

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.
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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*

Monday 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.

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

Tuesday Engage NY Lesson 6-16

Objective: Students summarize a data set using box plots, the median, and the interquartile range. Students use box plots to compare two data distributions.

4. Warm up: Ways to Make a Number AND Video:
5. Classwork: Engage NY Lesson 6-16 Examples 1-2 and Exercises 1-15
6. Homework: Engage NY Lesson 6-16 Problem Set/Homework

Wednesday Engage NY Lesson 1

Objective: Students show the area formula for the region bounded by a parallelogram by composing it into rectangles. They understand that the area of a parallelogram is the area of the region bounded by the parallelogram.

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

Thursday Unit 6 Vocabulary

Objective: Become familiar with the Unit 6 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.

Friday Engage NY Lesson 2

Objective: Students justify the area formula for a right triangle by viewing the right triangle as part of a rectangle composed of two triangles.

4. Warm up: Ways to Make a Number AND Video:
5. Classwork: Engage NY Lesson 2 Exemplary Challenge and Exercises 1-8
6. Homework: Engage NY Lesson 2 Problem Set/Homework

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

	Monday	Tuesday	Wednesday	Thursday	Friday
Accessing Prior Knowledge - <i>Where</i> 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 <i>experience and explore</i> the big idea and questions in the unit? How will you equip them with needed skills and knowledge?	Direct Instruction: Engage NY Lessons 6-15	Direct Instruction: Engage NY Lesson 6-16	Direct Instruction: Engage NY Lesson 6-1	Direct Instruction: Engage NY Vocabulary	Direct Instruction: Engage NY Lesson 6-2 Examples 1-8
Independent Practice - How will you cause students to <i>reflect and rethink</i> ? 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 6-15 Problem Set/Homework	Student Notes and Homework: Engage NY Lesson 6-16 Problem Set/Homework	Student Notes and Homework: Engage NY Lesson 6-1 Problem Set/Homework	Student Notes and Homework: Vocabulary	Student Notes and Homework: Engage NY Lesson 6-2 Problem Set/Homework
Assessing Knowledge - How will you help students to <i>exhibit and self-evaluate</i> 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 <i>tailor</i> 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 <i>demonstrate</i> , as a result of lesson, their level of mastery? <ul style="list-style-type: none"> • Understand • Know • Do 	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 summarize a data set using box plots, the median, and the interquartile range. Students use box plots to compare two data distributions.	Students distinguish between statistical questions and those that are not statistical. Students formulate a statistical question and explain what data could be collected to answer the question. Students distinguish between categorical data and numerical data.	Become familiar with the Unit 6 Vocabulary prior to beginning the unit	Given a dot plot, students begin describing the distribution of the points on the dot plot in terms of center and variability.

Unit 7 Common Core State Standards

7.NS.1 Apply and extend previous understanding of addition and subtraction to add and subtract rational numbers; represent addition and subtraction on a horizontal or vertical number line diagram.	7.NS.2 Apply and extend previous understandings of multiplication and division and of fractions to multiply and divide rational numbers.	7.NS.1a Describe situations in which opposite quantities combine to make 0. For example, a hydrogen atom has 0 charge because its two constituents are oppositely charged.	7.NS.2b Understand that integers can be divided, provided that the divisor is not zero, and every quotient of integers is a rational number.
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Unit 7 Essential Questions:

- *What rules can we find to generalize patterns when operations with rational numbers? What connections can we make to operations with whole numbers, fractions and decimals?*
- *How are rational number operations useful in the real world?*

Number Sense:

- *Count around the room*
- *Ways to make a number*
- *Ways to solve a math problem mentally*
- *Organic number line*

Monday Engage NY Lesson 7-5

Objective: Students justify the rules for subtraction: subtracting a number is the same as adding its opposite.

7. Warm up: Ways to Make a Number AND Video:
8. Classwork: Engage NY Lesson 7-5 Examples 1-3 and Exercises 1-3
9. Homework: Engage NY Lesson 7-5 Problem Set/Homework

Tuesday Engage NY Lesson 7-6

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 and use the definition of subtraction to justify the distance formula.

10. Warm up: Ways to Make a Number AND Video:
11. Classwork: Engage NY Lesson 7-6 Examples 1-2 and Exercises 1-4
12. Homework: Engage NY Lesson 7-6 Problem Set/Homework

Wednesday Engage NY Lesson 7-7

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 differences $p - q$ by first rewriting the difference as a sum, $p + (-q)$, and then locating the sum.

7. Warm up: Ways to Make a Number AND Video:
8. Classwork: Engage NY Lesson 7-7 Exercises 1-5 and examples 1-2
9. Homework: Engage NY Lesson 7-7 Problem Set/Homework

Thursday Unit 6 Vocabulary

Objective: Become familiar with the Unit 6 Vocabulary prior to beginning the unit

Agenda:

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

Friday Engage NY Lesson 7-8

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.

10. Warm up: Ways to Make a Number AND Video:
11. Classwork: Engage NY Lesson 7-8 Examples 1-2 and Exercises 1-5
12. Homework: Engage NY Lesson 7-8 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: 7-5	Direct Instruction: Engage NY Lessons: 7-6	Direct Instruction: Engage NY Lessons: 7-7	Direct Instruction: Engage NY Vocabulary	Direct Instruction: Engage NY Lessons 7-8
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 7-5 Problem Set/Homework	Student Notes and Homework: Engage NY Lesson 7-6 Problem Set/Homework	Student Notes and Homework: Engage NY Lesson 7-7 Problem Set/Homework	Student Notes and Homework: Vocabulary	Student Notes and Homework: Engage NY Lesson 7-8 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? <ul style="list-style-type: none"> ● Understand ● Know ● Do 	Students justify the rules for subtraction: subtracting a number is the same as adding its opposite.	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 and use the definition of subtraction to justify the distance formula.	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 differences $p - q$ by first rewriting the difference as a sum, $p + (-q)$, and then locating the sum.	Become familiar with the Unit 6 Vocabulary prior to beginning the unit	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.