

# Public Schools of the Tarrytowns

## *Grade 5 Math Curriculum*

### *First Trimester*

#### **September**

#### *Mathematics in Our World*

Week 1, 4 Weeks

#### Essential Questions:

How is math used in the real world?

Do I understand the place-value structure of the base-ten system?

#### Skills:

Estimate whole-number computations and judge the reasonableness of results.

Understand the need for measuring with standard units.

Demonstrate understanding of the place-value structure of the base-ten system.

Compute with whole numbers and judge the reasonableness of answers.

Read and interpret information presented in graphs or charts.

Make predictions based on data.

Convert among standard units of time.

Add times expressed in minutes and seconds.

Identify and use relationships between operations.

Use addition, subtraction, multiplication, and/or division to solve problems.

### *Properties of Polygons and Circles*

#### Essential Questions:

What properties are used to describe and compare 3-dimensional shapes?

What are the attributes of a circle?

Why is estimating important before measuring exact angles?

#### Skills:

Identify attributes of 3-dimensional shapes.  
Develop vocabulary to name and describe 3-dimensional shapes and circles.  
Identify attributes of circles.  
Measure angles using a protractor.  
Use a right angle as a benchmark for estimating size of angles.  
Determine the sum of the measures of the angles of polygons and the measure of each angle in regular polygons.  
Know that the sum of the central angles of polygons is  $360^\circ$ .  
Classify, identify, and name triangles according to their properties.  
Identify and construct shapes that are congruent and shapes that are similar.

## **October**

### *Using Division*

Week 5, 5 Weeks

#### **Essential Questions:**

How does applying the inverse relationships of multiplication and division help identify products and quotients?  
How can I estimate quotients?  
How does the order of a set of data affect the range and mean?

#### **Skills:**

Use inverse relationships of multiplication and division to identify factors of a number.  
Identify common factors and greatest common factor of pairs of number.  
Divide three digits by a 1-digit divisor.  
Explain the meaning of the remainder in a division problem.  
Identify the range and the mean for a set of data.  
Make predictions about data.  
Multiply and divide by a multiple of 10.  
Develop and use strategies to estimate quotients.  
Describe important features of data with emphasis on how data are distributed.  
Estimate the results of whole-number computation.

### *Investigating Length and Perimeter*

#### **Essential Questions:**

Do I know that different shapes can have the same perimeter?  
How does a change in length and width affect the perimeter of a rectangle?

**Skills:**

Understand the need for having standard units of measure.  
Convert units within the customary system of measurement.  
Use decimal notation to express metric units.  
Convert units of measurement within the metric system.  
Understand that measurements are approximations.  
Estimate distances on a map.  
Develop and use strategies to estimate results of computations with whole numbers and with decimal numbers.  
Carry out simple unit conversions within a system of measurement.  
Develop, understand, and use a formula to find the perimeter of a rectangle.  
Understand how changes to a 2-dimensional shape affect perimeter.

**November**  
*Adding and Subtracting Fractions*  
Week 10, 4 Weeks

**Essential Questions:**

What is the relationship between the denominator and the size of a fractional piece?  
What are the similarities and differences in strategies when adding or subtracting fractions with like and unlike denominators?

**Skills:**

Recognize and generate equivalent forms of commonly used fractions.  
Develop and use strategies to estimate computations involving fractions.  
Use concrete or visual models and equivalent forms to add or subtract commonly used fractions.  
Recognize and generate equivalent forms of commonly used fractions.  
Develop understanding of fractions as part of a collection and compare fractional parts of collections.  
Develop and use strategies to add, subtract, and multiply fractions.  
Use visual models to generate equivalent forms of unrelated fractions.  
Use visual models to add and subtract unrelated fractions.

## *Analyzing Everyday Data*

### **Essential Questions:**

Can I find the median and mean of a set of data?

Can I construct, read, interpret, and represent data in a bar, circle, and line graph?

### **Skills:**

Classify and describe different types of graphs.

Construct, read, and interpret bar graphs.

Explore measures of central tendency: median and mean.

Collect and organize a set of data and identify the median.

Calculate the mean for a set of data.

Develop understanding of a fraction as part of a whole.

Recognize and generate equivalent form of commonly used fractions.

Represent data as a pie (circle) graph.

Describe the shape and important features of a set of data.

Collect data using observations, surveys, or experiments.

Construct a line graph to represent data.

Read and interpret data presented in a line graph.

