

Essential Standards and Course Descriptions

Grade 7 Science

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 7th 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: 7th Grade Science

Course Description: The 7th Grade Science curriculum consists a study of measurement, scientific problem solving, a study of plants, Earth science, and Astronomy. To begin the year, students will use lab equipment and practice making accurate scientific measurements. Students will setup experiments, identify variables, gather and analyze data. These skills will then be applied to the various topics throughout the year. In the second unit of study students will describe plant adaptations, discover how the availability of nutrients affects plant growth, explore plant reproduction, and describe how biochemical reactions change molecules into energy through the process of photosynthesis. In the third unit of study students will explore the structure, composition, and characteristics of rocks and minerals. Students will also investigate the processes involved in the rock cycle, plate motion, and processes within the Earth as evident from volcanoes and earthquakes. In the final unit of study students will model lunar phases, eclipses, and the seasons. Students will also explore gravity, rocketry, and space exploration.

Essential Standards Taught:

- **MS-ESS3-2**

Analyze and interpret data on natural hazards to forecast future catastrophic events and inform the development of technologies to mitigate their effects.

MS-ESS3 Earth and Human Activity

Students who demonstrate understanding can:

Analyze and interpret data on natural hazards to forecast future catastrophic events and inform the development of technologies to mitigate their effects.

- **MS-ESS2-2**

Construct an explanation based on evidence for how geoscience processes have changed Earth's surface at varying time and spatial scales.

MS-ESS2 Earth's Systems

Students who demonstrate understanding can:

Construct an explanation based on evidence for how geoscience processes have changed Earth's surface at varying time and spatial scales.

- **MS-ESS2-1**

Develop a model to describe the cycling of Earth's materials and the flow of energy that drives this process.

MS-ESS2 Earth's Systems

Students who demonstrate understanding can:

Develop a model to describe the cycling of Earth's materials and the flow of energy that drives this process.

- **MS-ESS1-1**

Develop and use a model of the Earth-sun-moon system to describe the cyclic patterns of lunar phases, eclipses of the sun and moon, and seasons.

MS-ESS1 Earth's Place in the Universe

Students who demonstrate understanding can:

Develop and use a model of the Earth-sun-moon system to describe the cyclic patterns of lunar phases, eclipses of the sun and moon, and seasons.

Other Topics Covered:

Plant Adaptations
Plant Growth and Development
Photosynthesis
Plant Reproduction