

# Environmental Science Honors

## Course Expectations and Policies

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### Introduction and Content Overview

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Environmental Science Honors is a sophomore science course, designed to provide an introduction to the science of the environment, while also reinforcing and expanding concepts from the physical and life sciences. The course uses environmental issues as a context for introducing these physical and life science principles.

The course will begin with an overview of quantitative scientific calculations, before progressing to an introduction to atomic theory and the elements. These basics will be used to describe the formation of the planets, and the nuclear reactions that permit the sun to release energy. Next, the “systems” of the Earth will be studied, focusing on the geochemical cycles by which carbon, water, and other substances move through the planetary system. The course will continue with an in-depth study of the mechanisms behind weather and climate, along with an examination of current atmospheric issues and controversies: climate change, pollution, and ozone depletion. Finally, the course will include an overview of energy resources, present and future. The science behind energy innovations will be introduced.

The course has two primary foci. First, it is designed to broaden the scientific knowledge of students, including an understanding of the behavior of complex systems such as the Earth. Second, students completing the course will be prepared to participate intelligently as literate citizens in a future society that will be increasingly aware of the environment.

As an **Honors course**, Environmental Science Honors progresses at a very fast pace, covering a great breadth and depth of topics. Students are expected to have mastered the skills and thoroughly understand the concepts covered in prior courses. Students will be expected to apply their knowledge to open-ended and non-routine problems on tests, assignments, and projects, and learn material by reading the textbook and solving problems on their own. Students will be expected to draw well-supported conclusions from information collected from reliable sources. Students are expected to be highly self-motivated, taking complete responsibility for their own learning and seeking help when needed. The course is designed for students who thrive in an independent learning environment.

### Respect: The Only Rule

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At all times, students are expected to act in a manner befitting college-bound young adults in a Catholic high school. This behavior means **RESPECT**, which is demonstrated in several ways.

Obviously, respect for fellow students, the teacher, the learning environment, and the institution is expected at all times. Equally important, however, is the respect that I expect you to afford to yourself. Self-respect means taking yourself, and your capabilities, seriously, and viewing yourself as a resourceful and intelligent individual who takes pride in a job done well and grows to meet increasingly demanding challenges. Respect for self means:

- **Presence**: Making every possible effort to attend, and stay in class for the full period, every day.
- **Preparedness**: Showing up ready to learn, having done all assigned work to provide sufficient background before the class, and ready to ask questions about material that was not clear.
- **Engagement**: Actively trying to understand material being introduced in class, asking questions frequently, and seeking out all resources to help with your understanding.
- **Growth Mindset**: Modern neurological research has demonstrated that our intelligence is fluid, and grows as a result of our willingness to intellectually challenge ourselves. Further research demonstrates clearly that students are more successful if they take the mindset that intelligence grows with time and hard work, and less successful if they believe that their intelligence is fixed.

Showing respect in this class does not simply mean being “nice” and following the rules. It means taking yourself seriously, and setting yourself up to be successful. It means being willing to learn from others, and allowing others to learn from you. At all times, **demonstrate an open-minded, independent, and positive attitude, along with a willingness to work hard and wrestle with difficult concepts.**

### Course Website and Email

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Updated information about the course will be provided at the course website, accessible through

[www.stachemistry.com/env](http://www.stachemistry.com/env)

I assume that you have a working computer with the ability to frequently access this site to retrieve materials. If not, computer access is available through the library. Email will be used frequently for communication of course information. Students will be expected to submit many homework assignments via email. Please check **now** to ensure that you can access your STA student email, and check it on a regular basis, at least every twenty four hours.

## Materials

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You need a **binder** with several sections: class notes, handouts, and returned work. A **calculator** is needed to solve numerical problems (TI-83 Plus or TI-84 required). **Computers** are encouraged in class, assuming your computer has been cleared with Mrs. Knapp, and is not used for entertainment (games, Facebook, etc.). A computer, if you have one, will make you an information resource in class discussions, and can be a tool for broadening your learning experience.

## Grading

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This course is graded on a “total points” scale, which means that there are no separate categories for tests, quizzes, labs, etc. Instead, each assessment is worth a specific number of points, and your grade is determined by dividing the total points you have earned by the maximum possible points.

$$\text{final percentage} = \frac{\text{points you have earned}}{\text{total possible points}} \times 100\%$$

The percentage of points that you earn will be used to determine your grades according to the St. Thomas Aquinas grade scale.

## Extra Credit / Independent Study

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This is an Honors course, and students are expected to meet all expectations fully. There is no extra credit. However, if you would like to conduct research independently on a topic that is discussed in class, see me for prior approval, and I will count that research as an additional assignment in your grade.

## Homework

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Homework will be assigned in a variety of formats, over short-term and long-term intervals. Students are expected to work nightly, and to manage time to allow successful completion of all work by the assigned deadline. Late homework is not accepted. **Students in an Honors course are expected to utilize the textbook, teacher, and other resources to ensure that misunderstandings are clarified *before* the class period when the assignment is due.**

Students are encouraged to work collaboratively on any assignments (unless I indicate otherwise). If you work with other students, indicate at the top of the page the names of the students you worked with (just as you might cite a source on a research paper).

COMMUNICATE! I am willing to be flexible if you communicate a legitimate reason for a late assignment. If there is a problem, I expect that you will approach me *prior* to the class period in which the assignment is due. There will be few exceptions to the late work policy if you haven't communicated with me ahead of time, regardless of excuse.

## Absences

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It is the student's responsibility to arrange make up for all work missed due to absence. In cases of absence of a single day, make up arrangements should be made on the day of return to school. Make up for extended absences will be arranged on a case-by-case basis. Make up work must be completed as promptly as possible – the end of the quarter is not the time to do so. Please refer to the Student Handbook for details on the school's makeup policy.

## Extra Help

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I will typically be available everyday before school and most days after school. If you know in advance that you need extra help, see me in advance to ensure my availability. It is important that you seek help *immediately* if you find yourself confused. Otherwise, you risk becoming overwhelmed. I generally may be found in Room 207, at my desk, or on the second or fourth floors of the main building.

## Academic Honesty

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Cheating is a serious offense. All cheating incidents will result in a grade of zero and referral to the Dean of Students for further disciplinary action, including possible suspension. Parents will also be notified.

What is “cheating” in this course? It is inappropriate for one student to directly copy answers from another's test, quiz, or graded assignment or to consult with another student when my permission to do so has not been granted. The use of unauthorized aids during “closed book” tests is also cheating. In particular, it is cheating to store information or programs on your calculator for retrieval during a test or quiz. If you have any doubt as to whether some action would be cheating, ask first!

*If you are struggling, and feel that you need to cheat in order to succeed in the class, ask for help. Cheating will not help you learn the subject, and it will prevent me from recognizing your need for extra help. Don't give in to the temptation!*