Mrs. Rayman's 6th Grade Math Weekly Lesson Plans

Date: Week of May 13, 2019

Unit 5 Common Core State Standards

6.SP.1 Recognize a statistical question as one that anticipates variability in the data related to the question and .accounts for it in the answers	**6.SP.2** Understand that a set of data collected to answer a statistical question has a distribution which can be described by its center, spread, and overall shape.	**6.SP.3** Recognize that a measure of center for numerical data set summarizes all of its values with a single number, while a measure of variation describes how its values vary with a single number.	**6.SP.4** Display numerical data in plots on a number line, including dot plots, histograms, and box plots.	**6.SP.5** Summarize quantitative measures of center and variability, as well as describing any overall pattern and any striking deviations from the overall pattern with reference to the context in which the data were gathered.

Unit 5 Essential Questions:

- *What are the benefits of each type of data plot when analyzing the distribution of a given data set?*
- *What do the measurements of variation: range, interquartile range (IQR) and mean absolute deviation (MAD); represent with respect to a numerical data set and how do they help us understand it better?*

Number Sense:

- *Odd one out*
- *Ways to make a number*
- *Always, Sometimes, Never*

<u>Monday Engage NY Lesson 6-12</u>

Objective: Given a data set, students calculate the median of the data. Students estimate the percent of values above and below the median value.

1. Warm up: Ways to Make a Number AND Video:
2. Classwork: Engage NY Lesson 6-12 Examples 1-4
3. Homework: Engage NY Lesson 6-12 Problem Set/Homework

Tuesday Engage NY Lesson 6-13

Objective: Given a set of data, students describe how the data might have been collected. Students describe the unit of measurement for observations in a data set. Students calculate the median of the data. Students describe the variability in the data by calculating the interquartile range.

4. Warm up: Ways to Make a Number AND Video:
5. Classwork: Engage NY Lesson 6-13 Example 1 and Exercises 1-6
6. Homework: Engage NY Lesson 6-13 Problem Set/Homework

Wednesday Engage NY Lesson 6-14

Objective: Students construct a box plot from a given set of data

7. Warm up: Ways to Make a Number AND Video:
8. Classwork: Engage NY Lesson 6-14 Examples 1-2 and Exercises 1-11
9. Homework: Engage NY Lesson 6-14 Problem Set/Homework

Thursday Engage NY Lesson 6-15

Objective: Given a box plot, students summarize the stat by the 5-number summary (Min, Q1, Median, Q3, and Max). Students describe a set of stat using the 5-number summary and the interquartile range. Students construct a box plot from a 5-number summary.

10. Warm up: Ways to Make a Number AND Video:
11. Classwork: Engage NY Lesson 6-15 Examples 1-2 and Exercises 1-15
12. Homework: Engage NY Lesson 6-15 Problem Set/Homework

Friday Unit 5 Vocabulary

Objective: Become familiar with the Unit 5 Vocabulary prior to beginning the unit

Agenda:

1. Warm up: Ways to Make a Number AND Video:
2. Classwork: Vocabulary Assignment
3. Homework: Finish any definitions that were not completed in class.

Mrs. Rayman's Daily Instructional Plan- Grade 6 Math

	Monday	Tuesday	Wednesday	Thursday	Friday
Accessing Prior Knowledge - Where are your students headed? Where have they been? How will you make sure the students know where they are going?	Warm up: Ways to Make a Number of the Day AND Video:	Warm up: Ways to Make a Number of the Day AND Video:	Warm up: Ways to Make a Number of the Day AND Video:	Warm up: Ways to Make a Number of the Day AND Video: :	Warm up: Ways to Make a Number of the Day AND Video: :
Guided Practice - What events will help students experience and explore the big idea and questions in the unit? How will you equip them with needed skills and knowledge?	Direct Instruction: Engage NY Lessons: 6-12	Direct Instruction: Engage NY Lessons: 6-13	Direct Instruction: Engage NY Lessons: 6-14	Direct Instruction: Engage NY Lessons 6-15	Direct Instruction: Engage NY Lessons 7.1.8
Independent Practice - How will you cause students to reflect and rethink? How will you guide them in rehearsing, revising, and refining their work? How will students work together to ensure mastery for all?	Student Notes and Homework: Engage NY Lesson 6-12 Problem Set/Homework	Student Notes and Homework: Engage NY Lesson 6-13 Problem Set/Homework	Student Notes and Homework: Engage NY Lesson 6-14 Problem Set/Homework	Student Notes and Homework: Engage NY Lesson 6-15 Problem Set/Homework	Student Notes and Homework: Engage NY Lesson 7.1.8 Problem Set/Homework
Assessing Knowledge - How will you help students to exhibit and self-evaluate their growing skills, knowledge, and understanding throughout the unit?	Exit Tickets and Teacher Observations	Exit Tickets and Teacher Observations	Exit Tickets and Teacher Observations	Exit Tickets and Teacher Observations	Exit Tickets and Teacher Observations
Differentiation/Accommodation - How will you tailor and otherwise personalize the learning plan to optimize the engagement and effectiveness of ALL students, without compromising the goals of the unit?	Pre written vocabulary & notes, extended time, preferential seating, reduced assignments	Pre written vocabulary & notes, extended time, preferential seating, reduced assignments	Pre written vocabulary & notes, extended time, preferential seating, reduced assignments	Pre written vocabulary & notes, extended time, preferential seating, reduced assignments	Pre written vocabulary & notes, extended time, preferential seating, reduced assignments
Learner Outcome - How will students demonstrate, as a result of lesson, their level of mastery? • Understand • Know • Do	Given a data set, students calculate the median of the data. Students estimate the percent of values above and below the median value.	Given a set of data, students describe how the data might have been collected. Students describe the unit of measurement for observations in a data set. Students calculate the median of the data. Students describe the variability in the data by calculating the interquartile range.	Students construct a box plot from a given set of data	Given a box plot, students summarize the stat by the 5-number summary (Min, Q1, Median, Q3, and Max). Students describe a set of stat using the 5-number summary and the interquartile range. Students construct a box plot from a 5-number summary.	Students use the constant of proportionality to represent proportional relationships by equations in real- world contexts as they relate the equations to a corresponding ratio table or graphical representation.

Mrs. Rayman's 6th Grade Advanced Math
Weekly Lesson Plans

Date: Week of May 13, 2019

Grade 7 Unit 1 Common Core State Standards (ALL)

7.RP.1 Compute unit rates associated with ratios of fractions, including ratios of lengths, areas, and other quantities measured in like or different units.	**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. For example, if total cost t is proportional to the number n of items purchased at a constant price p, the relationship between the total cost and the number of items can be expressed as t=pm	**7.RP.2d** Explain what a point (x,y) on a graph of a proportional relationship means in terms of the situation, with special attention to the points (0,0) adn (1, r) where r is the unit rate.	**7.G.1** Solve problems involving scale drawings of geometric figures, including computing actual lengths and areas from a scale drawing and reproducing a scale drawing at a different scale.

Grade 7 Unit 1 Essential Questions:

- *How can you determine if a relationship is proportional or non-proportional from a table, graph, equation, and verbal description?*
- *How are scale drawings useful in the real world?*

Number Sense:

- *Number Talk*
- *Ways to make a function from a given solution (only make proportional)*
- *Always, Sometimes, Never*
- *Odd One Out*
- *What's my rule?*
- *Visual Patterns*

Monday Engage NY Lesson 7.2.4

Objective: Students understand the rules for adding rational numbers: Add rational numbers with the same sign by adding the absolute values and using the common sign.Add rational numbers with opposite signs by subtracting the smaller absolute value from the larger absolute value and using the sign of the number with the larger absolute value. Students justify the rules using arrows and a number line or by using the Integer Game. They extend their findings to begin to include sums of rational numbers.

Agenda:

1. Warm up: Rate of the Day AND Video:
2. Classwork: Engage NY Lesson 7.2.4
3. Homework: Engage NY Lesson 7.2.4 Problem Set/Homework

Monday Engage NY Lesson 7.2.5

Objective: Students justify the rule for subtraction: Subtracting a number is the same as adding its opposite.
Students relate the rule for subtraction to the Integer Game: Removing (subtracting) a positive card changes the score in the same way as adding a corresponding negative card. Removing (subtracting) a negative card makes the same change as adding the corresponding positive card. Students justify the rule for subtraction for all rational numbers from the inverse relationship between addition and subtraction; that is, subtracting a number and adding it back gets you back to where you started: $(m-n)+n=m$.

Agenda:

4. Warm up: Rate of the Day AND Video:
5. Classwork: Engage NY Lesson 7.2.5
6. Homework: Engage NY Lesson 7.2.5 Problem Set/Homework

Tuesday Engage NY Lesson 7.2.6

Objective:Students justify the distance formula for rational numbers on a number line: If p and q are rational numbers on a number line, then the distance between p and q is $|p-q|$. Students know the definition of subtraction in terms of addition (i.e., $a-b=c$ means that $b+c=a$) and use the definition of subtraction to justify the distance formula. Students solve word problems involving changes in distance or temperature.

Agenda:

7. Warm up: Rate of the Day AND Video:
8. Classwork: Engage NY Lesson 7.2.6
9. Homework: Engage NY Lesson 7.2.6 Problem Set/Homework

Wednesday Engage NY Lesson 7.2.7

Objective: Students recognize that the rules for adding and subtracting integers apply to rational numbers.
Given a number line, students use arrows to model rational numbers where the length of the arrow is the absolute value of the rational number and the sign of the rational number is determined by the direction of the arrow with respect to the number line.

Students locate the sum $p+q$ of two rational numbers on a number line by placing the tail of the arrow for q at p and locating $p+q$ at the head of the arrow. They create an arrow for the difference $p-q$ by first rewriting the difference as a sum, $p+(-q)$, and then locating the sum.

Agenda:

10. Warm up: Rate of the Day AND Video:
11. Classwork: Engage NY Lesson 7.2.7
12. Homework: Engage NY Lesson 7.2.7 Problem Set/Homework

Thursday Engage NY Lesson 7.2.8

Objective: Students use properties of operations to add and subtract rational numbers without the use of a calculator.
Students recognize that any problem involving addition and subtraction of rational numbers can be written as a problem using addition and subtraction of positive numbers only. Students use the commutative and associative properties of addition to rewrite numerical expressions in different forms. They know that the opposite of a sum is the sum of the opposites (e.g., $-(3+(-4))=-3+4$).

Agenda:

13. Warm up: Rate of the Day AND Video:
14. Classwork: Engage NY Lesson 7.2.8
15. Homework: Engage NY Lesson 7.2.8 Problem Set/Homework

Friday Engage NY Lesson 7.2.9

Objective: Students use properties of operations to add and subtract rational numbers without the use of a calculator.
Students recognize that any problem involving addition and subtraction of rational numbers can be written as a problem using addition and subtraction of positive numbers only. Students use the commutative and associative properties of addition to rewrite numerical expressions in different forms. They know that the opposite of a sum is the sum of the opposites; for example, $-(3-4)=-3+4$.

Agenda:

16. Warm up: Rate of the Day AND Video:
17. Classwork: Engage NY Lesson 7.2.9
18. Homework: Engage NY Lesson 7.2.9 Problem Set/Homework

Mrs. Rayman's Daily Instructional Plan- Grade 6 Advanced Math

	Monday	Tuesday	Wednesday	Thursday	Friday
Accessing Prior Knowledge - Where are your students headed? Where have they been? How will you make sure the students know where they are going?	Warm up: Ways to Make a Number of the Day AND Video:	Warm up: Ways to Make a Number of the Day AND Video:	Warm up: Ways to Make a Number of the Day AND Video:	Warm up: Ways to Make a Number of the Day AND Video:	Warm up: Ways to Make a Number of the Day AND Video:
Guided Practice - What events will help students experience and explore the big idea and questions in the unit? How will you equip them with needed skills and knowledge?	Direct Instruction: Engage NY Lessons 7.1.16 AND 7.1.17	Direct Instruction: Engage NY Lessons: 7.2.6	Direct Instruction: Engage NY Lessons: 7.2.7	Direct Instruction: Engage NY Lessons: 7.2.8	Direct Instruction: Engage NY Lessons 7.2.9
Independent Practice - How will you cause students to reflect and rethink? How will you guide them in rehearsing, revising, and refining their work? How will students work together to ensure mastery for all?	Student Notes and Homework: Engage NY Lesson 7.1.16 AND 7.1.17 Problem Set/Homework	Student Notes and Homework: Engage NY Lesson 7.2.6 Problem Set/Homework	Student Notes and Homework: Engage NY Lesson 7.2.7 Problem Set/Homework	Student Notes and Homework: Engage NY Lesson 7.2.8 Problem Set/Homework	Student Notes and Homework: Engage NY Lesson 7.2.9 Problem Set/Homework
Assessing Knowledge - How will you help students to exhibit and self-evaluate their growing skills, knowledge, and understanding throughout the unit?	Exit Tickets and Teacher Observations	Exit Tickets and Teacher Observations	Exit Tickets and Teacher Observations	Exit Tickets and Teacher Observations	Exit Tickets and Teacher Observations
Differentiation/Accommodation - How will you tailor and otherwise personalize the learning plan to optimize the engagement and effectiveness of ALL students, without compromising the goals of the unit?	Pre written vocabulary & notes, extended time, preferential seating, reduced assignments	Pre written vocabulary & notes, extended time, preferential seating, reduced assignments	Pre written vocabulary & notes, extended time, preferential seating, reduced assignments	Pre written vocabulary & notes, extended time, preferential seating, reduced assignments	Pre written vocabulary & notes, extended time, preferential seating, reduced assignments
Learner Outcome - How will students demonstrate, as a result of lesson, their level of mastery? • Understand • Know • Do	**7.2.4** Students understand the rules for adding rational numbers: Add rational numbers with the same sign by adding the absolute values and using the common sign.Add rational numbers with opposite signs by subtracting the smaller absolute value from the larger absolute value and using the sign of the number with the larger absolute value. Students justify the rules using arrows and a number line or by using the Integer Game. They extend their findings to begin to include sums of rational numbers. **7.2.5** Students justify the rule for subtraction: Subtracting a number is the same as adding its opposite. Students relate the rule for subtraction to the Integer Game: Removing (subtracting) a positive card changes the score in the same way as adding a corresponding negative card. Removing (subtracting) a negative card makes the same change as adding the corresponding positive card. Students justify the rule for subtraction for all rational numbers from the inverse relationship between addition and subtraction; that is, subtracting a number and adding it back gets you back to where you started: $(m-n)+n=m$.	**7.2.6** Students justify the distance formula for rational numbers on a number line: If p and q are rational numbers on a number line, then the distance between p and q is $\lvert p-q \rvert$. Students know the definition of subtraction in terms of addition (i.e., $a-b=c$ means that $b+c=a$) and use the definition of subtraction to justify the distance formula. Students solve word problems involving changes in distance or temperature.	**7.2.7** Students recognize that the rules for adding and subtracting integers apply to rational numbers. Given a number line, students use arrows to model rational numbers where the length of the arrow is the absolute value of the rational number and the sign of the rational number is determined by the direction of the arrow with respect to the number line. Students locate the sum $p+q$ of two rational numbers on a number line by placing the tail of the arrow for q at p and locating $p+q$ at the head of the arrow. They create an arrow for the difference $p-q$ by first rewriting the difference as a sum, $p+(-q)$, and then locating the sum.	**7.2.8** Students use properties of operations to add and subtract rational numbers without the use of a calculator. Students recognize that any problem involving addition and subtraction of rational numbers can be written as a problem using addition and subtraction of positive numbers only. Students use the commutative and associative properties of addition to rewrite numerical expressions in different forms. They know that the opposite of a sum is the sum of the opposites (e.g., $-(3+(-4))=-3+4$).	**7.2.9** Students use properties of operations to add and subtract rational numbers without the use of a calculator. Students recognize that any problem involving addition and subtraction of rational numbers can be written as a problem using addition and subtraction of positive numbers only. Students use the commutative and associative properties of addition to rewrite numerical expressions in different forms. They know that the opposite of a sum is the sum of the opposites; for example, $-(3-4)=-3+4$.