Grade: 4TH

Subject: MATH

Materials: jeopardy sheet, red and green colored pencils, whiteboards and markers, math notebook

Technology Needed: Smart Board

Instructional Strategies:

- ☐ Direct instruction
- ☐ Guided practice
- ☐ Socratic Seminar
- ☐ Learning Centers
- ☐ Lecture
- ☐ Technology integration
- ☐ Other (list)
- ☐ Peer teaching/collaboration/ cooperative learning
- ☐ Visuals/Graphic organizers
- ☐ PBL
- ☐ Discussion/Debate
- ☐ Modeling

Guided Practices and Concrete Application:

- ☐ Large group activity
- ☐ Independent activity
- ☐ Pairing/collaboration
- ☐ Simulations/Scenarios
- ☐ Other (list)
- ☐ Hands-on
- ☐ Technology integration
- ☐ Imitation/Repeat/Mimic

Explain:

Standard(s)

4.OA.4 find all factor pairs for a whole number range 1-36. Recognize that a whole number is a multiple of each of its factors. Determine whether a given whole number in the range 1-36 is a multiple of a given one digit number or is prime or composite.

4.NBT.2 Read and write multi-digit whole numbers to the one millions place using base-ten numerals, word form and expanded form. Compare two multi-digit numbers based on meanings of the digits in each place, using >, =, and < symbols to record the results.

4.NBT.4 fluently add and subtract multi digit whole numbers to the one millions place using strategies flexibly, including the standard algorithm.

Objective(s)

TSW **compare** multi-digit numbers based on the meanings of the digits in each place.

TSW **solve** addition and subtraction problems using various addition and subtraction strategies.

TSW **classify** a number as prime or composite, then **list** the number's factors.

Bloom's Taxonomy Cognitive Level:

Knowledge: list; comprehension: compare & classify; application: solve

Differentiation

Below Proficiency: lower value questions are easier or more basic level

Above Proficiency: higher value questions are more challenging

Approaching/Emerging Proficiency: a few questions of middle value are an average level for students

Modalities/Learning Preferences: visual, auditory, tactile

Classroom Management- (grouping(s), movement/transitions, etc.)

Groups will be either science groups or based on pods.

Movement: if walking to group, voice level 0-1.

Behavior Expectations- (systems, strategies, procedures specific to the lesson, rules and expectations, etc.)

Voice level should be 0 for individual solving time; low voice 1-2 during collaboration. When sharing out, voices off as others talk

Transitions: clap to get attention; chimes; sound of timer, then thumbs up/down to assess before transitioning to new problem.	**Expectations: use whiteboard for solving problems, not drawing.**

Minutes	Procedures
2 min	**Set-up/Prep:** Have the jeopardy game open and loaded on Smart Board. Greet the students upon arrival prompting them to read the message on the board: "Good morning! Miss Arman will be leading a math game this morning. Please grab these items: 1) white board, eraser & marker, 2) 1 green and 1 red colored pencil, 3) math notebook… Do you remember all of the addition and subtraction strategies we practiced this week?" **http://playfactile.com/4thgrademathsa**
3 min	**Engage: (opening activity/ anticipatory Set – access prior learning / stimulate interest /generate questions, etc.)** **GOOOOD MORNING ladies and gentlemen. Today, I Miss Arman, will be your host on Math Jeopardy! We will be practicing the addition/subtraction strategies you have been using, as well as working with factors, writing numbers, and comparing them." So, let's get into our teams (science or pods). Label groups 1, 2, 3, 4, 5, 6.**
7 min	**Explain: (concepts, procedures, vocabulary, etc.)** **Each group will take turns choosing a category/value and answering the question. While playing, we will solve the problems in a few ways. I will display the question and for the first minute or so, you will be working by yourself with a voice level of 0. You alone will solve the problem on your whiteboard. When the timer goes off, your groups will discuss your answers and how you solved them (teach each other). After agreeing on an answer, you will hold up a green card to let me know your group is ready for the answer. After you show you're ready, I expect voices to be off as you patiently wait. After seeing the answer, you will color the value square for the question either red (for wrong) or green (for right). Coloring is based on your individual answer, not the group answer. If you have solved it correctly on your own, color it green; if you did it wrong, color it red. I will cue you for the first few rounds.** **RECAP:** **1. Solve alone** **2. Discuss answer** **3. Hold card if you're ready** **4. Color if you (alone) got it right/wrong** **Thumbs up/ down if you understand and you're ready to begin.**
33 min	**Explore: (independent, concreate practice/application with relevant learning task -connections from content to real-life experiences, reflective questions- probing or clarifying questions)** **Students work in "I do, we do, you do"; I explain the game, possibly model example if there is confusion, you do takes place when students have the first 1 or 2 minutes to solve on their own. We do is when the students discuss in groups, then share out to the whole class. The game allows independent/concrete practice for addition, subtraction, writing numbers, and comparing numbers.** **Clarifying question after each: "Thumbs up/side/down, did you get it, kind of, or no?" Move on if majority is up or side, if many are down have a volunteer to solve.**
	Review (wrap up and transition to next activity):

2 min	**"Please total up the points you got correct (green) and hand it to me before you quietly line up. Double check to make sure you ONLY colored the numbers we answered."**

Formative Assessment: (linked to objectives) **Progress monitoring throughout lesson- clarifying questions, check-** **in strategies, etc.** **ask questions: "how did you come up with that?** **Float around to see how students are doing.** **Thumbs up or down quick assessment** **"Can you show me how…?"** **Consideration for Back-up Plan:** **Create my own problem or question for students to solve individually on white boards**	**Summative Assessment (linked back to objectives)** **End of lesson:** **Take assessment on Friday with Mrs. Churchill over the categories we practiced** **If applicable- overall unit, chapter, concept, etc.:** **Operations and algebraic thinking** **Number and operations in base 10**

Reflection (What went well? What did the students learn? How do you know? What changes would you make?):

This lesson went very well. The students were engaged and enjoyed this review. My introduction and explanation of the game went smoothly, the students understood it and were eager to begin. I placed a visual aid listing the steps they would take on the board: 1) solve alone, 2) discuss in group, 3) hold up card, 4) color in answer. The students learned/reviewed addition and subtraction strategies, writing numbers in word and expanded form, determining factors to be prime or composite and listing the factors, and comparing numbers using >,< and =. I know that the students learned this because they handed in their jeopardy sheet which showed me at a glance which questions students got right and which they got wrong. I was able to identify any patterns or common errors between the students because of this colored in sheet. This game went well because the students enjoyed it so much. I was thrilled to see that they loved something I created. If I would change anything, I would make sure float around to students whom I know struggle with certain problems to ensure their participation. I did this with a few students, and wish I would've been able to help more students at once. However, it was great that Mrs. Dietrich helped students that struggled, too.

Add it up!	Subtraction	Factors	Expanded form	Write number in words	Greater than or less than?
$100	$100	$100	$100	$100	$100
$200	$200	$200	$200	$200	$200
$300	$300	$300	$300	$300	$300
$400	$400	$400	$400	$400	$400
$500	$500	$500	$500	$500	$500