



8th Grade Science - Honors

8th Grade Physical Honors Science - Year at a Glance

Course #2003320

This course is a high school course for one HS credit and includes an employability grade.

A Note to Parents: The Florida state standards require that the science teacher plan lessons that build knowledge of various scientific concepts, develop the ability to apply these concepts, and engage students in critical thinking. To achieve these goals, students will take part in a range of activities including reading, discussions, writing, lab activities and projects. Safety is paramount in science labs and your child's teacher will ensure a safe learning environment.

Please note the units of study listed below indicate the course sequence. Instructional pacing may vary.

Course Description

Effective science learning enables our students to connect and apply science concepts and processes to everyday events. Students learn science by being actively engaged in the following ways: making observations; designing and conducting experiments and other types of investigations; collecting and organizing data; making predictions and possible conclusions; and communicating their understanding. The **Physical Sciences** course is an interactive course that uses up-to-date technology to investigate the following topics: Nature of Science; Force and Motion; Types of Energy; and Matter and Chemistry.

Honors Course Note: Advanced courses require a greater demand on students through increased academic rigor. Academic rigor is obtained through the application, analysis, evaluation, and creation of complex ideas that are often abstract and multi-faceted. Students are challenged to think and collaborate critically on the content they are learning. Honors level rigor will be achieved by increasing text complexity through text selection, focus on high-level qualitative measures, and complexity of task. Instruction will be structured to give students a deeper understanding of conceptual themes and organization within and across disciplines.

International Baccalaureate Middle Years Program Note: The International Baccalaureate® aims to develop inquiring, knowledgeable and caring young people who help to create a better and more peaceful world through intercultural understanding and respect. The MYP curriculum framework comprises eight subject groups, providing a broad and balanced education for early adolescents. The MYP requires at least 50 hours of teaching time for each subject group, in each year of the program. The MYP is inclusive by design; students of all interests and academic abilities can benefit from their participation

CPALM Link

Please follow the links below to learn more about the course expectations, the course standards, and to access student resources. The student resources include Florida Department of Education recommendations that students can use to learn the concepts and skills in this course.

Physical Science Honors: <https://www.cpalms.org/PreviewCourse/Preview/4344>

| Unit of Study | |
|---|--|
| <p>Quarter 1 Aug 10 – Oct 12</p> | <p>Unit 1 – Nature of Science</p> <ul style="list-style-type: none"> • Science Investigation • Science Process Skills <p>Unit 4 - Motion</p> <ul style="list-style-type: none"> • Motion • Newtons Laws • Work and Power <p>Unit 3 – Force</p> <ul style="list-style-type: none"> • Fundamental Forces • Gravity • Electricity |
| <p>Quarter 2 Oct 13 – Dec 22</p> | <p>Unit 7 – Electromagnetism</p> <ul style="list-style-type: none"> • Electric and Magnetic Fields • Circuits • Conductors and Insulators <p>Unit 2 – Energy</p> <ul style="list-style-type: none"> • Types of Energy • Energy Conservation • Waves • Heat <p>Unit 5 – Behaviors of Matter</p> <ul style="list-style-type: none"> • Classification of Matter • Chemical and Physical Properties • Chemical and Physical Changes • Gas Laws |
| <p>Quarter 3 Jan 11 – Mar 11</p> | <p>Unit 6 – Understanding Atoms</p> <ul style="list-style-type: none"> • Structure of Atoms • Atomic Theory • Nuclear Chemistry <p>Unit 8 – Introducing the Periodic Table</p> <ul style="list-style-type: none"> • Development of the Periodic Table • Structure and Trends of the Periodic Table <p>Unit 9 – Chemical Bonding</p> <ul style="list-style-type: none"> • Ions • Ionic Bonding • Covalent Bonding |

Quarter 4

Mar 22 – May 27

Unit 10 – Chemical Reactions and Equations

- Chemical Formulas
- Chemical Reactions
- Equations and Balancing Equations
- Reaction Rates
- Thermochemistry

Unit 11 – Water Solutions

- Properties of Water
- Acid, Bases and Salts

State Testing Review

Students are guided through the review of 6th and 7th grade standards to prepare for the annual State Science Assessment.

Course Resources**Core Techbook:****Discovery Education Science Online Techbook**

For more information on this resource: <https://www.discoveryeducation.com/programs/science/middle-school/>

Supplemental Resources:

Middle School eSources which are accessed through MySCS. <https://launchpad.classlink.com/sarasota>

For additional supplemental resources, please see your child's course syllabus.