Congratulations on making a wise choice in your high school career. Advanced Placement Environmental Science may be one of the most meaningful courses you encounter throughout your academic experience. Environmental Science is interdisciplinary as it integrates biology, geology, chemistry, geography, economics, and social science to investigate global environmental issues. If you heard about it in the news, chances are we'll be talking about it! 

The AP Environmental Science course is designed to be the equivalent of a one-semester, introductory college course in environmental science. The goal of this interdisciplinary course is to provide students with the scientific principles, concepts, and methodologies required to understand the **interrelationships** of the natural world. The course will focus on the identification and analysis of environmental issues of the past, present, future, and proposed future solutions. The course will require students to develop their critical thinking skills as demonstrated through a variety of methods including but not limited to lecture, activities (guided and open), labs, formative and summative assessments, and alternate forms of assessment such as research papers and presentations.

This is an Advanced Placement science course which enables you the opportunity to earn 3 hours of college credit by earning a 3, 4 or 5 on the AP Exam that will be administered in May. We will work together throughout the year so that you will have the skills and knowledge required to earn credit. The course also includes methods for analyzing and interpreting information and experimental data, including mathematical calculations. Additionally, the course includes a laboratory investigation component.

Because this is a college level course, you will be responsible for learning a large amount of material on your own. I will help you as we go, but it will be your responsibility to take notes, study and learn your vocabulary. We also work on the assumption that you have a general science background that includes biology and algebra.

***The Big Ideas of AP Environmental Science:***

* Energy Transfer
* Interactions Between Earth Systems
* Interactions Between Different Species and the Environment
* Sustainability

***Lab work and Activities:***

As per College Board requirements, lab work will constitute a large portion of your class time and will also involve extensive analysis and write-ups. Lab exemplars and rubrics will be provided as a guide. You will also engage in media and staggered assessments via the guided video viewing platform EdPuzzles and deeply rich Bozeman Science video library on APES. Lastly, you will be expected to complete problem sets based on in-class learning and at-home text interaction with the assessment tool Albert IO.

***Student Expectations:***

1. Students will log in prepared and ready to learn. Students must be **ready to work when class is in session.**

2. Have all materials ready.

3. Follow directions.

4. Be willing to work in a group, pair or solo.

5. Students will respect themselves, other students, teachers, staff, guests, classroom tools, substitute teachers, and the school building.

6. Students will abide by expectations and guidelines in the TCS Student Handbook.

7. All laboratory procedures and safety guidelines will be followed at all times as per the Lab Safety contract.

**Class Supplies List:**

* Spiral notebook or composition book for note taking
* Pencils, pens & erasers
* Internet enabled device to use as necessary.
* Loose leaf notebook paper

***Grading Policy:***

The assessment of your performance in this course will involve your completion of a variety of activities, laboratory investigations, and assessments. The weighting of these categories will be as follows:

Assessments: Test and quizzes………………………………………………..30%

performance tasks or Projects………………………………………………….30%

Classwork and participation…….……………..…………………………..…....35%

Homework assignments……………………………………………………...….15%

Lab coded classes will be graded as follow:

Labs:................................................................................................... P or F

Homework assignments may include but not be limited to: reading the current unit content and answering textbook questions, reviewing lecture notes (from PowerPoints), readings articles and case studies, making and studying flashcards for unit tests and quizzes, lab write-ups, essays, creating posters, surveys, etc.

Late assignments will be accepted for reduced credit. Pre-class assignments such as pre-reads before delving into new content or pre-labs before investigations are graded and mandatory. If you have not completed a pre-lab assignment, you will not be permitted to participate in the lab of the day, will affect your grade on the investigation, and you will need to make up this work after school on your own time.

***Course Textbook:***

Students will access the course textbook online. Link to the textbook will be provided in due time.

***Lab Maintenance and Safety:***

As with all lab-based science courses, this course will involve doing the lab investigations. Please follow these guidelines:

* Follow the Lab Safety Contract to the letter.
* Make sure to complete all lab assignments even when absent.
* follow all lab safety procedures.

***AP Environmental Science Unit Sequence:***

| **Unit No.** | **Unit Title** | **Timeframe** |
| --- | --- | --- |
| **SEMESTER 1** |
| **1** | Ecosystems | Early Sept – Mid-Sept |
| **2** | Nutrient Cycling & Climate Change | Mid-Sept – Early Oct |
| **3** | Populations | Early Nov – Late Nov |
| **4** | Earth Resources | Early Dec – Late Dec |
| **5** | Land & Water Use | Early Jan – Late Jan |
|  | **MIDTERM** | **Regents Week** |
| **SEMESTER 2** |
| **6** | Energy | Early Feb – Late Feb |
| **7** | Atmosphere & Air Pollution | Early Mar – Mid-Mar |
| **8** | Pollution | Early Mar – Early Apr |
| **9** | Global Policy & Toxicity | Early Apr – Late Apr |
|  | **AP REVIEW** | Late Apr – Early May |
| **AP EXAM - Tuesday MAY 2, 2023** |
| **11** | Independent Research | Early May – Early Jun |
| ***The AP Exam will be administered on Tuesday May 2, 2023*** |

***AP Exam Structure:***

The AP Environmental Science Exam is 3 hours long and is divided equally in time between a multiple-choice section and a free-response section.

The ***multiple-choice section***, which constitutes **60 percent of the final grade**, consists of ***100 multiple-choice questions*** that are designed to cover the breadth of the students’ knowledge and understanding of environmental science.

The ***free-response section*** emphasizes the application of principles in greater depth. In this section, students must organize answers to broad questions, thereby demonstrating reasoning and analytical skills, as well as the ability to synthesize material from several sources into coherent essays.***Four free-response questions*** are included in this section, which constitutes ***40 percent of the final grade***.