

# Essential Standards and Course Descriptions

## Grade 7 Mathematics

Hortonville Middle School | Greenville Middle School

The following document has been created with our parents in mind. The purpose is to communicate with parents related to the 'essential standards' being taught for every subject and in every grade level. Included is also a brief course description written by a collaborative team of teachers representing both middle schools. As a school district, we believe very strongly that although we have two unique middle schools, both schools must ensure a guaranteed and viable curriculum. What this means is that the same 'essential' learning being taught at HMS will also be taught at GMS to ensure that EVERY student, regardless of enrollment, will be prepared to enter Hortonville High School having learned prioritized academic and behavioral expectations.

**What is an 'essential standard'?** Every school district adopts academic standards for every area of study. The Hortonville Area School District is no different. Unfortunately, not all standards are created equal. This means that some standards have been predetermined by the teaching faculty as most critical or 'essential' for students to learn and demonstrate before moving on to the next grade level. These standards are assessed and reported out to parents on progress reports (formerly called report cards). We sometimes call these our 'must know' standards. This is not to say that all other standards, or 'nice to know standards', are not covered, but they may not be covered to the same level as our 'essential standards'.



Below you will find a listing of courses taught at the 7<sup>th</sup> grade level in the Hortonville Area School District. Included will also be a brief course description and the 'essential standards' assessed. If you should ever have any questions, we strongly encourage parents to contact our faculty members early and often.

### **Subject: 7<sup>th</sup> Grade Mathematics**

**Course Description:** In 7<sup>th</sup> grade mathematics, there are eight short books, with each covering a different topic. The following is a listing of those topics by book.

1. Shapes and Design – Students will explore properties of polygons. Students will draw, build, measure, and reason about the size and shape of polygons.
2. Accentuate the Negative – Here the students will use negative numbers to solve problems.
3. Stretching and Shrinking – Students will learn the mathematical meaning of similarity, explore properties of similar figures, and use similarity to solve problems.
4. Comparing and Scaling – Here students will extend their knowledge of ratios, proportions, and proportional reasoning.
5. Moving Straight Ahead – In this book, students will explore properties of linear relationships and linear equations.
6. What do you Expect? – Students will deepen their understanding of basic probability concepts and will learn about the expected value of situations involving chance.
7. Filling and Wrapping – Here the students will explore surface area and volume of three-dimensional objects.
8. Samples and Populations – In this book, students will learn about different ways to collect and analyze data in order to make comparisons and draw conclusions.

### **Essential Standards Taught:**

#### **Shapes and Design**

##### ○ **7.G.A.2**

Draw (freehand, with ruler and protractor, and with technology) geometric shapes with given conditions.

#### **Geometry**

**Draw construct, and describe geometrical figures and describe the relationships between them.**

2. Draw (freehand, with ruler and protractor, and with technology) geometric shapes with given conditions. Focus on constructing triangles from three measures of angles or sides, noticing when the conditions determine a unique triangle, more than one triangle, or no triangle.

### **Accentuate the Negative**

- **7.NS.A.3**

Solve real-world and mathematical problems involving the four operations with rational numbers.

### **The Number System**

**Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers.**

3. Solve real-world and mathematical problems involving the four operations with rational numbers. <sup>1</sup>

### **What do you Expect?**

- **7.SP.C.5**

Understand that the probability of a chance event is a number between 0 and 1 that expresses the likelihood of the event occurring.

### **Filling and Wrapping**

- **7.G.B.4**

Know the formulas for the area and circumference of a circle and use them to solve problems; give an informal derivation of the relationship between the circumference and area of a circle.

- **7.G.B.6**

Solve real-world and mathematical problems involving area, volume and surface area of two- and three-dimensional objects composed of triangles, quadrilaterals, polygons, cubes, and right prisms.

### **Samples and Populations**

- **7.SP.A.1**

Understand that statistics can be used to gain information about a population by examining a sample of the population; generalizations about a population from a sample are valid only if the sample is representative of that population.