



**KENOSHA UNIFIED SCHOOL DISTRICT NO. 1
CURRICULUM AND INSTRUCTIONAL SERVICES**

**COURSE SYLLABUS FOR GEO-SCIENCE AND ASTRONOMY
(454011 and 451042)**

Number of Credits: 1 **Location:** Indian Trail Academy

Prerequisites

Successful completion of biology, chemistry, and physics

Course Description

This course consists of one semester of geology and one semester of astronomy. The geology portion is an introduction to Earth's dynamic systems, including plate tectonics, mineral and rock formation, Earth's origins, geologic time, and a variety of geologic hazards. The Astronomy portion includes a study of our solar system, planets, stars, galaxies, and the universe at large. We will use all you have learned in the areas of Biology, Chemistry, and Physics to advance our understanding of Earth and its place in the Cosmos.

Course Standards

Standard A: Science Connections
Standard B: Nature of Science
Standard C: Science Inquiry
Standard E: Earth Science
Standard G: Science Applications
Standard H: Science in Social and Personal Perspectives

Explanations of standards and most essential benchmarks can be viewed at www.kusd.edu

Lifelong Learning Standards

- Knowledgeable person
- Effective communicator
- Quality producer
- Complex thinker
- Self-directed learner
- Contributing citizen

Lifelong learning benchmarks may be viewed at: www.kusd.edu.

Course Outline

- I. Quarter 1
 - a. Lab safety
 - b. Scientific measurements
 - c. Separations
 - d. Earth's layers and interacting spheres
 - e. Mineral identifications
 - f. Gem identification
 - g. Earthquakes and plate tectonics

- h. Desert landforms
- II. Quarter 2
- a. Rock cycle
 - b. Igneous rocks and volcanoes
 - c. Sedimentary rocks, evolution, and fossils
 - d. Geologic time scale and absolute dating
 - e. Metamorphic rocks and
 - f. Geology of Wisconsin
 - g. Structural and glacial geology
 - h. Coastal landforms
- III. Quarter 3
- a. Scale of the solar system and cosmos
 - b. The night sky and time
 - c. Ancient astronomers
 - d. Solar system formation
 - e. Comparative planetology
 - f. Temperature/density/surface features
 - g. Weather, atmospheres, and seasons
 - h. Kepler's laws; magnetic fields; light pollution
- IV. Quarter 4
- a. Our sun
 - b. Stars, magnitude, and luminosity
 - c. Spectroscopy
 - d. The HR diagram and stellar evolution
 - e. Constellations
 - f. Tools of the astronomer, star clusters and galaxies
 - g. The expanding universe
 - h. Life in the universe

Board-Approved Instructional Materials

Plummer, Charles C. et al (2007). *Physical Geology, (12th Ed)*. Glencoe/McGraw-Hill.
Chaisson, Eric and Steve McMillan (2005). *Astronomy Today*. Pearson - Prentice Hall.

Methods of Assessment

Final exams should be cumulative in nature, emphasizing the most essential benchmarks for the course. Results of the final exam represent 20 percent of the final grade, but this single measure **may not** drop a student's grade by more than one letter grade. In courses that rely heavily on a major project, performance exhibition, etc., the project should be divided into stages or components and each of those should be graded separately, providing students with frequent and specific feedback.

Board-Approved Grading Scale

Excerpts taken from School Board Rule 6452

GRADING SCALE

A+=98-100 percent

A=93-97 percent

A-=90-92 percent

B+=86-89 percent

B=83-85 percent

B-=80-82 percent

C+=76-79 percent

C=73-75 percent

C-=70-72 percent

D+=66-69 percent

D=63-65 percent

D-=60-62 percent

F=0-59 percent

MAKE-UP WORK

Students submitting work up to ten school days late without prior approval may receive up to two grades lower on the work than they would have received if the work had been submitted on time (i.e., B+ lowered to a D+). Student work submitted after ten school days without prior approval shall not be accepted for credit and shall be recorded with a score of zero.

Upon returning to school after an absence, a student has the responsibility within the number of days equal to the length of the absence or suspension to meet with the teacher to develop a plan for making up missed work, quizzes, and examinations. A truant student has the responsibility on the first day he or she returns to the course/class to meet with the teacher to develop a plan for making up missed work, quizzes, and examinations. Lower grades may not be given for late work due to excused absences, suspension, or truancy unless the work is submitted later than agreed upon deadlines.

See Rule 6452 in its entirety at: www.kusd.edu.