Lesson 2: Ecological Footprint

Eco Footprint Calculator

Directions: Visit the following site: http://ecocamp.us/eco-footprint-calculator. Complete the quiz using your own personal information then answer the questions below:

- What does sustainability mean?
- How many basketball courts does it take to support you?
- How many basketball courts are available for each person?
- Are you living a sustainable lifestyle?
- What are your percentages for the following categories:
  - Housing:
  - Travel:
  - Shopping:
  - Energy and Water:
  - Food:
- What are three ways you could become more sustainable?
- Retake the quiz changing those three answers. What was the effect on your overall sustainability?
- Why is it important to create a product that considers both profit and the impact on community/environment?
● What factors influence the size of the human population?

● What challenges are there of a growing human population in regards to sustainability?

● How do you think people’s behaviors will have to change in order to support a growing human population?

300 Years of Fossil Fuels in 300 Seconds

It all started with a big bang. Wait, we don’t have to go back that far. The earth was formed 4.5 billion years ago. No, still too far. Try this: It's the middle ages. People in Britain run out of firewood. They start burning coal, but they use up the coal on the ground. Miners dig deep. Coal mines fill with water. Samuel Newcomen invents a coal burning steam engine to pump out water so miners can keep digging. James Watt makes it practical for other uses. Now we have ingredients for the industrial revolution. Fossil fuels and a way to put them to work. All hell breaks loose. Coal miners bog down lugging coal. Rails make it easier. Rails and stream engine combined make a railroad. Michael Faraday makes the first electric Motor. Nikola Tesla invents alternating current. Soon, utility companies start burning coal to generate electricity. Meanwhile, Edwin Drake drills the first rock oil well in Pennsylvania, and Gottlieb Daimler builds an automobile running on petroleum. Coal tar and oil are turned into industrial chemicals and pharmaceuticals that prolong life. More population growth. The Wright brothers start oil fueled aviation. Fritz Haber and Carl Bosch make fertilizer from fossil fuels. Fertilizer and oil-powered tractors expand food production, feeding more people. World War I is the first fossil fueled conflict. Then comes World War II, giving us guided missiles and atom bombs. In between is a Great Depression, partly caused by overproduction. Powered assembly lines make products faster than people need them. Advertising executives invent consumerism to soak up overproduction.

It's the 1950s. Advertisers use television to hook new generations of consumers. In the 70s, there's an oil shock. Everyone’s shocked to realize how dependent they are on oil. With the energy crisis, the environmental movement is born. But oil prices fall, and everyone forgets energy shortages. There’s a showdown between market and planned economies. Market wins. Goodbye evil Soviet empire. Politicians decide the market will solve everything. Personal computers arrive. Globalization takes over when the market notices labor is cheaper in China. Suddenly everyone has a cell phone, but world oil production stalls out.