**Geo Physical Science**

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Text Books:   Earth Science   Tarbuck, Lutgens

**Course Description:**

GeoPhysical Science is for 9th grade students in the Berthoud High School.  The goal of this course is to give students a solid foundation in science so they will be successful in future AP Science courses.  Many students go on to take Biology or Physics their 10th and 11th grade years and this course will give them the prerequisite skills to be successful.  The curriculum first semester will focus on Astronomy, Physics, and Earth Systems, while second semester will investigate more Earth Science, Chemistry, and Human Sustainability. There are numerous inquiry based labs with an emphasis on problem solving and the scientific method.

**Materials:**

3-Ring Binder (1 ½”- 2”) Notebook, Pen or Pencil loose leaf or notebook paper, and colored pencils (12-count is fine), Students will have the opportunity to purchase their own safety goggles for $7 the first week of class.

**Standards-Based Grading System:**

Grades will be calculated based on summative and formative assessments.

*Summative Assessments:*

These assessments will focus on the Next Generation Science Standards and Science and Engineering Practices.  Students are expected to complete all forms of assessments and can take several forms, such as labs, research papers, or projects.  Assessments will be graded according to a rubric.

Assessments missed because of absences and any corrections made are to be completed by the end of the semester.  Corrections and makeups are to be scheduled with the teacher.  Assessment corrections are to be completed within a week and a half of when the original assessment was scored.

*Formative Assessments:*

These assessments will focus on the Next Generation Science Standards and Science and Engineering Practices.  Examples of these grades are practice assignments/homework, quizzes, pretests, and daily warm ups/exit tickets.

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**Grading Scale:**

|  |  |  |  |
| --- | --- | --- | --- |
| 4  3  2  1 | Exemplary  Meets  Progressing  Emerging\*  \*Students scoring a 1 out of 4 on ½ of their assessments will be expected to complete credit recovery | *Other Symbols*  X  IE  M  L | Exempt (not figured into grade)  Insufficient Evidence (worth 0/4)  Missing (Has not been turned in)  Late (will still have a grade) |

**Tips for Success:**

Keep in mind that I am and will always be on your side.  With everything that we do in our classroom, there is a purpose to benefit you.  However, it is up to you to utilize the resources available to you if help is needed.  There is me, for one thing, but don’t forget your classmates.  They are a wonderful resource and by helping you, they are also helping themselves.  The best way to learn something is by *teaching* it.

In the words of the great Albus Dumbledore, “Help will always be given...to those who ask for it.”

**Course Outline:**

***First Semester***

**1st 2 weeks of school:**

\*Rubric training and setting up class expectations

**Unit 1: Space Systems**

Topic 1: The Big Bang and the EM Spectrum

Topic 2: Life Cycle of Stars

Topic 3: Life Cycle of the Sun

Topic 4: Orbits

**Unit 2: Earth Systems**

Topic 1: Effects of Water on Earth’s Surface

Topic 2: Carbon in Biochemical Systems

Topic 3: Cause and Effect of Systems

Topic 4: Variation in Energy and Result on Climate Change

Topic 5: Data on Climate Change

***Second Semester***

**1st 2 weeks of school:**

\*Rubric re-training and setting up class expectations for second semester

**Unit 3: History of the Earth**

Topic 1: Formation and History of the Earth

Topic 2: Coevolution of Earth’s Systems and Life

Topic 3: Earth’s Interior

Topic 4: Continental Drift and Plate Tectonics

Topic 5: Plate Movement

**Unit 4: Human Sustainability**

Topic 1: Relationships in Earth’s Systems

Topic 2: Energy Management

Topic 3: Relationships Between Resources and Human Population

Topic 4: Influences on Human Activity

Topic 5: Solutions of Human Activities on Natural Systems