

**URBAN ASSEMBLY SCHOOL FOR CRIMINAL JUSTICE**

4200 16th Avenue, Brooklyn, New York 11204

**Phone:** (718) 438 – 3893

MARIELA GRAHAM, ***Principal***

Nathalie Jufer, ***Assistant Principal***

A.P. Environmental Science



2015-2016

Teacher: Ms. McDaniel

Email: kmcdaniel@uascriminaljustice.org

Class Website:

[http://uascjmcdaniel.weebly.com](http://uascjmcdaniel.weebly.com" \t "_blank)

Welcome to A.P.E.S.!

The Planet Earth is in grave danger. In order to make informed decisions, it is crucial for the world’s citizens to have a broad knowledge of environmental problems. The College Board created the AP Environmental Science course with the intention of providing students with the scientific principles, concepts, and methodologies required to understand the interrelationships of the natural world, to identify and analyze environmental problems both natural and human-made, to evaluate the relative risks associated with these problems, and to examine alternative solutions for resolving and/or preventing them. A.P. environmental science is an interdisciplinary study that integrates information from both natural sciences (biology, chemistry, earth science, physics) and social sciences (economics, ethics, politics).

Course Goals: We will ALL

* Write college-level lab reports
* Score a 4 or 5 on the A.P. exam on **Monday May 2nd at 8 a.m.**

Major Unifying Themes:

* Earth is an interconnected system
* Humans alter natural systems
* Survival depends on sustainable systems

Textbook: Freidland and Reylea. Environmental Science for the A.P. 2012

Course outline:

|  |  |  |  |
| --- | --- | --- | --- |
| Unit  | Text Reference | Activity/Lab | Duration |
| Introduction to Environmental Science | Ch.1, Ch. 2 | Inquiry lab: Fertilizer.Lab: What is energy? | 2 weeks |
| Ecology and Biodiversity | Ch. 3, Ch. 4, Ch. 5 | Inquiry lab: nitrogen cycleLab: Benthic BugsField lab: Aquatic invertebrates pond surveyActivity: Determining the health of a pond ecosystemSugar Babies LabOutdoor Albedo LabIce cube density labJellybean Evolution | 4 weeks |
| Population and Conservation Biology | Ch. 6, Ch. 18 | Lab: Catch and releaseVirtual Lab: SuccessionActivity: Forest SuccessionProject: Invasive Species News ArticleLab: Island Biogeography | 3 weeks |
| Water | Ch. 9, Ch. 14 | Inquiry lab: Waste Water TreatmentLab: Water Quality |  2 weeks |
| Geology: Processes and Soil | Ch. 8 | Lab: Soil PropertiesActivity: Cookie Mining | 2 weeks |
| More humans, More problems | Ch. 7, Ch. 20 | Video: NOVA population in the balanceHuman population growth labActivity: Cemetery Survivorship curvesResearch paper: Solutions to human population growth | 2 weeks |
| Global Climate Change  | Ch. 19 | Lab: analysis of carbon dioxideActivity: Grappling with graphics | 2 weeks |
| Land and Food | Ch. 10, Ch. 11 | Project: Origins of foodFilm: Food INC.Activity: Estimating Carrying CapacityInquiry lab: SalinizationLab: nitrogen fixation fertilizerLab: Energy transfer | 2 weeks |
| Air | Ch. 15 | Inquiry lab: Air QualityLab: Acid Rain | 1 week |
| Waste and Toxicity | Ch. 16, Ch. 17 | Project: Waste DiaryLab: Virustown Project: Waste DiaryLab: LD50 | 2 weeks |
| Energy | Ch. 12, Ch. 13 | Film: A crude awakening: The Oil CrashLab: Making biodiesel from new vegetable oilLab: Radiation on the effect and germination of radish seeds | 3 weeks |

**Materials**

The following items are required for this class. Please have all of these items by Wednesday, September 16th.

* 1 inch or 1.5 inch binder
* College ruled loose leaf paper
* 1 composition notebook for labs
* 1 spiral notebook for Current Events Journal
* Pen or pencil

**Grading Policy**

|  |  |
| --- | --- |
| **Tests, Quizzes, Labs, Projects and Papers** | **80%** |
| **Homework** | **10%** |
| **Participation** | **10%** |

**My expectations of you in this class**

**Entry routine:** When you enter the classroom, you should do these three things **immediately**:

* Take out your binder
* Take out any homework from the night before and place it at the top of the table
* Write down the objective and start on the Do Now.

**In-Class Behavior:** During lectures be attentive and ask questions. If you have a question, raise your hand! Do **NOT** call out. It is rude and will get you thrown out of class in college.

**Do Now:** Do Nows will either consist of A.P. multiple-choice questions. You should keep the Do Now multiple choice questions as they may show up on exams.

**Homework:** You should spend at least an hour studying/reading for this class EVERY night. As you read you should take notes. Possible note-taking strategies include:

* Cornell Notes
* Write down definitions (in bold)
* Summarize “Key Ideas Revisited”

Additional homework assignments include FRQs, news articles, research papers graphing and math worksheets. Reading notes may randomly be collected and counted as **quiz grades**.

**Current Event Presentations:** Currents events in environmental science frequently pop up on FRQs. Every student will be giving a 10 minute presentation on a current event (within the last 5 years) that relates to their assigned unit. The exact dates for each presentation will be decided at the beginning of the each unit. All presentation topics must be approved by Ms. McDaniel beforehand.

|  |  |
| --- | --- |
| Unit | Student Presenters |
| Ecology and Biodiversity | * Rimsha
* Amrat
 |
| Population and Conservation Biology | * Desire
* Monica
 |
| Water | * Mehrangiz
* Shayna
 |
| Geology: processes and soil | * Harmanpreet
* Cynthia
 |
| More humans, more problems | * Hamna
* Rahila
 |
| Global Climate Change | * Uzma
* Bukurie
 |
| Land and Food | * Wyllana
* Mahnoor
 |
| Air | * Attia
 |
| Waste and Toxicity | * Wendy
* Saliha
 |
| Energy | * Kaylah
* Ramlah
 |

**Current Event Journals:** Your current event journal will contain summaries from current event presentations and from articles that I assign as homework. The journal will randomly be collected and the entries will count as a quiz grade.

**Absent/ late work:** If you are absent, it is YOUR responsibility to make up the work within 2 days in order to receive full credit. This policy holds true for exams, quizzes and labs.You can find copies of power points presentations, class worksheets, and homework on the class website or in the absent folder. You MUST write absent at the top of the assignment so that it is not counted as late. For lab reports, essays and projects, you must include a signed note from home in order to receive full credit. The maximum grade that late work can receive is 75%. Once a unit has ended, you cannot turn in work for that unit.

**Extra Help**

If you need extra help on assignments you may come in any day during lunch. If you wish to meet with me before school or after school, please talk to me beforehand so we can schedule a time.

**Exams:** You will have an exam for every unit that will consist of 50 multiple-choice questions. In later units, exams will occur on block days with 50 multiple choice questions and two FRQs. There will be a midterm and final exam for this class.

**Quizzes:** The frequency of quizzes will vary depending on the unit. For longer units, there will be more quizzes. Quizzes may consist of vocab definitions, multiple choice questions, or math problems.

**The A.P. Exam**

This course is equivalent to a one semester introductory course in environmental science. In order to receive college credit, you must pass the A.P. exam.

Exam Topics:

Earth Systems and Resources 10-15%

(e*arth science, atmosphere, global water resources, soil)*

Living World 10-15%

*(Ecosystem structure, energy flow, ecosystem diversity, natural ecosystem change biogeochemical cycles)*

Population 10-15%

*(population biology, human population)*

Land and Water Use 10-15%

*(Agriculture, forestry, mining, fishing, global economics)*

Energy Resources and Consumption 10-15%

*(energy concepts, energy consumption, fossil fuel resources, nuclear energy, hydroelectric power, energy conservation, renewable energy)*

Pollution 25-30%

*(air pollution, noise pollution, water pollution, solid waste, impacts on the environment and health, economic impact)*

Global Change 10-15%

*(stratospheric ozone, global warming, loss of biodiversity)*

Exam Format: The exam is divided into two parts:

Part I:

100 multiple choice questions (90 minutes)

 Breadth and knowledge of content (60% of final score)

Part II:

4 free response questions (90 minutes)

Critical thinking and application of concepts (40% of final score)

1 data set question, 1 document-based question, 2 synthesis and evaluation question

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**Think/Pair/Share:**

What are two thoughts or reactions you have to this data?

**Strategies to succeed in this class:**

* Review notes from class **every night**
* Keep up with current events in environmental science
* Make flash cards
* Find study buddies!

Dear Parent/Guardian,

My name is Kayla McDaniel and I am your daughter’s A.P. environmental science teacher this year. I selected your daughter to be in this course because she performed well in my environmental science class last year and has a strong work ethic. This is a rigorous, college-level science course that includes a considerable amount of homework and studying.

Please take a moment to fill out your contact information. One of my goals this year is to establish and maintain consistent communication with parents.

Parent/guardian name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Student’s name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Cell Phone:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Home Phone:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Email:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Best way to reach you:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Does your daughter have access to a computer at home?\_\_\_\_\_\_\_

Does your daughter have access to internet at home?\_\_\_\_\_\_\_\_\_

Parent signature:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Please be aware that the following are required materials for my class:

* 1 inch or 1.5 inch binder
* College ruled loose leaf paper
* 1 composition notebook for labs
* 1 spiral notebook for current events articles
* Pen or pencil

Students must have these materials by **Wednesday, Sept. 16th**.

Please feel free to reach out to me with any questions or concerns!

Sincerely,

Kayla McDaniel

Email: kmcdaniel@uascriminaljustice.org