register	STM	LTM
Attention Recognition Perception	Focus Organization Rehearsal Visualization	Connections Elaborations Meaning

Facets of Understanding

1. Explanation
2. Interpretation
3. Application
4. Perspective
5. Empathy
6. Self-Knowledge

Multiple Intelligences

1. Linguistic [words]
2. Visual [pictures]
3. Mathematical [numbers & reasoning]
4. Kinesthetic [hands-on]
5. Musical [music]
6. Interpersonal [social]
7. Intrapersonal [self]
8. Naturalist [nature]

Multiple Exposures [4 x 2]

1. Dramatization
2. Visualization
3. Verbal

Complex Interactions

1. Discussion
2. Argumentation

Bloom's Taxonomy

1. Knowledge [Verbatim]
2. Comprehension [Own Words]
3. Application [Problem-Solving]
4. Analysis [Identify components]
5. Synthesis [Combine information]
6. Evaluation [Decisions]

Aspects of the Topic

1. Facts
2. Compare
3. Cause/Effect
4. Characteristics
5. Examples
6. Relationships

9 Effective Strategies

1. Similarities and Differences
2. Summarization and Note Taking
3. Reinforcing Effort and Providing Recognition
4. Homework and Practice
5. Nonlinguistic Representations
6. Cooperative Learning
7. Setting Objectives and Providing Feedback
8. Generating and Testing Hypotheses
9. Questions, Cues, and Advanced Organizers

Review problems, students can ask questions.

INPUT/ ACQUIRE NEW KNOWLEDGE:

and/or

APPLY/ DEEPEN NEW KNOWLEDGE:

The students will get to apply their prior knowledge on the test that is given to them.

CLOSURE/ASSESSMENT:

Ask thumbs up and thumbs down how the test was.

HOMEWORK: (Purpose- Preparation, Practice, Expansion)

none

EVALUATION/ASSESSMENT OF STUDENTS:

Grade the tests

INSTRUCTIONAL PROCEDURES:

Time:

<p>The teacher will:</p> <ol style="list-style-type: none">1. Ask the students: Does anybody have any questions about the connections between multiplication and division? Does anybody remember the connection between multiplication and division?2. Does anybody have any questions on open ended division problems? Does anybody remember how we connected it to a real life situation? What was that situation?3. Give them the test. Remind them all that they are all silent during the test and only looking at their own test. They can also ask questions if they need to.4. After everybody is done ask thumbs up or thumbs down	<p>The students will:</p> <ol style="list-style-type: none">1. Ask any questions if needed.2. The answer to the division problem is the divisor times that number that equals the dividend.3. Ask any questions if needed.4. Grocery Store Activity5. The price of the group of items divided by the number of items in the pack equals how much money each individual item costs.6. Take the test silently and without looking at anybody else's paper. Also asks questions if they need to and turn in the test when done then sits quietly.7. Thumbs up or thumbs down about the test.
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Division Test

1. Carly uses 27 stamps to mail 9 letters. She used the same number of stamps on each letter. How many stamps did Carly put on each letter?
 - a. Answer: 3
2. A group of 12 students wants to ride a roller coaster. If the cars on the roller coaster can hold 2 people, how many cars will the students need?
 - a. Answer: 6
3. Brian took 9 wooden blocks and arranged them in 3 even stacks. How many blocks are in each stack?
 - a. Answer: 3
4. Regan bought 55 granola bars. If the granola bars came in packs of 5, how many packs did Regan buy?
 - a. Answer: 11
5. Leslie made 99 key chains. She gave the same number of key chains to 11 friends. How many key chains did each friend get?
 - a. Answer: 9
6. $132 \div 6 = \underline{\hspace{2cm}}$
 $6 \times \underline{\hspace{2cm}} = 132$
 - a. Answer: 22
7. $124 \div 2 = \underline{\hspace{2cm}}$
 $2 \times \underline{\hspace{2cm}} = 124$
 - a. Answer: 62
8. $49 \div 7 = \underline{\hspace{2cm}}$

$$7 \times \underline{\quad\quad} = 49$$

a. Answer: 7

9. $64 \div 8 = \underline{\quad\quad}$

$$8 \times \underline{\quad\quad} = 64$$

a. Answer: 8

10. $100 \div 2 = \underline{\quad\quad}$

$$2 \times \underline{\quad\quad} = 100$$

a. Answer: 50