**Teacher(s): Mrs. Breazeale (Ms. DeBLanc) Subject/Grade:** 7th /Grade Math **Week of: Oct 23, 2023**

**Domain:** Expressions & Equations **Lesson Plan Title:** Expressions & Equations

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|  | **MATHEMATICS - Mississippi College and Career Readiness Standards for 7th Grade** |
| **Numbers & Operations** | **7.NS. 1 Apply and extend previous understandings of addition and subtraction to add and subtract rational numbers; represent addition and subtraction on a horizontal or vertical number line diagram.** |
| **Ratios & Proportions** | **7.RP Analyze proportional relationships and use them to solve real-world and mathematical problems.** |
| **Expressions & Equations** | **7.EE Solve real-life and mathematical problems using numerical and algebraic expressions and equations.**  **7.EE.1 Apply properties as strategies to add, subtract, factor, and expand linear expressions with rational coefficients.**  **7.EE.2 Understand that rewriting an expression in different, yet equivalent, forms in a problem can show how the quantities in it are related.**  **7.EE.3 Write an expression from a real world context possibly involving sales tax, tip, discount, gratuity, markup, selling price, perimeter, area, and angle measures of a triangle. • Evaluate ...** |
| **Geometry** | **7.G Draw, construct, and describe geometrical figures and describe the relationships between them.** |

**ACROSS CURRICULUM STANDARDS**

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| **ELA - Mississippi College and Career Readiness Standards for 7th Grade** |
| **CCR.R.10** Read and comprehend complex literary and informational texts independently and proficiently.  **RI.7.10** By the end of the year, read and comprehend literary nonfiction in the grades 6-8 text complexity band proficiently, with scaffolding as needed at the high end of the range.  **W.7.2c** Use appropriate transitions to create cohesion and clarify the relationships among ideas and concepts.  **W.7.2d** Use precise language and domain-specific vocabulary to inform about or explain the topic.  **W.7.2e** Establish and maintain a formal style.  **W.7.4** Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.  **W.7.10** Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.  **CCR.L.1:** Demonstrate command of the conventions of standard English grammar and usage when writing (printing, cursive, or keyboarding) or speaking.  **L.7.1b** Choose among simple, compound, complex, and compound-complex sentences to signal differing relationships among ideas.  **CCR.L.2:** Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.  **L.7.2b** Spell correctly.  **CCR.L.6:** Acquire and use accurately a range of general academic and domain-specific words and phrases sufficient for reading, writing, speaking, and listening at the college and career readiness level; demonstrate independence in gathering vocabulary knowledge when considering a word or phrase important to comprehension or expression.  **L.7.6** Acquire and use accurately grade-appropriate general academic and domain specific words and phrases; gather vocabulary knowledge when considering a word or phrase important to comprehension or expression. |

**ESSENTIAL QUESTION(S):** How do mathematicians evaluate, translate, and write expressions from real world contexts?

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| **Date** | **Day** | **Objective** | **Focus Question** | **I will…** |
| **10/23** | M | TSWBAT complete an iReady math lesson by taking notes on key vocabulary and at least three example problems with 80% accuracy by the end of the lesson. | How do mathematicians use iReady to enhance their mathematical skills? | Use iReady to enhance my mathematical skills. |
| **10/24** | T | TSWBAT use their knowledge of zero pairs, scale factor, slope, and unit rate by creating a masterpiece with given mathematical prompts with 90% accuracy by the end of the lesson. | How do mathematicians use mathematical concepts to create an abstract piece of art? | -Create original and scale drawings with a given scale factor.  -Draw lines with a given slope.  -Draw integer chips to represent zero pairs and positive integers.  -Calculate unit rate and create models to represent them. |
| **10/25** | W | TSWBAT examine, analyze, and correct their current mixed practice test (MPT) by reviewing resources provided by the teacher, consulting with peers, and/or asking the teacher for help with 100% accuracy by the end of the lesson. | How do mathematicians analyze and correct their graded tests in order to reflect on knowledge needed to master 7th grade math standards? | -Differentiate between silly mistakes and lack of knowledge.  -In writing, explain the silly mistake and rework the problems that contain silly mistakes.  -Use resources to help correct mistakes where mastery is not yet obtained. |
| **10/26** | Th | TBA based on MPT data. |  |  |
| **10/27** | F | TSWBAT translate and write expressions by analyzing real-world problems from RCC workbook with 80% accuracy by the end of the lesson | How do mathematicians rewrite expressions in different forms to better understand relationships within concepts? | Rewrite expressions in different forms to better understand relationships within concepts,  Incorporate expressions representing length and width into formulas for perimeter and area of triangles and rectangles. |

**REMEDIATION & ENRICHMENT**

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| **Students** | **Skill(s) & Activity** |
| **P25** | **M -** Students will be pulled for 5-15 minutes by Ms. DeBlanc to work on goals and any 7th grade skills not mastered. Students will be working on their path for iReady to close those gaps. Mrs. Breazeale will assist when help is needed during iReady.  **W** - Ms. DeBlanc will invite individual students to her desk to discuss their most recent MPT and clear up any misconceptions and offer support. |
| **Bubbles** | **M -** Students will be working on their path for iReady to close those gaps. Mrs. Breazeale will assist when help is needed during iReady.  **W -** Ms. DeBlanc or Mrs. Breazeale will invite individual students to her desk to discuss their most recent MPT and clear up any misconceptions and offer support. |
| **T25** | **M -** Students will be working on their path for iReady to close those gaps. Mrs. Breazeale will assist when help is needed during iReady.  **W -** Ms. DeBlanc or Mrs. Breazeale will invite individual students to her desk to discuss their most recent MPT and clear up any misconceptions and offer support. |

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| **MONDAY\_ Oct 23, 2023**  **WARM-UP/HOOK:** *The student will*  login to iReady. Write down the lesson title, class period, and date on the recording sheet. Take notes on lesson vocabulary and lesson goals.  **(5 minutes)**  **TEACHER INPUT: ( 5 minutes)**  *The teacher will …*   * Remind students to take notes on lesson vocabulary and lesson goals. * 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.   **INDEPENDENT PRACTICE: ( 35 minutes)**  *The student will …*   * Listen and complete a lesson on their path to the best of their ability. * Complete the lesson quiz with 80% or higher accuracy.   **—MEANWHILE—**   * Mrs. Breazeale (Teacher 1) will walk around assisting and monitoring students while they work. (Focusing on P25 & SPED populations.) * Ms. DeBlanc will pull select students to work on lesson goals and clear up any skills not mastered so far.   **STUDENT REFLECTION/EXIT TICKET:** *The student will* reflect on what they learned from the iReady lesson they just took based on their individual 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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| **TUESDAY\_ Oct 24, 2023**  **WARM-UP/HOOK:** *The student will*  grab an activity sheet, ruler or protractor, pencil, and graph paper. TSW write their name on their paper and read the notes and directions on the activity sheet. **(5 minutes)**  **TEACHER INPUT: ( 5 minutes)**  *The teacher will …*   * Explain they are going to be creating a masterpiece. * Explain the directions. * Ask if there is any questions.   **INDEPENDENT PRACTICE: ( 45 minutes)**  *The student will …*   * Listen and complete the assigned lesson to the best of their ability. * Complete the lesson quiz with 80% or higher accuracy.   **EXIT:** *The student will*  turn in their creation into the designated shelf..  **(<1 minute)**  **MATERIALS:**  graph paper, “Abstract Visual Arts Math Activity,” activity sheets, protractors/rulers, colored pencils, markers, crayons  **ASSESSMENT(S**): Completed work |

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| **WEDNESDAY\_ Oct 25, 2023**  **WARM-UP/HOOK:** *The student will* grab a data analysis sheet and a class set of Tuesday’s test. Write their name, date, etc. *The teacher* will pass back their Tuesday tests. **(5 minutes)**  **TEACHER INPUT: ( 2 minutes)**  *The teacher will …*   * Direct student to mark an “X” on the questions that the students missed. * Explain that they will use the class set of the test that includes “Teacher Notes” to rework the problems and/or explain what silly mistake they made.   **INDEPENDENT PRACTICE: ( 30 minutes)**  *The student will …*   * Rework problems on their test paper. * Justify why they missed certain problems. * Login to edulastics.com and complete the MPT 2.3 test corrections practice test while using hints to correct the missed problems. * Identify careless mistakes and correct them. * Use the UNRAVEL test taking strategy for math for questions not understood. * Use the videos under the topic “Helpful Videos” in Google classroom recommended by the teacher for each question not understood. * Notify the teacher when they think they are finished for feedback/review. * Staple data analysis sheet to the top of their test. * Get it signed by their parents or guardian and return the following day   **Meanwhile…**  **TEACHER CONFERENCES: Ms. DeBlanc**  or **Mrs. Breazeale** will invite individual students to her desk to discuss their most recent MPT and clear up any misconceptions and offer support. **(30 minutes)**  **EARLY FINISHERS:** The student will get iReady or Math Prodigy and wait patiently to be called to the teacher’s desk to discuss the test and any misconceptions.  **TEACHER INPUT: ( 10 minutes)**  *The teacher will …*   * Review the most missed problems or take any questions the students have. * Check over student work and provide feedback. * Choose a student to staple the remainder of the student's paper. * Explain that it is mandatory to bring their tests back signed by tomorrow.   **STUDENT REFLECTION/EXIT TICKET:** *The student will*  complete an exit ticket based on the most missed question(s). The teacher will use this data to determine which students need extra support.  **(5 minutes)**  **MATERIALS:**  graded Tuesday tests, test analysis sheets, stapler, staples, exit tickets  **ASSESSMENT(S**): Teacher observation, exit tickets, Tuesday tests |

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| **THURSDAY\_ Oct 26, 2023**  **To Be Announced based on the most recent MPT Math data.**   |  |  |  | | --- | --- | --- | | **Most Missed Standard(s)** | **Objective(s)** | **Activity** | |  | TSWBAT |  | |  | TSWBAT |  | |  | TSWBAT |  |   **Meanwhile…**  **TEACHER CONFERENCES:** TTW will finish inviting individual students to her desk to discuss their most recent MPT and clear up any misconceptions and offer support. **(30 minutes)**  **STUDENT REFLECTION/EXIT TICKET:** *The student will*  complete an exit ticket based on the most missed question(s). The teacher will use this data to determine which students need extra support.  **(5 minutes)**  **MATERIALS:**  returned Tuesday tests, exit tickets  **ASSESSMENT(S**): Teacher observation, exit tickets |

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| **FRIDAY\_ Oct 27, 2023**  **Lesson Duration: (50 minutes)**  **Printed Materials:** N/A  **Materials:** calculators, scratch paper, RCC workbooks  **Technology:** Promethean Board, Projector  **Anticipatory Set:**  **Hook/Pre-Class:** Students will observe 4 expressions which are the same and which are different. Discuss.  **Real/World Connection:** Say, “Life is full of problems. Many do not have easy solutions or no solution at all. Luckily with math, if you know a few basic concepts, mathematical problems can be the problems you encounter are easy to solve.  **Importance/Relevance**: Say, “As you level up in your academic career, you need to know how to write expressions to match real-world mathematical problems. Today, we are going to practice just that.”  **Teaching: Input: (~15 minutes)**  *The teacher will…*   * Present the EQ and FQ. Explain what they are expected to know at the end of the lesson. * Pass out a copy of lesson 15: Writing Linear Expressions from the old RCC workbook. * Read through the opening problem with the help of students. * Model problems a, b, and c.   **Teaching: Guided: (~15 minutes)**  *The teacher will…*   * On page 137, choose different students to read the text. * Guide students on writing a response to the “Reflect” question.   **Teaching: Independent: (~5 minutes)**  *The student will…*   * Read the problem and the notes on page 138. * Answer problems 2-8. * TTW review.   **Closure:** Review the high points of the lesson and provide an exit ticket.  **Assessment:**  Teacher observation and completed work. |

**MISSISSIPPI STATE STANDARDS ACROSS CURRICULUM**

**Math Standards**

**Numbers & Operations:**

**7.NS. 1** Apply and extend previous understandings of addition and subtraction to add and subtract rational numbers; represent addition and subtraction on a horizontal or vertical number line diagram.

**7.NS.1a** Describe situations in which opposite quantities combine and make 0.

**7.NS.1b** Understand that p + q is the number located a distance from the absolute value of q from p, in the positive or negative direction depending on whether q is positive or negative. Show that a number and its opposite have a sum of 0. Interpret sums of rational numbers by describing real-world contexts.

**7.NS.1c** Understand subtraction of rational numbers as adding the additive inverse. Show that the distance between two rational numbers on a number line is the absolute value of their difference, and apply this principle in real-world contexts.

**7.NS.1d** Apply properties of operations as strategies to add and subtract rational numbers.

**7.NS.2** Apply and extend previous understandings of multiplication and division and of fractions to multiply and divide rational numbers.

**7.NS.2a** Understand that multiplication is extended from fractions to rational numbers by requiring that operations continue to satisfy the properties of operations, particularly the distributive property, leading to products such as (-1)(-1) = 1 and the rules for multiplying signed numbers. Interpret products of rational numbers by describing real-world contexts.

**7.NS.2b** Understand that integers can be divided, provided that the divisor is not zero, and every quotient of integers (with non-zero divisor) is a rational number. If p and q are integers, then −p/q = (−p)/q = p/(−q). Interpret quotients of rational numbers by describing real-world contexts.

**7.NS.2c** Apply properties of operations as strategies to multiply and divide rational numbers.

**7.NS.2d** Convert a rational number to a decimal using long division; know that the decimal form of a rational number terminates in 0s or eventually repeats.

**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.

**Expressions & Equations:**

**7.EE** Solve real-life and mathematical problems using numerical and algebraic expressions and equations.

**7.EE.1**  Apply properties as strategies to add, subtract, factor, and expand linear expressions with rational coefficients.

**7.EE.2** Understand that rewriting an expression in different, yet equivalent, forms in a problem can show how the quantities in it are related.

**7.EE.3** Write an expression from a real world context possibly involving sales tax, tip, discount, gratuity, markup, selling price, perimeter, area, and angle measures of a triangle. • Evaluate an expression given a value for the variable. • Translate a verbal expression into an algebraic expression. • Use manipulatives such as algebra tiles to factor expressions.

**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.