Grade/Subject:	8th/Mathematics	Unit: Square Roots and Exponents – Unit 2
Teacher:	Poole	

Standards/Elements:	MGSE8.EE2, MGSE8.EE.4, MGSE8.G.6
EQ:	How do you solve problems involving Square Roots

Opening	
Learning Target(s): *What will students know, understand and be able to do as a result of this lesson? Is the target rigorous, relevant and concept based?*	**Guiding/Essential Questions:** *What thought-provoking question can I ask students that will stimulate learning and cause students to wonder, inquire, and connect learning to the target? (Keep in mind the DOK levels)*
The students should be able to identify perfect squares, cube roots, square roots and apply these concepts to real life situations. The students should be able to explain the rules to solving problems involving exponents and scientific notation? The students should be able to solve word problems and explain the process for using the Pythagorean Theorem?	How do you solve problems involving square and cube roots? 11/7- 11/11 How do you solve problems involving exponents, scientific notation and the Pythagorean Theorem? 11/14 -11/30 DOK QUESTIONS What is the difference between square and cube roots? What do you notice about similarities and differences of rational and irrational numbers? How do you calculate area using square roots? It what manner can you explain the process of adding, subtracting, multiplying and dividing exponents using scientific notation? What is the process for solving for a missing side using the Pythagorean Theorem?
Building Commitment/Cue Set/Hook: *How can I cue/hook my students' attention to draw them into the lesson, activate their schema, and focus them on the target?*	**Presentation/Teaching Strategies:** *How will I present the new information from the curriculum content in a real and personal manner using research based best practices that will help my students make connections while circling back to the target?*
Students will review previous knowledge of concepts pertaining to exponents and area. Students will completed time drills of basic skills involving order of operations and evaluating exponents to prepare for lessons on square and cube roots.	The vocabulary for Unit 2 will be introduced to students and they will prepare a chart on square and cube roots. This chart will be used to assist them with problems involving estimating square roots and area. Students will also complete multiple choice assessments to prepare them for standardized testing.

Work Session	
Guided Practice: *How will I provide a guided practice opportunity for my students to use/apply the newly learned information?*	**Independent Practice:** *What activity will I provide my students that will allow them time to practice the skill/concept independently?*
Teacher and students will review vocabulary daily and discuss examples. Students will complete practice problems on the Smart Board. Students will also review concepts from the previous day by completing at least 5 problems for the warm up assignment.	Students will complete Smart Board Practice and assignments pertaining to Square and Cube Roots This will include the following assignments. Estimating Square Roots (Smart Board problems 1-10) Equations and Square Roots Puzzle Quiz – Square Roots and Perfect Squares Warm Up Assignments

	Rational and Irrational Worksheet Exponents/Pythagorean Theorem computer assessments Constructed Reponses Assignments (2)
Closing and Assessment	
Closure: *How will I close the lesson to reinforce and assure understanding of the learning that will lead my students closer to the target?*	**Assessment/Data:** *How will I assess for learning? What does the data tell me about instruction?*
Each day students will have an exit ticket and solve three problems or explain vocabulary from the present lesson	Students will be assessed using Study Island Math Program and Independent Practice assignments (40%) Unit test on Square Roots will be given on November 18th (60%)
Additional Delivery Info	
Other Instructional Strategies: *What other strategies will I use? Technology, Differentiation, etc.*	
Differentiation Students will be placed in groups based on Study Island Math Test scores. Students who score 80% or higher will work on the current lesson. Students who less than 80% will have a remediation assignment or work with the teacher Some students will complete Math Probes Some students may be working on an alternate assignment at the computer based on learning levels.	