

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 6-7

Objective: Students characterize the center of a distribution by its mean in the sense of a balance point. Students understand that the mean is a balance point by calculating the distances of the data points from the mean and call the distances, deviations.

Agenda:

1. Warm up: Ways to Make a Number AND Video:
2. Classwork: Engage NY Lesson 6-7 Examples 1-6
3. Homework: Engage NY Lesson 6-7 Problem Set/Homework

Tuesday Engage NY Lesson 6-8

Objective: Students interpret the mean of a data set as a “typical” value. Students compare and contrast two small data sets that have the same mean but different amounts of variability.

Agenda:

1. Warm up: Ways to Make a Number AND Video:
2. Classwork: Engage NY Lesson 6-8 Examples 1-3
3. Homework: Engage NY Lesson 6-8 Problem Set/Homework

Wednesday Engage NY Lesson 6-9

Objective: Students calculate the mean absolute deviation (MAD) for a given data set. Students interpret the MAD as the average distance of data values from the mean.

Agenda:

4. Warm up: Ways to Make a Number AND Video:
5. Classwork: Engage NY Lesson 6-9 Examples 1-6
6. Homework: Engage NY Lesson 6-9 Problem Set/Homework

Thursday Engage NY Lesson 6-10

Objective: Students calculate the mean and MAD for data distribution. Students use the mean and MAD to describe a data distribution in terms of center and variability.

7. Warm up: Ways to Make a Number AND Video:
8. Classwork: Engage NY Lesson 6-10 Examples 1-4
9. Homework: Engage NY Lesson 6-10 Problem Set/Homework

Friday Engage NY Lesson 6-11

Objective: Students use the mean and MAD to describe a data distribution in terms of center and variability. Students use the mean and MAD to describe similarities and differences between two distributions.

Agenda:

10. Warm up: Ways to Make a Number AND Video:
11. Classwork: Engage NY Lesson 6-11 Examples 1-6
12. Homework: Engage NY Lesson 6-11 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 6-7	Direct Instruction: Engage NY Lessons: 6-8	Direct Instruction: Engage NY Lessons: 6-9	Direct Instruction: Engage NY Lessons: 6-10	Direct Instruction: Engage NY Lessons 6-11
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 6-7 Problem Set/Homework	Student Notes and Homework: Engage NY Lesson 6-8 Problem Set/Homework	Student Notes and Homework: Engage NY Lesson 6-9 Problem Set/Homework	Student Notes and Homework: Engage NY Lesson 6-10 Problem Set/Homework	Student Notes and Homework: Engage NY Lesson 6-11 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 	Students characterize the center of a distribution by its mean in the sense of a balance point. Students understand that the mean is a balance point by calculating the distances of the data points from the mean and call the distances, deviations.	Students interpret the mean of a data set as a "typical" value. Students compare and contrast two small data sets that have the same mean but different amounts of variability.	Students calculate the mean absolute deviation (MAD) for a given data set. Students interpret the MAD as the average distance of data values from the mean.	Students calculate the mean and MAD for data distribution. Students use the mean and MAD to describe a data distribution in terms of center and variability.	Students use the mean and MAD to describe a data distribution in terms of center and variability. Students use the mean and MAD to describe similarities and differences between two distributions.

Unit 6 Common Core State Standards

6.G.1 Find the area of right triangles, other triangles, special quadrilaterals, and polygons by composing into rectangles or decomposing into triangles and other shapes; apply these techniques in the context of solving real-world and mathematical problems.	6.G.2 Find the volume of a right rectangular prism with fractional edge lengths by packing it with unit cubes of the appropriate unit fraction edge lengths, and show that the volume is the same as would be found by multiplying the edge lengths of the prism. Apply the formulas $V = L \times W \times H$ and $V = B \times H$ to find the volume of right rectangular prisms.	6.G.3 Draw polygons in the coordinate plane given coordinates for the vertices; use coordinates to find the length of a side joining points with the same first coordinate or the same second coordinate. Apply these techniques in the context of solving real-world and mathematical problems.	6.G.4 Represent three-dimensional figures using nets made up of rectangles and triangles, and use the nets to find the surface area of these figures. Apply these techniques in the context of solving real-world and mathematical problems.
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Unit 6 Essential Questions:

- What are the similarities and differences of finding the area and perimeter of a 2-dimensional shape compared to the volume and surface area of a 3-dimensional shape?
- What strategies can be used to find the area of non-regular shapes?

Number Sense:

- Odd one out
- Always, Sometimes, Never

Monday Engage NY Lesson 10

Objective: Students determine distance, perimeter, and area in real-world contexts.

1. Warm up: Ways to Make a Number AND Video:
2. Classwork: Engage NY Lesson 10 Exercises and Exploratory Challenge
3. Homework: Engage NY Lesson 10 Problem Set/Homework

Tuesday Engage NY Lesson 11

Objective: Students extend their understanding of the volume of a right rectangular prism with integer side lengths to right rectangular prisms with fractional side lengths. They apply the formula $V = l * w * h$ to find the volume of a right rectangular prism and use the correct volume units when writing the answer.

4. Warm up: Ways to Make a Number AND Video:
5. Classwork: Engage NY Lesson 11 Examples 1 and 2 and Exercises 1-5
6. Homework: Engage NY Lesson 11 Problem Set/Homework

Wednesday Engage NY Lesson 12

Objective: Students extend the volume formula for a right rectangular prism to the formula $V = \text{Area of base} * \text{height}$. They understand that any face can be the base.

7. Warm up: Ways to Make a Number AND Video:
8. Classwork: Engage NY Lesson 12 Examples 1 and 2 and Extension
9. Homework: Engage NY Lesson 12 Problem Set/Homework

Thursday Engage NY Lesson 14

Objective: Students understand that volume is additive, and they apply volume formulas to determine the volume of composite solid figures in real-world contexts . Students apply volume formulas to find missing volumes and missing dimensions.

10. Warm up: Ways to Make a Number AND Video:
11. Classwork: Engage NY Lesson 14 Example 1 and 2 and Exercises 1-4
12. Homework: Engage NY Lesson 14 Problem Set/Homework

Friday Engage NY Lesson 15

Objective: Students construct 3 dimensional figures through the use of nets. They determine which nets make specific solid figures and determine if nets can or cannot make a solid figure.

13. Warm up: Ways to Make a Number AND Video:
14. Classwork: Engage NY Lesson 15 Examples 1-2
15. Homework: Engage NY Lesson 15 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: 10	Direct Instruction: Engage NY Lessons: 11	Direct Instruction: Engage NY Lessons: 12	Direct Instruction: Engage NY Lessons 14	Direct Instruction: Engage NY Lessons 15
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 10 Problem Set/Homework	Student Notes and Homework: Engage NY Lesson 11 Problem Set/Homework	Student Notes and Homework: Engage NY Lesson 12 Problem Set/Homework	Student Notes and Homework: Engage NY Lesson 14 Problem Set/Homework	Student Notes and Homework: Engage NY Lesson 15 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 determine distance, perimeter, and area in real-world contexts.	Students extend their understanding of the volume of a right rectangular prism with integer side lengths to right rectangular prisms with fractional side lengths. They apply the formula $V = l * w * h$ to find the volume of a right rectangular prism and use the correct volume units when writing the answer.	Students extend the volume formula for a right rectangular prism to the formula $V = \text{Area of base} * \text{height}$. They understand that any face can be the base.	Students understand that volume is additive, and they apply volume formulas to determine the volume of composite solid figures in real-world contexts . Students apply volume formulas to find missing volumes and missing dimensions.	Students construct 3 dimensional figures through the use of nets. They determine which nets make specific solid figures and determine if nets can or cannot make a solid figure.