

04: Astronomy

Content Area: **Special Education**
Course(s):
Time Period: **Full Year**
Length: **4 weeks**
Status: **Published**

General Overview, Course Description or Course Philosophy

Physical Science establishes a basic approach to the fundamentals of chemistry and physics. The following concepts will be explored: atomic structure, chemical bonding, chemical reactions, the periodic table, kinetic theory, and kinematics. The use of technology to gather and analyze data will be incorporated. This course is concept-oriented with a focus on Chemistry and Physics in the real world. Laboratory work and special projects will facilitate active learning and accommodate different learning styles.

OBJECTIVES, ESSENTIAL QUESTIONS, ENDURING UNDERSTANDINGS

Students will understand that:

- Astronomers learn about the Universe by careful observation of light.
- The Sun and Earth formed billions of years ago.
- The Universe started in an explosion called the Big Bang.
- We are well situated in the Milky Way Galaxy to support life.

CONTENT AREA STANDARDS

SCI.HS-ESS1-2	Construct an explanation of the Big Bang theory based on astronomical evidence of light spectra, motion of distant galaxies, and composition of matter in the universe.
SCI.HS-ESS1-3	Communicate scientific ideas about the way stars, over their life cycle, produce elements.

RELATED STANDARDS (Technology, 21st Century Life & Careers, ELA Companion Standards are Required)

CRP 2 Apply appropriate academic and technical skills.

CRP 4 Communicate clearly and effectively and with reason.

CRP 5 Consider the environmental, social and economic impacts of decisions.

CRP 6 Demonstrate creativity and innovation.

CRP 8 Utilize critical thinking to make sense of problems and persevere in solving them.

CRP 11 Use technology to enhance productivity.

Student Learning Targets

Refer to Declarative and Procedural Knowledge

Declarative Knowledge

Students will understand:

Procedural Knowledge

Students will be able to:

EVIDENCE OF LEARNING

Refer to the 'Formative Assessments' and 'Summative Assessments' sections.

Formative Assessments

White boards, exit ticket, homework

Summative Assessments

- Benchmarks – departmental benchmark given at the end of MP1, MP2, and MP3
- Alternative Assessments
 - Lab inquiries and investigations
 - Lab Practicals
 - Exploratory activities based on phenomenon
 - Gallery walks of student work
 - Creative Extension Projects

- Build a model of a proposed solution
- Let students design their own flashcards to test each other
- Keynote presentations made by students on a topic
- Portfolio

RESOURCES (Instructional, Supplemental, Intervention Materials)

physicsclassroom.com

Vernier.com/experiments

Khan Academy, Crash Course Physics, and Bozeman Science

INTERDISCIPLINARY CONNECTIONS

Algebra, English, Geometry

ACCOMMODATIONS & MODIFICATIONS FOR SUBGROUPS

See link to Accommodations & Modifications document in course folder.