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**Sample Course Module
DEP 2000 Human Growth and Development**

Adapting to a Changing World - Evolutionary Psychology

LIVING IN A WORLD WITHOUT COAL AND PETROLEUM

Fossil fuels took eons to create and years to consume. Inevitably we will run out of this finite resource. Foresight is not the forte of our species. We seem to do our best work when in crisis mode. A bacterium was developed to devour oil spills. What if that bacterium mutated and consumed all of the petroleum and coal on the planet as well as all products derived from those resources? How would our lives instantly change?

No cargo or people would move by conventional trains, planes, trucks or ships. How would you get to work or school tomorrow? If you walk, it might have to be with bare feet as it's likely that your shoe soles were petroleum-based. You could be one of the few green thinking owners of an electrical car. Funny thing about that car, the tires are gone as are the plastic body panels, paint on the metal parts, grease on the wheel bearings, transmission fluid, brake fluid, power steering fluid, the battery cases, wiring insulation, windshield wipers, lenses on the many lights, seat covers and foam cushioning, rugs, floor mats, dash board, door panels, headliner, cup holders and even the middle layer of the safety glass windshield lamination. Without wiring insulation and battery cases you won't be charging any batteries, but if you could where would the electricity come from? Our country is heavily dependent upon coal fired power plants, but the coal was gobbled up by hungry bacteria. You were lucky enough to live near a wind farm, but where did all of those huge, high tech propellers go? They went to petroleum heaven. There are many petroleum-based components and lubricants used in nuclear plants and even solar arrays require insulated wiring.

Assignment:

Use the data bases listed in your course syllabus and discussed in class to research petroleum and coal dependency in the United States. Complete the following items.

1. Graph the consumption of both domestic and foreign petroleum and coal in this country since 1900.
2. Research and graph patterns of oil/coal consumption by different segments of the economy. Consider personal transportation, commercial transport, recreation, power production, residential use, commercial use, manufacturing, aviation, agriculture and other uses.
3. Research and list the range of products made from petroleum and coal derivatives.
4. Graph the amount of U.S. land devoted to agricultural production since 1900.
5. Plant-based fuels, oils and plastics exist, but can we fill the voids left by the end of petroleum and coal availability with agricultural products and still feed the world and maintain a healthy natural environment?
6. How does the aviation industry plan to deal with the ultimate end of the oil era?