

10 grade science: Matter & Energy syllabus

Frank Allen

ballen@asfa.k12.al.us

10th grade science is a physical science course that covers topics in physics and chemistry. Physics concepts are studied in the first semester. The course essentially builds on concepts previously studied in 8th grade, while adding in new topics not covered by the 8th grade curriculum. Like 8th grade science, students acquire a conceptual understanding of various phenomena, though deeper math skills are utilized to understand the topics covered in the 8th grade, in addition to new topics. Writing skills are incorporated via lab reports, news articles and other assignments. Grades are categorized into exams (1 cumulative exam per 9-weeks), quizzes/projects (about 5-8 per 9-weeks) & HW/daily grades, and a student's grade is calculated using a weighted average method. Exams are 15 %, quizzes/projects are 43 % and HW/daily grades are 42 %. Individual grades/assignments and a student's current average can be followed/checked on the parent's INOW portal (please email Melanie Lee with any log-in issues). There are no extraordinary classroom supplies requirements, though students might want to use a dry erase marker from time to time (*please purchase only markers that are marked "low odor"*). Although classroom assignments are always posted on googleclassroom, along with due dates, and assignments that are uploaded via googleclassroom are graded and returned via the website, always check INOW for verification of completed assignments and grades. Some retakes on assignments are possible, though handled differently for each assignment.

<u>Physics (1st semester)</u>	<u>Chemistry (2nd semester)</u>
Motion & Newton's Laws Newton's Laws: forces, inertia & acceleration Impulse moment Gravity Centripetal force	Atomic structure Ions and isotopes Radiation Electron structure Fission vs fusion
Electric and Magnetic Charges Electrical Charges Magnetism Ohm's Law Circuitry	Properties of Matter Review of density Gas behavior IMFs
Energy Types of Energy Energy Conversions Energy Transfers/Measurements	Chemical Reactions Combustion acids/bases Energy conversion
Waves Wave Measurements Electromagnetic Waves Soundwaves Lightwaves	

Welcome to the 2018 school year for the Alabama School of Fine Arts. It is an honor to teach students that have pursued and developed their artistic interests to the degree necessary to receive an invitation to study here. I hope you have a fabulous year!