



# **SCIENCE SEQUENCES**

**Grades 6-8**

# **Grade 6 (Physical Science)**

- **Scientific Method**
  - Measurement
  - Graphing
- **Motion and Forces**
- **Energy**
  - Potential, kinetic and conversions
- **Electricity & Magnetism**
  - Parallel and series circuits
  - Conductors and insulators
  - Electromagnetism
- **Simple Machines**
- **Introductory Chemistry**

# **Grade 7 (Life Science)**

- **Scientific Method**
  - **Experimental design**
  - **Density**
- **Cells and Microscopes**
  - **Cell division**
  - **Microscopic measurement**
- **Genetics and Heredity**
- **Ecology**
  - **Classification**
  - **Food chains/webs and trophic levels**
- **Evolution**
- **Human Body Systems**

# **Grade 8 (Regents Earth Science)**

- **Mapping and Measurement**
  - Latitude & Longitude
  - Topographic Maps & Landforms
- **Astronomy**
  - Earth's Motions (rotation & revolution)
  - Seasons (insolation)
  - Solar System & Deep Space
- **Meteorology**
  - The Atmosphere
  - Weather Variables & Systems
- **Geology**
  - Rocks & Minerals
  - Plate Tectonics
  - Weathering, Erosion & Deposition
  - Earth's History



# **HIGH SCHOOL SCIENCE**

**2020-2021**

# **SCIENCE OVERVIEW** — GRADES 9-11

Regents Living Environment  
(grade 9)

Chemistry or electives  
(grade 10)

Physics, APs or electives  
(grade 11)

# **ADVANCED SCIENCE — GRADES 11 & 12**

- **AP Courses**
  - **Biology**
  - **Chemistry**
  - **Environmental Science**
  - **Physics C (Calculus-based)**
- **Anatomy & Physiology**
- **SUPA Forensic Science**

**NOTE: All of these courses have a separate required lab period in the schedule.**

# **Science Research in the High School (from UHS Albany)**

- **3-year sequence**
  - **10<sup>th</sup> grade – i.d. topic, find mentor**
  - **11<sup>th</sup> grade – design experiment, collect data**
  - **12<sup>th</sup> grade – analyze data, present findings**
- **Starts in 10<sup>th</sup> grade (only)**
- **Open to all students**
- **For independent learners**
- **Can earn up to 12 credits from SUNY Albany**



# **SCIENCE ELECTIVES\***

**\*No separate lab period**

- Forensic Science**
- Marine Science**
- Human Origins and Evolution**
- Introduction to Horticulture**
- The Geology of Our National Parks**
- Environmental Sustainability & Human Impact**
- Dual-Language Medical Terminology**



# **TECHNOLOGY SEQUENCES**

# Technology 8

- **Foundational skills**
  - **Safety**
  - **Measurement**
  - **The Engineering Design Process**
  - **Technical Drawing**
- **Design and Modeling (PLTW Gateway)**
  - **Students learn the design process and use it to design a toy for a child with cerebral palsy.**
- **Apartment towers**
  - **Students design their own apartment to specifications, then construct a model using technical drawing and measurement skills.**
- **CO<sub>2</sub> racecars**
  - **Students design, construct and test cars powered by CO<sub>2</sub> cylinders**

# OVERVIEW – HS ENGINEERING

