Teacher(s): Mrs. Breazeale (Ms. DeBLanc) \& Mr. Contreras (Ms.Moran) Week of: Sep 18, 2023

Domain: Ratios \& Proportions

Subject/Grade: $7^{\text {th }}$ /Grade Math
Lesson Plan Title: EXAM WEEK \& Scale Factor

|  | MATHEMATICS - Mississippi College and Career Readiness Standards for ${ }^{\text {th }}$ Grade |
| :---: | :---: |
| Numbers \& Operations | 7.NS. 1 Apply and extend previous understandings of addition and subtraction to add and subtract rational numbers; represent addi... - |
|  <br> Proportions | 7.RP Analyze proportional relationships and use them to solve real-world and mathematical problems. <br> 7.RP. 1 Compute unit rates associated with ratios and fractions, including ratios or lengths, areas and other quantities measured in li... <br> 7.RP. 2 Recognize and represent proportional relationships between quantities. <br> 7.RP.2a Decide whether two quantities are in a proportional relationship, e.g., by testing for equivalent ratios in a table or graphing ... <br> 7.RP.2b. Identify the constant of proportionality (unit rate) in tables, graphs, equations, diagrams, and verbal descriptions of propor... <br> 7.RP.2c. Represent proportional relationships by equations. <br> 7.RP.2d . Explain what a point ( $x, y$ ) on the graph of a proportional relationship means in terms of the situation, with special attentio... <br> 7.RP. 3 Use proportional relationships to solve multistep ratio and percent problems. Examples: simple interest, tax, markups and ma... |
| Geometry | 7.G Draw, construct, and describe geometrical figures and describe the relationships between them. 7.G.1 Solve problems involving geometric figures, including actual lengths and area of a scale drawing. |

Bottom 25\%: Students will be placed in groups based on ability. The general education teacher and the inclusion teacher will review their MPT. The general education teacher and the inclusion teacher will review their MPT and clear up any misconceptions on Tuesday and Thursday.

Top 25\%: Students will work through problems on math prodigy while the teacher pulls students that scored below $70 \%$ on their current MPT.

Bubbles: Students will be placed in groups based on their ability. Some with higher performing students and some with lower performing students. The students in the higher performing group will learn from their peers and the students in the lower performing groups will act as a tutor to their peers. The general education teacher and the inclusion teacher will review their MPT and clear up any misconceptions on Tuesday and Thursday.

ESSENIIAL QUESTION(S): How do mathematicians analyze proportional relationships and use them to solve real-world and mathematical problems including problems that contain scale drawings?

| Date | Day | Objective | Focus Question | I will... |
| :--- | :--- | :--- | :--- | :--- |
| $9 / 15$ | M | TSWBAT compute actual lengths and <br> areas from a scale drawing by <br> completing practice problems on an <br> activity sheet with 75\% accuracy by the <br> end of the lesson | 1) How can mathematicians compute <br> actual lengths and areas from a scale <br> drawing? <br> 2)How can mathematicians compute unit <br> rates associated with ratios of fractions, <br> including ratios of lengths? | -Compute actual lengths and areas from <br> a scale drawing. <br> -Compute unit rates associated with <br> ratios of fractions, including ratios of <br> lengths. |
| $9 / 16$ | T | TSWBAT complete an iReady math lesson <br> by taking notes on key vocabulary and at <br> least two example problems with 80\% <br> accuracy by the end of the lesson. | 1) How do mathematicians use iReady to <br> enhance their mathematical skills? <br> 2) How will I use scale factor to calculate <br> unknown lengths? | -Use iReady to enhance my mathematical <br> skills. <br> -Understand that scale drawings are <br> figures with the same angles and with <br> side lengths in equivalent ratios. |
| -Calculate and use scale factor to find |  |  |  |  |
| unknown length. |  |  |  |  |$|$| 9/17 |
| :--- |
| W |
| Math DCA |

MONDAY_Sep 18, 2023

WARM-UP: The student will write name, class period, and date on "Scale Drawings/Models \& Scale Factor" activity sheet. Read the vocabulary: scale, scale, drawings, and proportional and be ready to answer questions about it. (5 minutes)

## ANTICIPATORY SET:(5 minutes)

(HOOK \& REAL-WOLRD CONNECIION) TTW say, "Scale drawings are all around us in our world. There are even examples in this room. (Student 1): Point to a scale drawing in this room. (Examples Answers: map, photographs on the wall, etc.
(RELEVANCE) This skill will help you if you want to be a scientist, architect, engineer, or even when completing projects around the house or if you like to build model airplanes and such. Say (LESSON GOAL) By the end of the lesson, you will be able to explain scale factor and use scale drawings to find actual length.

## TEACHER INPUT: (I do.) (15 minutes)

The teacher will ...

- Choose a BUBBLE to read the vocabulary at the top of the activity sheet.
- Choose a BUBBLE to repeat what the first student said. Then ask a B25 to repeat what the other two said. Finally ask a T25 to summarize the vocabulary.
- Direct students to the example where it says "A map is an example of a scale drawing!" Ask different students to help complete the guided notes.
- Model Examples 1, 2, and 3.


## GUIDED INSIRUCIION: (We do.) (10 minutes)

## The teacher will ...

- Direct students to example 4 and demonstrate how to find the area of an room from a scale drawing.
- Choose different students to help complete examples 4, 5, and 6.
- Choose a T25 to read the vocabulary word "scale factor"
- Choose a BUBBLE to repeat what the first student said. Then ask a B25 to repeat what the other two said. Finally ask a BUBBLE to summarize the vocabulary.
- Choose a T25 to read how to find the scale factor.
- Choose a BUBBLE to repeat what the first student said. Then ask a B25 to repeat what the other two said. Finally ask a

T25 to summarize how to find the scale factor.

## INDEPENDENT PRACTICE: (You do.) (15 minutes)

The student will ...

- Complete the rest of the activity sheet.
- Bottom 25 students will work in a small group with the general ed teacher or inclusion teacher.

SIUDENT REFL.ECIION/EXIT TICKET: TTW ask random students today's focus questions. 1) How can mathematicians compute actual lengths and areas from a scale drawing? 2)How can mathematicians compute unit rates associated with ratios of fractions, including ratios of lengths? BONUS QUESTION: How is finding the area different from finding a length when converting from the scale drawing to actual? ( 5 minutes)

HOMFWORK: Complete scale drawings and Models. (Due tomorrow.)
MATERIALS: projector, activity sheets, calculators
ASSESSMENI(S): Teacher observation

## TUESDAY_Sep 19, 2023

## 9 WEEKS EXAMS START TODAY!

WARM-UP/HOOK: The student will get out homework and recheck answers. ( 5 minutes) The teacher will review. (10 minutes)

## TEACHER INPUT: ( 5 minutes)

The teacher will ...

- Present the lesson objectives.
- Review the requirements to receive help on the lesson quiz - all vocabulary with definitions must be written down, at least 3 examples recorded from the lesson, and I need to see evidence that the students attempted to work out the current problem on paper.


## MODELED PRACTICE: ( 10 minutes)

The teacher will ...

- Direct students to login to iReady and choose "Practice: Proportional Relationships."
- Demonstrate when to take notes and where to see vocabulary definitions.


## INDEPENDENT PRACTICE: ( 10 minutes)

- Take notes on lesson vocabulary and lesson goals.
- Listen and complete the assigned lesson to the best of their ability.
- Complete the lesson quiz with $80 \%$ or higher accuracy.
- The general education teacher and/or the inclusion teacher will periodically check on students while asking them questions about the lesson.

SIUDENT REFLECIION/EXIT TICKET: The student will complete an exit ticket based on today's learning target. The teacher will use this data to determine which students need extra support. ( 5 minutes)

MATERIALS: notebook paper or "iReady Notes template," computers, projector, exit tickets ASSESSMENT(S): Teacher observation, exit tickets, iReady lesson quiz results

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\text { WEDNESDAY_ Sep 20, } 2023
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- The student will take their Math DCA.
- Early finishers will complete yesterday's iReady lesson.

September DCA Results

| Class | 0\% - 49\% (Critical) | 50\% - 69\% (Emerging) | 70\% - 100\% (Proficient) |
| :--- | :--- | :--- | :--- |
| 1st |  |  |  |
| 3rd |  |  |  |
| 4th |  |  |  |
| 5th |  |  |  |



## FRIDAY_Sep 22, 2023

WARM-UP/HOOK: The student will login to Prodigy. Take notes on lesson vocabulary and lesson goals. (5 minutes)

## TEACHER INPUT: ( 5 minutes)

The teacher will ...

- Present the lesson objectives.
- Review the requirements to receive help on a question -I need to see evidence that the students attempted to work out the current problem on paper.


## INDEPENDENT PRACTICE: ( 30 minutes)

The student will ...

- Complete practice problem on 7.RP.2.
- Correctly answer 30 questions or more correctly.

STUDENT REFLECTION/EXIT TICKET: The student will complete an exit ticket based on today's learning target. The teacher will use this data to determine which students need extra support. (5 minutes)

MATERIALS: computers, projector, scratch paper
ASSESSMENT(S): Teacher observation, exit tickets, iReady lesson quiz results

## MISSISSIPPI STATE STANDARDS ACROSS CURRICULUM

## Math Standards

## Numbers \& Operations:

7.NS. 3 Solve real-world and mathematical problems involving the four operations with rational numbers.

## Ratios \& Proportions:

7.RP Analyze proportional relationships and use them to solve real-world and mathematical problems.
7.RP. 1 Compute unit rates associated with ratios and fractions, including ratios or lengths, areas and other quantities measured in like of different units.
7.RP. 2 Recognize and represent proportional relationships between quantities.
7.RP.2a Decide whether two quantities are in a proportional relationship, e.g., by testing for equivalent ratios in a table or graphing on a coordinate plane and observing whether the graph is a straight line through the origin.
7.RP.2b. Identify the constant of proportionality (unit rate) in tables, graphs, equations, diagrams, and verbal descriptions of proportional relationships.
7.RP.2c. Represent proportional relationships by equations.
7.RP.2d. Explain what a point ( $x, y$ ) on the graph of a proportional relationship means in terms of the situation, with special attention to the points $(0,0)$ and $(1, r)$ where $r$ is the unit rate.
7.RP. 3 Use proportional relationships to solve multistep ratio and percent problems. Examples: simple interest, tax, markups and markdowns, gratuities and commissions, fees, percent increase and decrease, percent error.

## Geometry:

7.G Draw, construct, and describe geometrical figures and describe the relationships between them.
7.G.1 Solve problems involving geometric figures, including actual lengths and area of a scale drawing.

