

NJDOE MODEL CURRICULUM PROJECT

CONTENT AREA: Mathematics	GRADE: 6	UNIT #3	UNIT NAME: Equations and Inequalities
---------------------------	----------	---------	---------------------------------------

#	STUDENT LEARNING OBJECTIVES	CORRESPONDING CCSS
1	Use variables to represent numbers and write expressions when solving real world or mathematical problems.	6.EE.6
2	Solve an equation or inequality to answer the question: which values from a specified set, if any, make the equation or inequality true? and check the solution using substitution to determine whether a given number in a specified set makes an equation or inequality true. (including formulas $V=lwh$ and $V=bh$).	6.EE.5
3	Write and solve one step equations that represent real world or mathematical problems.	6.EE.7
4	Write an inequality of the form $x > c$ or $x < c$ to represent a constraint or condition in a real world or mathematical problem and represent them on a number line diagram.	6.EE.8
5	Find the area of right triangles, other triangles, special quadrilaterals and polygons by composing into rectangles or decomposing into triangles and other shapes to solve real world or mathematical problems.	6.G.1
6	Represent three dimensional figures using nets made of rectangles and triangles, and use the nets to find the surface area of the figures in the context of solving real world and mathematical problems.	6.G.4
7	Find the volume of a right rectangular prism with fractional edge lengths by packing it with unit cubes. Show that the volume is the same as it would be if found by multiplying the edge lengths.	6.G.2

Major Content **Supporting Content** **Additional Content** (Identified by PARCC Model Content Frameworks).

Bold type indicates grade level fluency requirements. (Identified by PARCC Model Content Frameworks).

NJDOE MODEL CURRICULUM PROJECT

CONTENT AREA: Mathematics	GRADE: 6	UNIT #3	UNIT NAME: Equations and Inequalities
----------------------------------	-----------------	----------------	--

Selected Opportunities for Connection to Mathematical Practices

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. **Construct viable arguments and critique the reasoning of others.**
SLO #3 Order and justify steps to reach a solution to a one step equation.
4. **Model with mathematics.**
SLO #6 The use of 2-D nets to solve surface area problems.
5. Use appropriate tools strategically.
6. **Attend to precision.**
SLO #2 Real-world context involving careful attention to units of measure.
7. **Look for and make use of structure.**
8. **Look for and express regularity in repeated reasoning.**
SLO #1 The use of variables to represent real-world context over time.

All of the content presented at this grade level has connections to the standards for mathematical practices.

Bold type identifies possible starting points for connections to the SLOs in this unit.

Code #	Common Core State Standards
6.EE.5	Understand solving an equation or inequality as a process of answering a question: which values from a specified set, if any, make the equation or inequality true? Use substitution to determine whether a given number in a specified set makes an equation or inequality true.
6.EE.6	Use variables to represent numbers and write expressions when solving a real-world or mathematical problem; understand that a variable can represent an unknown number, or, depending on the purpose at hand, any number in a specified set.
6.EE.7	Solve real-world and mathematical problems by writing and solving equations of the form $x + p = q$ and $px = q$ for cases in which p , q and x are all nonnegative rational numbers.
6.EE.8	Write an inequality of the form $x > c$ or $x < c$ to represent a constraint or condition in a real-world or mathematical problem. Recognize that inequalities of the form $x > c$ or $x < c$ have infinitely many solutions; represent solutions of such inequalities on number line diagrams.

NJDOE MODEL CURRICULUM PROJECT

CONTENT AREA: Mathematics	GRADE: 6	UNIT #3	UNIT NAME: Equations and Inequalities
----------------------------------	-----------------	----------------	--

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 $V = l w h$ and $V = b h$ to find volumes of right rectangular prisms with fractional edge lengths 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.

Major Content **Supporting Content** **Additional Content** (Identified by PARCC Model Content Frameworks).

Bold type indicates grade level fluency requirements. (Identified by PARCC Model Content Frameworks).