SCIENCE CURRICULUM

Course Title: Unified Science
Prerequisite: None
Grade: 9 (Required Course for graduation)
Length of Course: 2 semesters
Credits: 1.0
Textbook: Earth Science: Geology, The Environment, & The Universe; © 2008 Glencoe Science
Instructor: Mary Ann Ruden

Course Description: Unified science covers several areas of science, including physical science, physics, chemistry, and earth science. Topics are investigated through both written and hands-on laboratory investigations. Students will gain background knowledge and lab experience to prepare them for future science courses. Growing crystal gardens from charcoal is a memorable lab experiment. Grades are calculated based on completion of homework and in-class activities, laboratory experiments, online simulations, projects outside of a lab activity, and assessments including quizzes, tests, and semester exams.

Course Title: Biology I & II
Prerequisite: Unified Science
Length: 2 semesters
Credits: 1.0
Textbook: Prentice Hall Biology; © 2008 by Pearson Education
Instructor: Cody Groskreutz

Course Description:
Students will follow a guided science packet that includes notes, labs, and reinforcement activities consolidated on a pre-outlined electronic document. Topics covered in this course are as follows: Basic science skills/scientific method, Cells, Energy Flow Through Ecosystems, Genetics, Heredity, & Evolution. Activities use a mix of the senses to help students grasp sometimes abstract concepts such as hands-on labs, constructing models, and drawing structures & processes. Grades will be determined by the instructor based on written homework assignments, class participation, quizzes, & tests.

Course Title: Anatomy
Prerequisite: Biology I & II
Length of Course: 1 semester
Credits: 0.5
Text Book: Essentials of Human Anatomy & Physiology. Elaine N. Marieb 9th edition. © 2009
Instructor: Cody Groskreutz

Course Description: Students will follow a guided anatomy packet that includes notes, labs, and reinforcement activities consolidated on a pre-outlined electronic document. Topics covered in this course are as follows: Biology Basics, Support & Motion, Control & Coordination. Activities use a mix of the senses to help students grasp sometimes abstract concepts such as hands-on labs, constructing models, drawing structures & processes. Grades will be determined by the instructor based on written homework assignments, class participation, quizzes, & tests.

SCIENCE CURRICULUM

Course Title: Physiology
Prerequisite: Biology I & II & Anatomy
Length of Course: 1 semester
Credits: 0.5
Text Book: Essentials of Human Anatomy & Physiology. Elaine N. Marieb 9th edition. © 2009
Instructor: Cody Groskreutz

Course Description: Students will follow a guided physiology packet that includes notes, labs, and reinforcement activities consolidated on a pre-outlined electronic document. Topics covered in this course are as follows: Transport, Absorption & Secretion, & Protection. Activities use a mix of the senses to help students grasp sometimes abstract concepts such as hands-on labs, constructing models, drawing structures & processes. Grades will be determined by the instructor based on written homework assignments, class participation, quizzes, & tests.

Course Title: Chemistry
Prerequisite: Successful completion of Unified Science, Biology, and Algebra 1
Length of Course: 2 semesters
Credits: 1.0
Textbook: Chemistry: Matter and Change © 2008 Glencoe Science
Instructor: Mary Ann Ruden

Course Description: Chemistry is an introductory course designed to challenge students in an upper level science elective. Students considering entering any medically-related field should consider this course. Students will be encouraged to think independently throughout the course and will develop beneficial study skills in the process. Students will develop a strong background in basic chemistry should they choose to take chemistry at the undergraduate level in college. A favorite lab activity is making bath fizzies for mother's day gifts. Grades are calculated based on completion of homework and in-class activities, laboratory experiments, online simulations, projects outside of a lab activity, and assessments including quizzes, tests, and semester exams.

Course Title: Physics
Prerequisite: Trigonometry or concurrently taking Trigonometry
Length of Course: 2 semesters
Credits: 1.0
Textbook: Physics © 2008 Holt, Rinehart, Winston
Instructor: Mary Ann Ruden

Course Description: Physics is designed to introduce students to topics that may be covered in their first year of college physics. Students considering degrees in engineering, medical, or industrial fields should consider taking it. A mathematical approach will be emphasized with the laboratory work being used to reinforce the concepts and relate them to the physical world. Students enjoy activities such as running stairs to calculate their personal horsepower, and playing on the swings to study pendulums. Grades are calculated based on completion of homework and in-class activities, laboratory experiments, online simulations, projects outside of a lab activity, and assessments including quizzes, tests, and semester exams.