9th Grade Honors Physics 2024

9th Grade Physics Overview: The objective of this 9th grade required course is for students to learn the fundamental concepts of how the physical world works. Physics is about describing the world, the physical world, in a way that we can use: to understand, to apply to solving problems, and to make critical decisions.

A strong emphasis is placed on using the scientific method, as part of problem solving techniques and as a foundation for understanding what science is. We also emphasize learning how physics impacts everyday lives and our environment. The course is conceptual in that we explore the ideas behind physical phenomena.

Honors Curriculum: Students may take 9th grade Honors Physics in place of 9th grade Physics. This class is designed for the student with advanced interests and abilities in Science. It will cover topics in more depth than the regular Physics class, with advanced labs, more challenging homework and tests, and somewhat more reliance on mathematical tools to understand concepts. This class will use Algebra that students have learned to better master the concepts. Concepts are conveyed through lab, demo, video, computer simulation or hands-on experience.

Factors for Acceptance into Honors Physics:
- Strong interest in Science
- Record of high performance in middle school science classes
- Taken Algebra or higher math class
- Score on Honors Physics Assessment

Honors Physics Placement Assessment: This assessment is designed to demonstrate that the student has the background of skills and knowledge necessary to be successful in honors physics. These skills and knowledge include:
- Scientific and general critical thinking
- Scientific method: hypotheses, predicting consequences, creating experiments, formulating rules or theories
- Understanding of basic atomic theory (atoms, molecules, nuclear particles)
- Graphing of data
- Algebra: solving for variables, exponential (scientific) notation,
- Units and metric system: units of length, mass, speed, unit conversion