|  |  |  |  |
| --- | --- | --- | --- |
| **Unit** | ***Chapter*** | Topics | Labs/Activities |
| **Introduction** | ***Enviro 101*** | Graphing  Exponents and Scientific Notaiton  APES Math  Tragedy of Commons  Enviro. Disasters | Tragedy of Commons Simulation  Graphing Activities  Enviro. Disaster Projects |
| **Geosphere** | ***Earth Structure*** | Earth Structure History  Types of Rocks  Contour Maps  Volcanoes  Sulfur Cycle  Plate Tectonics  Earthquakes  Radioactive Decay | Volcano Lab  Earthquake Epicenter Activity  Half-Life Candy Lab |
| ***Land Use*** | National Parks  Sustainable Use Lands  Urban Development  Mining  NIMBY and Solid Waste | Movie: Secret Yosemite  National Park Tycoon  Cooking Mining Lab  Solid Waste Inventory (Ben Smith) |
| ***Farming*** | Soil  Nitrogen Cycle  Pesticides  Organic Farming  Farming Pollution  Biomagnification  Monocultures  Fertilizer | Soil Lab (Ben Smith Modified)  Movie: Food Inc.  Industrial vs. Organic Farming DBQ |
| ***Energy*** | Power Unit Conversions  Nonrenewable vs. Renewable Energy  Fracking | Energy Source Debate Project  Movie: Who Killed the Electric Car |
| **Biosphere** | ***Biomes*** | Terrestrial and Aquatic Biomes  Temperature and Rainfall | Biome Presentations |
| ***Energy Flow*** | Food Chains  Food Webs  Biodiversity  Energy Conversions  Ecological Succession | Fad Diet Projects  Biodiversity with Cars Project  Ecological Succession Flip Books  Yellowstone Food Web Project (Ben Smith) |
| ***Populations*** | Invasive Species  Mainland vs. Islands Diversity  Human Population  Age-Structure Diagrams  Logistic vs. Exponential | Non-Native Species Project  Habitat Islands Project (Ben Smith)  Movie: India’s Missing Girls  Population Growth DBQ |
| ***Toxicology and Disease*** | LD50  Various Mutagens  Various Important Diseases (HIV, Influenza, etc) | LD50 Lab – Black worms and nicotine  Disease Investigation  AIDS Lab  Plague Inc. iPhone Game |
| **Atmosphere** | ***Wind and Weather*** | Wind Cells  Coriolis Effect  Hurricanes  Biome Influences | Be a Meteorologist Proejct |
| ***Global Warming*** | Layers of Atmosphere  Carbon Cycle  Carbon Sinks | Movie: Inconvenient Truth  Ecological Footprint  Global Warming: Fact or Fiction DBQ |
| ***Air Pollution*** | Types of Smog  NOx, SOx  CFCs  Air Pollution Math  Ozone | Lung Model Activity  Air Quality Lab (Ben Smith)  Particulate Matter Lab (Ben Smith) |
| **Hydrosphere** | ***Water Uses*** | Water Cycle  Sewers  Water Privatization | Salinization Lab – Mung Beans(Ben Smith)  Planet Earth – Shallow Seas and Deep Oceans  Movie: Blue Gold  Water DBQ |
| ***Water Pollution*** | Water Treatment  Water Treatment Math  Ocean Acidification | Lab: Water Quality Testing (Dissolved Oxygen)  What’s in Your Water Activity (Computer Lab)  Movie: Erin Brockovitch |

**AP EXAM = MAY 4th 2015!!!**

Previous Exams: Google Search “*APES FREE RESPONSE QUESTIONS*”