Public Schools of the Tarrytowns

Grade 6 Math Curriculum

Third Trimester

March

Units of Measurement

Week 25, 3 Weeks

Essential Questions:

What is the most appropriate tool to measure capacity?
How do I convert between gallons, quarts, cups, and pints?
How do I convert between liter and milliliter?

Skills:

Measure capacity and calculate volume of a rectangular prism.
Identify customary units of capacity (cups, pints, quarts, and gallons).
Identify equivalent customary units of capacity (cups to pints, pints to quarts, and quarts to gallons).
Identify metric units of capacity (liter and milliliter).
Identify equivalent metric units of capacity (milliliter to liter and liter to milliliter).
Determine the tool and technique to measure with an appropriate level of precision: capacity.
Justify the reasonableness of estimates.
Determine personal references for capacity.

Properties

Essential Questions:

Can I identify and define the properties of rational numbers?

Skills:

Define and identify the commutative and associative properties of addition and multiplication.

Define and identify the distributive property of multiplication over addition.
Define and identify the identity and inverse properties of addition and multiplication.
Define and identify the zero property of multiplication.

April

Probability

Week 28, 5 Weeks

Essential Questions:

When I am given a collection of data, how do I use a tree diagram to show the number of outcomes, and how is it connected to the counting principle?
How can I express a probability as a fraction and a percent?
What is the difference between experimental and theoretical probability?
What determines whether an event is dependent or independent?

Skills:

Use tree diagrams and the fundamental principle of counting to count outcomes.
List possible outcomes for compound events.
Determine the probability of dependent events.
Determine the number of possible outcomes for a compound event by using the fundamental counting principle and use this to determine the probabilities of events when the outcomes have equal probability.

Geometry - Surface Area and Volume

Essential Questions:

How can I use my knowledge of length, width, and height to calculate the surface area and volume of 3-dimensional figures?

Skills:

Draw 3-dimensional figures.
Find surface area of rectangular prisms and cylinders.
Find volume of cylinders.
Identify the two-dimensional shapes that make up the faces and bases of three-dimensional shapes (prisms, cylinders, cones and pyramids).
Estimate surface area.

Squares and Square Roots

Essential Questions:

How do I find the square root of a perfect square?
How do I use the square root of perfect squares to estimate the square root of a non-perfect square?

Skills:

Recognize and state the value of the square root of a perfect square (up to 225).
Determine the square root of non-perfect squares using a calculator.
Classify irrational numbers as non-repeating/non-terminating decimals.
Identify the two consecutive whole numbers between which the square root of a non-perfect square whole number less than 225 lies (with and without the use of a number line).
Place rational and irrational numbers (approximations) on a number line and justify the placement of the numbers.

May

Coordinate Geometry

Week 33, 4 Weeks

Essential Questions:

Can I plot and read points in all four quadrants?
Do I know how to find the area of a basic polygon on a coordinate plane?

Skills:

Identify and plot points in all four quadrants.
Calculate the area of basic polygons drawn on a coordinate plane.

Two-Step Equations

Essential Questions:

How do I substitute to evaluate an algebraic expression?
How do I translate from a two step verbal sentence into an algebraic equation?
What are the rules for adding, subtracting, multiplying and dividing integers?

Skills:

Use substitution to evaluate algebraic expressions (may include exponents of one, two, and three).
Translate two-step verbal sentences into algebraic equations.
Translate two-step equations involving whole numbers using inverse operations.
Solve and explain two-step equations involving whole numbers using inverse operations.
Add, subtract, multiply and divide integers

June

Operations with Integers

Week 37, 2 Weeks

Essential Questions:

How do operations with negative integers compare with operations with positive whole numbers?

Skills:

Define, order, and compare integers.
Add and subtracting integers.
Multiply and divide integers.
Integers as exponents.