

AICE / AP Environmental Management: Course Outline and Policies

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Course Scope and Sequence:

The AICE Environmental Management syllabus defines the ‘environment’, by reference to the four traditional subdivisions of the global environment:

- The **lithosphere** or the upper mantle of rock and crust, that forms the tectonic plates upon which the continents lie.
- The **hydrosphere** or the body of water, present as ice, liquid water or water vapour.
- The **atmosphere** or the gaseous shell outside these two non-living components.
- The **biosphere** or the living organisms that have established themselves in the other three spheres.

The syllabus recognises that human population growth has become the dominant factor producing environmental change. Since the majority of humans now live in cities, issues related to the growth of urban and industrial areas and the impact of rapid population growth are an important aspect of the syllabus.

Environmental management is concerned with both local and global issues and with the various ways in which societies, governments and economic activity (industry, agriculture and urban areas) use, misuse and attempt to manage both local and global environments. Whilst environmental management can often be presented in a negative light by emphasizing pollution, exploitation and misuse, it is important to give recognition to the positive ways in which we manage our environment. Thus issues such as global warming, industrial pollution and the impact of rapid population growth need to be balanced with others like the creation of National Parks, sensitive urban design and sustainable management/development.

The syllabus reflects a contemporary concern with sustainable management. Through their study of environmental management, it is hoped that candidates will learn to appreciate that the exploitation of the environment has often had a negative impact and that we should aim for a sustainable management of resources.

All students enrolled in this course will be required to:

- **Take the AICE Environmental Management papers 1 & 2.**
- **Complete individual research and produce a report of 1500–2000 words on an issue arising out of their course of study.**
- **Take the AP Environmental Science Exam.**

The text we will use is: *Living in the Environment* by G. Tyler Miller, Jr. 14TH edition.
In addition, each student will be issued a *Biozone Environmental Science* workbook

Due to the quantitative analysis that is required in this course, students should have a solid foundation in biology and chemistry and have taken at least one year of algebra. Admission to an AP or AICE course ordinarily depends on the student's interest in the subject as well as on a superior academic record. Experience has shown that the most successful students in AP and AICE courses are those who are both well-prepared and highly motivated.

AICE / AP Environmental Management: Tentative Pacing Guide

Topic	Miller page(s)	Biozone page (s)	~ # class days
The Lithosphere (Structure of the earth, plate tectonics, rock cycle)	329-336, 338-339	10-18	8 days
Natural and Human-Caused Hazards of the Lithosphere (volcanoes, earth quakes, mass movements, hazard management)	336-337	n/a	8 days
Soils (Formation & characteristics, soil profiles, Testing local soil samples, erosion & deterioration)	72-76, 279-286	19,107	7 days
Resources of the Lithosphere (Renewable, non-renewable & recyclable resources, mining, resource management in MEDC's vs LEDC's)	9-11, 340- 345	111	8 days
Energy from the Lithosphere (Carbon cycle, fossil fuels, nuclear energy)	77-80, 346-373	51, 111-114	7 days
The Hydrosphere (Water cycle, ocean circulation, groundwater, water quality testing, study of local water sources)	76-77, 493-494	55, 25-26	8 days
Resources of the Hydrosphere (management of water supply, potential effects of global climate change on water supply)	305-330	27-29	7 days
Human Impacts on the Hydrosphere (Fresh and salt water pollution & remediation, solid waste management)	490-516	120-124	8 days
The Atmosphere (Atmospheric structure & composition, Earth's "energy budget")	59-61, 434-435	21-22	5 days
Weather and Climate (Local weather systems, forecasting, climate, ENSO, biomes)	101-126	23-24	10 days
Human Impacts on the Atmosphere (Stratospheric ozone depletion, global climate change, air pollution)	461-489, 433-456	125-131	15 days
The Biosphere: Ecosystems (Biotic & abiotic factors, terrestrial and aquatic biomes, ecosystems, primary productivity & photosynthesis, movement of energy through ecosystems)	55-59, 61-72, 127-137	33, 36-50	15 days
Changes in Ecosystems (Community ecology succession, studying ecological change)	143-160	76-80, 58-61 81-95	10 days
Human Impacts on the Biosphere (Effects of human activity on terrestrial and aquatic ecosystems, loss of biodiversity, conservation & management of Earth's living systems)	195-272	109-110, 115-117	10 days
Populations (Population biology, human population demographics, MEDC's versus LEDC's)	163-192	64-75	10 days
Independent Research & Write-Up: Due April 1st	n/a	n/a	10 days
Review for AP Exam (Practice exams, FRQ's, & last minute fill in the gaps)		53, 56-57, 97-105	5 days
AP Exam (Your moment to shine!!!) May 2nd, 8:00 am			
AICE Wrap up & Review / AICE Papers 1 & 2 (Woot!!)			TBA

AICE / AP Environmental Management: Classroom Policies and Procedures:

Welcome to AICE / AP Environmental Management! In order to ensure that you are successful in reaching your goals this year, please take some time to become familiar with my procedures and expectations for you. I am committed to doing all I can to help you learn a great deal of Environmental Science, but I also need you to make a commitment to do your part to stay on track and motivated as the year progresses.

My Philosophy & Teaching Strategies: I feel strongly that to fully experience life and to participate in society, you need to attain scientific literacy. As a voter, you will need to understand the ways in which public policy and resource use impact our environment and our ability to share this planet with our fellow animals, plants and microbes. As stewards of the earth, we need to learn how we can best meet the needs of humanity without exhausting the very resources on which we rely. I view this course as an opportunity for you to ask questions and, using an organized approach, learn how to pursue the answers for yourself. As a result, my lectures are not one-way transmissions of information, rather, I ask that you come to class prepared to ask and answer questions about the topic of the day. I encourage class discussion and cooperative learning and many of our activities and assignments will offer you opportunities to share data, discuss your findings and collaborate with your peers in an attempt to bring all students to a higher level of critical thinking. **Science is a process, not merely a collection of facts.** To learn science, you must engage your curiosity and learn to apply the knowledge you gain to new situations.

- 1. Personal Responsibility:** Be aware that there is a significant jump in the curriculum between IGCSE and AICE level courses (and from honors to AP level). This is especially reflected in the difficulty of your tests, which are modeled on the AICE exam papers you will be taking at the end of the course. **Because this is a college level course, you will be expected to take personal responsibility for your learning.** If you find that you are falling behind or having difficulties with tests or assignments, it is YOUR JOB to seek assistance. I am available to help you before and after school most days. Please schedule some time where we can work out how to get you back on track.
- 2. Honor Code:** True learning depends on honesty. *Academic Dishonesty* - is defined as knowingly giving or receiving information or assistance on any graded work that is understood to be an example of individual effort. This includes copying or allowing someone to copy your work, receiving unauthorized help on any quiz or test, lab, homework or project, or falsely misrepresenting another's work as your own. Any violation of this honor code will result in a zero for the assignment for all involved students, and teacher contact with parents of all involved students. Mr. Mercer will also be notified, and the Cambridge policy concerning academic honesty will be upheld.
- 3. Lab Work:** This course involves extensive lab and field-work at the college level. Because of this, there may be times when you will need to come either before or after school to complete a procedure. Any lab work missed will need to be made up. In most cases, this will need to be outside of class time.
- 4. Late Work is NOT Accepted! :** The only exception to this rule will be made in instances where you have made arrangements with me before the due date - usually due to an excused absence or school related activity. Please do not ask for an extension. The answer will be no. Unless otherwise specified, all assignments will be collected at the beginning of class.
- 5. Required Materials:** Each student will need a calculator, pencils, and pens in blue or black ink only. You will need a composition book for journaling and data collection -NO SPIRAL BOUND BOOKS! It is also recommended that you keep a 3-ring binder dedicated solely to AICE Environmental Management.
- 6. Extra Credit:** There are two ways you can earn extra credit in AICE Environmental Management:
 - Periodically throughout the year, I will collect supplies for extra credit points. This includes things like paper towels, kleenex, and basic supplies needed for specific activities or labs. Points will be announced for each collection.
 - Each nine weeks I will have at least one weekend, or evening activity you may choose to attend for extra credit. This may be a nature hike, community service project, or data collection opportunity. I can guarantee, whatever it is, it will be worth your time! Points will be announced for each activity.

AICE / AP Environmental Management Grading Policy:

- A. Your grade will be based on a total point system.** At any time you may calculate your grade by totaling the number of points you have earned and dividing your total by the total points possible. I will hand out grade sheets for you to use for this purpose. Your learning will be assessed based on the following types of assignments:

Guided Reading Questions / Problem Sets (GR): 20 points each (one per unit):

For each unit of study, I will prepare a set of problems and comprehension questions to guide your thinking as we learn the material. You are expected to work on this every night as your regular homework. It will be due a few days before the test. It is your responsibility to ask for help if there is any question you do not understand. This assignment is to be completed individually by each student. You may not copy another student's work.

Practice Questions (PQ's): 20 points each (one per unit)

As we prepare for each test, I will assign a set of practice questions, which is essentially a "mock test" for you to do. I encourage you to collaborate with your peers, and use the texts as you answer these questions. This will be due the day before the test. I will use a random number table to check the work of selected students each time. You can guarantee I will check each student at least twice per nine weeks. We will go over the answers in class, and you will take it home to study.

Labs: 20 points each (4 + per 9 weeks)

We will be doing labs on an almost daily basis throughout most of the year. Each lab will be due for grading 2 days after our last in-class data collection day for that lab. In addition, a few selected labs will require formal lab write-ups.

Individual Research Progress Checks: (100+ points per 9 weeks)

For each nine weeks, there will be specific tasks you will have to complete towards completing your individual research requirement. These will total at least 100 points per grading period.

Current Events: 20 points each (Due last school day of every month)

Each month you will be asked to read one news article related to any issue in environmental science that interests you. You need to write a concise abstract of the most pertinent facts in the article (100 words max), and a reaction "editorial" or essay about YOUR feelings concerning the topic (at least 250 words). These will be submitted electronically to evansgn@gm.sbac.edu

Tests: 50 - 100 points each (Approx. 2-3 / 9 weeks)

Tests will be a combination of multiple choice, short answer, essay and diagram questions, and may cover 2-3 or more chapters in your textbook. There will frequently be calculations as well. Your tests are designed to closely resemble AP & AICE exam papers in terms of format, pacing and difficulty. Some tests will be graded solely by the instructor, but some tests will also be self or peer graded in class and checked by the instructor. This better facilitates your comprehension and also serves as a review of the material tested.

B. The Alachua County grading scale is used for this course.

A	= 90 - 100	C	= 70 - 76
B+	= 87 - 89	D+	= 67 - 69
B	= 80 - 86	D	= 60 - 66
C+	= 77 - 79	F	= 0 - 59

I am looking forward to a great year of ecological exploration with you! Together we will surely make this year one to remember (in a good way). Thank you in advance for your hard work and positive attitude 😊.

I have read Ms. Evans' syllabus and understand what is expected of me in AICE / AP Environmental Management. I also understand all of Ms. Evans' policies and I agree to follow them in her classroom.

Student's Name (Please Print)

Student's email address

Student's Signature

Date

Parent's Name (Please Print)

Parent's email address

Parent's Signature

Date

Parent's email address

Please use the space below to tell me anything you think I need to know to help you achieve your academic goals for this course.