

## **Energy Resources Unit - Web Module Descriptions**

Developed by Michigan Technological University and the Western Upper Peninsula Center for Science, Mathematics & Environmental Education ([http://tecalive.mtu.edu/meec\\_index.htm](http://tecalive.mtu.edu/meec_index.htm))

### **1. Home Energy Use**

How much energy, money, and pollution can Michigan residents save if every electricity consuming resident turned off one 75-watt light bulb for one hour each day? Explore this interactive web module to learn about residential uses of energy, different energy sources, how to reduce energy loss, and how to increase the energy efficiency of your home. Supports Energy Resources Unit Lessons 2, 6 and 8.

### **2. Life Cycle Analysis of Paper and Plastic Bags**

"Paper or plastic?" It's a simple question, but your answer has environmental impacts that you may not have considered. Choosing which product is best for the environment is not always an easy task. Careful analysis of resources, energy, and pollution data must be made at each stage of a product's life cycle in order to come up with the best choice. Use the life cycle analysis data and interactive calculators in this web module to help you decide what type of bag to use. Then test your knowledge using the interactive quiz. Supports Energy Resources Unit Lessons 7 and 8.

### **3. Where Does Our Garbage Go?**

How much fuel does it take to transport your garbage to the nearest landfill? If Michigan residents reduced their garbage by half, (by reducing, reusing, recycling, and composting) how much fuel would Michigan save? What's the difference between a landfill and a dump? Find the answers to these and other questions by exploring this interactive web module. Supports Energy Resources Unit Lessons 6, 7, and 8.

### **4. My Decisions Impact Michigan, the U.S. and the World**

You may not know it, but decisions you make every day can have an impact on the rest of the world. We can see this by looking at the pollution on Isle Royale, an island and International Biosphere Reserve located in Lake Superior. Explore this web module to learn about different pollutants found on Isle Royale, how they got there, and what you can do to reduce pollution. Supports Energy Resources Unit Lessons 4,5, 6 and 8.

### **5. Oil, Gas, and Coal in Our Lifetime**

Most of our energy comes from three fossil fuels: oil, natural gas, and coal. Why are fossil fuels an important source of energy? Where do fossil fuels come from? How much oil, natural gas, and coal does Michigan produce and consume? How long will the World's supply of oil last? Find the answers to these questions and examine the concerns associated with our heavy use of fossil fuels by exploring this web module. Supports Energy Resources Unit Lesson 4.

### **6. Sustainability**

How can we ensure equality for the six billion citizens of our planet and also ensure that future generations are able to meet their needs? Sustainable development has been defined as "development that meets the needs of the present without compromising the ability of the future to meet its needs" (*Our Common Future*, 1987). Issues of energy use, pollution prevention, and social equity all have an important role in the movement towards a more sustainable world. Explore these important issues in this interactive web module. Supports Energy Resources Unit Lesson 8.

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