

Common Core Lesson Plan

Lesson Plan: UNIT 1 - Segment 2	Timeframe: 5 Days
Learning Target: <ul style="list-style-type: none"> ● Students identify perfect squares between 1 and 225. ● Understand that x^2 and \sqrt{x} are inverses as are x^3 and $\sqrt[3]{x}$. ● Solve equations with squares and cubes ($x^2 = a$ and $x^3 = a$). ● Use squares, cubes, square roots, and cube roots to solve word problems. ● Understand and use the square root and cube root symbols. 	Essential Questions: What are perfect squares? How can you utilize tell inverses to show exponent rules to simplify and rewrite expressions/equations?
CCSS: 8.EE.1, 8.NS.1, 8.NS.2, 8.EE.2	Academic Language: Exponent, root, power, integer, cubed, rational, irrational, squared, radical, inverse operations
DOK level: 3	
Title: Author: Curriculum Associates	
MODEL (I Do)	
Student Task: Students draw all perfect squares for the first 15 integers. They draw all perfect cubes for the first 5 integers. They use the radical symbol to represent the inverse of squaring.	Guiding Questions: What makes a number a perfect square? A perfect cube? How do the terms perfect square/perfect cube relate to the geometric representations of a square/cube? Does squaring/cubing have an inverse?
Learning Structures: SMP: 2, 5, 6, 7, 8	Resources: Internet Handouts Teacher-created supplements
Formative Feedback: Class work, warm-ups, homework	
PRACTICE (We Do)	
Student Task: Students solve a multi-step word problem involving square/cube root.	Guiding Questions: How do I use square/cube root to solve real world problems involving square and cube shapes?
Learning Structures: SMP: 2, 5, 6, 7, 8	Resources: Internet Handouts Teacher-created supplements
Formative Feedback: Class work, warm-ups, homework	
ASSESS (You Do)	

<p>Student Task: Students build a perfect cube by cutting and folding paper. They label each edge, and the area of each face as well as the volume.</p>	<p>Guiding Questions: How do I physically represent the ideas of square and cube root?</p>
<p>Learning Structures: SMP: 2, 5, 6, 7, 8</p>	<p>Resources: https://www.youtube.com/watch?v=SwjsbLrdpkw Internet Handouts: http://www.firstpalette.com/tool_box/printables/cube.pdf Teacher-created supplements</p>
<p>Formative Feedback: Build a cube project</p>	
<p>Key Components:</p>	
<p>Learning Task: Conveys rigor and complexity and clarifies key skills and knowledge of the student task.</p>	<p>Guiding Questions: Prompts students to engage in use of skills and concepts at a rigor and complexity</p>
<p>Learning Structures: Engagement and literacy strategies that frame student outputs, interactions and checking for understanding.</p>	<p>Resources: Determine how students will access resources to complete the learning task</p>
<p>Formative Feedback: Assess students' ability to demonstrate skills and knowledge.</p>	