

Teacher(s): Mrs. Breazeale & Ms. DeBlanc

Subject/Grade: 7th /Grade Math

Week of: Apr 29, 2024

Domain: ALL ▾

Lesson Plan Title: The Math Movie Week 1

	MATHEMATICS - Mississippi College and Career Readiness Standards for 7 th Grade
Numbers & Operations	<p>7.NS.1 Apply and extend previous understandings of addition and subtraction to add and subtract rational numbers; represent addition ... ▾</p> <p>7.NS.2 Apply and extend previous understandings of multiplication and division and of fractions to multiply and divide rational numbers. ▾</p> <p>7.NS.3 Solve real-world and mathematical problems involving the four operations with rational numbers. ▾</p>
Ratios & Proportions	<p>7.RP Analyze proportional relationships and use them to solve real-world and mathematical problems. ▾</p>
Expressions & Equations	<p>7.EE.2 Understand that rewriting an expression in different, yet equivalent, forms in a problem can show how the quantities in it are rela... ▾</p>
Geometry	<p>7.G.6 Solve real-world and mathematical problems involving area, volume and surface area of two- and three-dimensional objects comp... ▾</p>
Statistics & Probability	<p>7.SP.4 Use measures of center and measures of variability (i.e. inter-quartile range) for numerical data from random samples to draw inf... ▾</p>

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.

ESSENTIAL QUESTION(S): What happens when mathematicians theater artists use their imaginations while engaging in creative exploration and inquiry in order to create a math skit from start to finish?

Date	Objective	Focus Question	I will...
M	TSWBAT infuse math concepts with their creativity to generate ideas for a movie skit with 80% accuracy.	1) How will I express my creativity when generating and conceptualizing artistic ideas and work? 2) How will I organize, develop artistic ideas and work while infusing math concepts? 3) How do I refine and complete artistic work?	<ul style="list-style-type: none"> ● Generate and conceptualize artistic ideas and work. ● Organize and develop artistic ideas and work. ● Refine and complete artistic work.
T	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.
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.
Th	TSWBAT infuse math concepts with their creativity to write a math movie skit with 80% accuracy.	1) How will I organize, develop artistic ideas and work while infusing math concepts? 2) How do I refine and complete	-Write a rough draft and final draft for the math movie.

		artistic work?	
F	TSWBAT adapt speech to portray a character in a math skit with 80% accuracy.	How do mathematicians demonstrate command of the English language while incorporating mathematical vocabulary?	-adapt speech to portray a character in a math skit with 80% accuracy.

MONDAY_ Apr 29, 2024

Bell Ringer: TSW complete a MAAP style questions. TTW review.

Direct Instruction:

The teacher will...

- Say “Each homeroom will write a script based on one of the 5 domains we learn in math - The Number Sense, Ratios & Proportions, Equations & Expressions, Geometry, and Statistics & Probability. Your homeroom will be assigned _____.”
- We will come up with a concept together, and write it together.
- Before we can start writing, let’s come up with a concept.

Guided Practice:

The student will...

- Share ideas for a math skit to come up with a concept.
- As a class, we vote on the best concept.
- If time allows, we will share a google doc, and start writing.

Independent Practice:

The student will...

- Write a script for the math movie with Mrs. Breazeale (THE WRITING TEAM).
- Students not on the writing team will play math prodigy.

Closure: TTW review what all we have done so far.

Assessment: Informal Observation

TUESDAY_ Apr 30, 2024

WARM-UP/HOOK: *The student will* login to iReady and choose a lesson on their path. 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 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: **(30 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.
- Complete a second lesson on their path

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: notebook paper or “iReady Notes template,” computers, projector, exit tickets

ASSESSMENT(S): Teacher observation, exit tickets, iReady lesson quiz results

WEDNESDAY_ May 1, 2024

WARM-UP/HOOK: *The student will* copy the data set from the board. Find the mean, median, Mode, and range of the data set. TSW then create a dot plot and a box and whisker plot of the data. **(8 minutes)** TTW will invite students to the board to demonstrate each part. **(8 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.
- Compare their graded test to the teacher’s class set/guided notes and questions.
- 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: The teacher 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

THURSDAY_ May 2, 2024

Bell Ringer: TSW complete a MAAP style questions. TTW review.

Direct Instruction:

The teacher will...

- Give students a copy of the script.
- Facilitate a table read.

Guided Practice:

The student will...

- Work to memorize lines and then work on speaking loudly and making the lines believable.

Closure: TTW review what all we have done so far.

Assessment: Informal Observation

Students that do not wish to Participate in the Movie

Independent Practice:

The student will...

- Complete 25 questions from math prodigy.

FRIDAY_ May 3, 2024

Bell Ringer: TSW read over the script in preparation for filming.

Guided Practice:

The student will...

- Record the skits.

Closure: TTW review what all we have done so far.

Assessment: Informal Observation

Students that do not wish to Participate in the Movie

Independent Practice:

The student will...

- Complete 25 questions from math prodigy.

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.

7.EE.4 Use variables to represent quantities in a real-world or mathematical problem, and construct simple equations and inequalities to solve problems by reasoning about the quantities.

7.EE.4a Solve word problems leading to equations of the form $px + q = r$ and $p(x + q) = r$, where p , q , and r are specific rational numbers. Solve equations of these forms fluently. Compare an algebraic solution to an arithmetic solution, identifying the sequence of the operations used in each approach. For example, the perimeter of a rectangle is 54 cm. Its length is 6 cm. What is its width?

7.EE.4b Solve word problems leading to inequalities of the form $px + q > r$ or $px + q < r$, where p , q , and r are specific rational numbers. Graph the solution set of the inequality and interpret it in the context of the problem. For example: As a salesperson, you are paid \$50 per week plus \$3 per sale. This week you want your pay to be at least \$100. Write an inequality for the number of sales you need to make, and describe the solutions.

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.

7.G.2 Draw (freehand, with ruler and protractor, and with technology) geometric shapes with given conditions. Focus on constructing triangles from three measures of angles or sides, noticing when the conditions determine a unique triangle, more than one triangle, or no triangle.

7.G.3 Describe the two-dimensional figures that result from slicing three-dimensional figures, as in plane sections of right rectangular prisms and right rectangular pyramids.

7.G.4 Know the formulas for the area and circumference of a circle and use them to solve problems; give an informal derivation of the relationship between the circumference and area of a circle.

7.G.5. Use facts about supplementary, complementary, vertical, and adjacent angles in a multi-step problem to write and solve simple equations for an unknown angle in a figure.

7.G.6 Solve real-world and mathematical problems involving area, volume and surface area of two- and three-dimensional objects composed of triangles, quadrilaterals, polygons, cubes, and right prisms.

Statistics & Probability:

7.SP.1 Understand that statistics can be used to gain information about a population by examining a sample of the population; generalizations about a population from a sample are valid only if the sample is representative of that population. Understand that random sampling tends to produce representative samples and support valid inferences.

7.SP.2 Use data from a random sample to draw inferences about a population with an unknown characteristic of interest. Generate multiple samples (or simulated samples) of the same size to gauge the variation in estimates or predictions. For example, estimate the

mean word length in a book by randomly sampling words from the book; predict the winner of a school election based on randomly sampled survey data. Gauge how far off the estimate or prediction might be.

7.SP.3 Informally assess the degree of visual overlap of two numerical data distributions with similar variabilities, measuring the difference between the centers by expressing it as a multiple of a measure of variability. For example, the mean height of players on the basketball team is 10 cm greater than the mean height of players on the soccer team, about twice the variability on either team; on a dot plot, the separation between the two distributions of heights is noticeable.

7.SP.4 Use measures of center and measures of variability (i.e. inter-quartile range) for numerical data from random samples to draw informal comparative inferences about two populations. For example, decide whether the words in a chapter of a seventh-grade science book are generally longer than the words in a chapter of a fourth-grade science book.

7.SP.5 Understand that the probability of a chance event is a number between 0 and 1 that expresses the likelihood of the event occurring. Larger numbers indicate greater likelihood. A probability near 0 indicates an unlikely event, a probability around $1/2$ indicates an event that is neither unlikely nor likely, and a probability near 1 indicates a likely event.

7.SP.6 Approximate the probability of a chance event by collecting data on the chance process that produces it and observing its long-run relative frequency, and predict the approximate relative frequency given the probability. For example, when rolling a number cube 600 times, predict that a 3 or 6 would be rolled roughly 200 times, but probably not exactly 200 times.

7.SP.7 Develop a probability model and use it to find probabilities of events. Compare probabilities from a model to observed frequencies; if the agreement is not good, explain possible sources of the discrepancy.

7.SP.7a Develop a uniform probability model by assigning equal probability to all outcomes, and use the model to determine probabilities of events. For example, if a student is selected at random from a class, find the probability that Jane will be selected and the probability that a girl will be selected.

7.SP.7b. Develop a probability model (which may not be uniform) by observing frequencies in data generated from a chance process. For example, find the approximate probability that a spinning penny will land heads up or that a tossed paper cup will land opened down. Do the outcomes for the spinning penny appear to be equally likely based on the observed frequencies?

7.SP.8 Find probabilities of compound events using organized lists, tables, tree diagrams, and simulation.

7.SP.8a Understand that, just as with simple events, the probability of a compound event is the fraction of outcomes in the sample space for which the compound event occurs.

7.SP.8b Represent sample spaces for compound events using methods such as organized lists, tables and tree diagrams. For an event described in everyday language (e.g., "rolling double sixes"), identify the outcomes in the sample space which compose the event.

7.SP.8c Design and use a simulation to generate frequencies for compound events. For example, use random digits as a simulation tool to approximate the answer to the question: If 40% of donors have type A blood, what is the probability that it will take at least 4 donors to find one with type A blood?

Writing

W.7.2d Use precise language and domain-specific vocabulary to inform about or explain the topic.

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.

Speaking & Listening

CCR.SL.1: Prepare for and participate effectively in a range of conversations and collaborations with diverse partners, building on others' ideas and expressing their own clearly and persuasively.

SL.7.1a Come to discussions prepared, having read or researched material under study; explicitly draw on that preparation by referring to evidence on the topic, text, or issue to probe and reflect on ideas under **SL.7.1b** Follow rules for collegial discussions, track progress toward specific goals and deadlines, and define individual roles as needed.

SL.7.1c Pose questions that elicit elaboration and respond to others' questions and comments with relevant observations and ideas that bring the discussion back on topic as needed.

SL.7.1d Acknowledge new information expressed by others and, when warranted, modify their own views.

CCR.SL.5: Make strategic use of digital media and visual displays of data to express information and enhance understanding of presentations.

SL.7.5 Include multimedia components and visual displays in presentations to clarify claims and findings and emphasize salient points.

SL.7.6 Adapt speech to a variety of contexts and tasks, demonstrating command of formal English when indicated or appropriate.

Language

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.4: Determine or clarify the meaning of unknown or multiple-meaning words and phrases by using context clues, analyzing meaningful word parts, and consulting general and specialized reference materials, as appropriate.

L.7.4a Use context (e.g., the overall meaning of a sentence or paragraph; a word's position or function in a sentence) as a clue to the meaning of a word or phrase.

L.7.4b Use common, grade appropriate Greek or Latin affixes and roots as clues to the meaning of a word (e.g., belligerent, bellicose, rebel).

L.7.4c Consult general and specialized reference materials (e.g., dictionaries, glossaries, thesauruses), both print and digital, to find the pronunciation of a word or determine or clarify its precise meaning or its part of speech.

L.7.4d Verify the preliminary determination of the meaning of a word or phrase (e.g., by checking the inferred meaning in context or in a dictionary).

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.