**Teacher(s):** Mrs. Breazeale (Ms. DeBLanc)  **Subject/Grade:** 7th /Grade Math **Week of: Nov 6, 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.** |

**ESSENTIAL QUESTION(S):** How do I solve real-life and mathematical problems using numerical and algebraic expressions and equations?

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| **Date** | **Objective** | **Focus Question** | **I will…** |
| **11/7**  **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. |
| **11/8**  **T** | TSWBAT write equivalent expressions with percents while understanding the meaning of a discount and tax? | How will I write equivalent expressions with percents? | -Write equivalent expressions with percents.  -Write expressions in different forms to better understand relationships within concepts. |
| **11/9**  **W** | TSWBAT examine and analyze real-world problems while utilizing scratch paper. | How will I apply strategies and knowledge obtained in math class to score 80% or higher on my DCA? | -Score 80% or higher on my Math DCA. |
| **11/10**  **TH** | TBA | TBA based on DCA data. | TBA based on DCA data. |
| **11/11**  **F** | TSWBAT complete 30 problems (7.EE.1) playing the prodigy math game with 80% accuracy. | How do mathematicians use Math Prodigy to enhance their mathematical skills? | Use Math Prodigy to enhance my mathematical skills. |

**REMEDIATION & ENRICHMENT**

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| **Students** | **Skill(s) & Activity** |
| **P25** | **M -** Students will be pulled for 5-15 minutes by **Mrs. Breazeale**  for one-on-one instructions.  **M** - **Ms. DeBlanc**  will work with a small group to provide more guided practice..  **Th** - **Ms. DeBlanc** will invite individual students to her desk to discuss their most recent DCA and clear up any misconceptions and offer support. |
| **Bubbles** | **Th - Ms. DeBlanc**  or **Mrs. Breazeale** will invite individual students to her desk to discuss their most recent DCA and clear up any misconceptions and offer support. |
| **T25** | **W - Mrs. Breazeale** will challenge students to teach the most missed question to a peer. |

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| **MONDAY\_ Nov 6, 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.   **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\_ Nov 7, 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 on page 140 with the help of students. * Demonstrate how to draw a model to represent a sale price and tax.   **Teaching: Guided: (~15 minutes)**  *The teacher will…*   * On page 141, call on different students to help with the answers for 9-15.   **Teaching: Independent: (~5 minutes)**  *The student will…*   * Complete problems 16-18 and 1-5.   **Closure:** Review the high points of the lesson.  **Assessment:**  Teacher observation and completed work. |

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| **WEDNESDAY\_ Nov 8, 2023**  **INDEPENDENT PRACTICE: ( 55 minutes)**  *The student will …*   * Take the November DCA. * Focus * Work out problems on paper.   **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.  **MATERIALS:**  computers, scratch paper, pencils, calculators  **ASSESSMENT(S**): November DCA |

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| **THURSDAY\_ Nov 9, 2023**  **To Be Announced based on the most recent DCA Math data. We will rework most missed problems.**   |  |  |  | | --- | --- | --- | | **Most Missed Standard(s)** | **Objective(s)** | **Activity** | |  | TSWBAT |  | |  | TSWBAT |  | |  | TSWBAT |  | |

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| **FRIDAY\_ Nov 10, 2023**  **WARM-UP/HOOK:** *The student will*  login to Prodigy and start solving problems.  **(5 minutes)**  **TEACHER INPUT: ( 5 minutes)**  *The teacher will …*   * Remind students that they must solve at least 30 problems on 7.EE.4. * Review the requirements to receive help on a problem - students must have tried to work it out on paper first.   **INDEPENDENT PRACTICE: ( 35 minutes)**  *The student will …*   * Complete 30 questions on Prodigy with 80% or higher accuracy.   **STUDENT REFLECTION/EXIT TICKET:** *The student will* reflect on what they learned fromProdigy. The teacher will use this data to determine which students need extra support.  **(5 minutes)**  **MATERIALS:**  notebook paper computers, projector, exit tickets  **ASSESSMENT(S**): Teacher observation, exit tickets, iReady lesson quiz results |

**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.

**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.