Course Title: AP Environmental Science

Course #: 1565-1566

Course Description:
AP Environmental Science (Course #1565-1566) Grade 10-12 Prerequisite: A grade of “B” or higher in Chemistry both semesters. AP Environmental Science is an introductory college-level course. Students will identify and analyze environmental problems, both natural and man-made, and evaluate the relative risks associated with these problems. This course has been aligned to College Board Guidelines for Advanced Placement Environmental Science. Topics of study include the essentials of ecology and biodiversity, population issues, climate disruption, soil and water pollution, along with economics and politics of sustainability. Students are strongly encouraged to take the AP Exam in May.

UC/CSU Approval: “d” approved

Grade Level: 10-12

Estimated Homework Per Week: 3-4 hours/week

Prerequisite: Chemistry (“B” or higher in Chemistry both semesters).

Recommended Prerequisite Skills:

Course Grade Scale:
- Tests/quizzes 45%
- Final exam 15%
- Homework 10%
- Lab/Projects 30%

Major Assessments/Units/Topics:
  I. Earth Systems and Resources
  II. The Living World
  III. Population
  IV. Land and Water Use
  V. Energy Resources and Consumption
  VI. Pollution
## VII. Global Change

### Homework Planning Schedule

Assignments will include reading notes from the text, formal lab write-ups, activities, projects, journal responses/discussion boards, video notes, field trip studies, presentations and participations in discussions. The schedule may change due to time constraints and only the major assignments are listed. Tests are scheduled at the end of each unit.

<table>
<thead>
<tr>
<th>Dates</th>
<th>Assignment</th>
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<tr>
<td><strong>Unit 1</strong></td>
<td><em>Chapter 1: Studying the State of our Earth (quiz first week)</em> Salinization lab report <em>Chapter 20: Sustainability, Economics and Equity</em> – Introduce UN project, (Print an 8 1/2 x11 flag)</td>
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<td><strong>Unit 2</strong></td>
<td><em>Chapter 2: Environmental Systems</em> – <em>Chapter 3: Ecosystem Ecology: Understanding the Movement of Matter</em> –</td>
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<td><strong>Unit 3</strong></td>
<td><em>Chapter 4: Global Climates and Biomes</em> <em>Chapter 5: Evolution of Biodiversity</em> <em>Chapter 18: Sustaining Biodiversity</em> Wanted Posters: Research on Endangered Species. Guest speaker: Alex Warneke (Park ranger Cabrillo – tide pool activity Oct 19)</td>
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<td><strong>Unit 4</strong></td>
<td><em>Chapter 6: Population and Community Ecology</em> and <em>Chapter 7: Human Population</em> Tale of two cities and Population Growth in Lemna Minor, and I=PAT project, Population Calculations, rule of 70, Food for thought, and the People Paradox</td>
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<td><strong>Unit 5</strong></td>
<td><em>Chapter 8: Earth Systems and Resources</em>: Mining research/Cookie mining lab, Lab – Physical and Chemical Properties of Soil <em>Chapter 9: Water Resources</em> Research on California Water Issues</td>
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<td><strong>Semester 2:</strong> <strong>Unit 6</strong></td>
<td><strong>Chapter 14: Water Pollution</strong> – reading notes  a) Water Quality Testing Lab lab report  b) Field trip to the San Dieguito Lagoon/EIS (Environmental Impact Statement recommendations presentation)  <em>EXTRA CREDIT: Tour the water reclamation facility.</em>  <a href="https://www.sandiego.gov/water/purewater/purewatersd">https://www.sandiego.gov/water/purewater/purewatersd</a></td>
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<td><strong>Unit 7</strong></td>
<td><em>Chapter 10: Land, Public and Private</em> – reading  <em>Chapter 11: Feeding the World</em> – <em>GMO Jigsaw</em> Extra credit: <em>Movie: Food, Inc., Test Ch. 10 and Ch. 11</em>  Earth Day/sustainability project should be in progress.</td>
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| Unit 8 | Chapter 12: Nonrenewable Energy Resources and Chapter 13: Achieving Energy Sustainability  
*Test Ch. 12 and Ch. 13*  
Video series: *Switch* with activity |
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| Unit 9 | Chapter 15: Air Pollution and Ch 15 test 3/22  
Chapter 19: Global Change – (Watch Before the Flood the day before spring break)  
3/28)Extra Credit: Birch Aquarium  
Coral Bleaching and Acidification/Acid Test video: HHMI Lab  
*Test Ch. 19 after spring break*  
Start studying for the AP Test on your own. |
| Unit 10 | Chapter 16: Waste Generation and Waste Disposal & Chapter 17: Human Health and Environmental Risk  
Toxicology lab: Glow in the dark Daphnia  
*Chapter 16 and 17 Test included in Final exam/Benchmark* |