Thinking About Power Today

Introduction	This activity asks students to compare various sources of energy used in the United States today. It is a suggested follow-up to the Tsongas Industrial History Center's Power to Production program.
Time	2 class periods
Lesson Preparation	Print copies of the Energy Source worksheet for students. Provide sources and/or internet access to research the energy source. There are many places online that discuss various energy sources. • The National Energy Education Development project has some good info books online on Energy sources broken down by age groups: http://www.need.org/energysources. • Energy4me.org also has some good information: http://energy4me.org/all-about-energy/.
Background Information	Energy refers to the resource used to generate power. "Primary energy sources take many forms, including nuclear energy, fossil energy -- like oil, coal and natural gas -- and renewable sources like wind, solar and hydropower. These primary sources are converted to electricity, a secondary energy source, which flows through power lines and other transmission infrastructure to your home and business."* "Energy is defined as the capacity to do work. We use energy in almost every aspect of our lives. For many people, it is difficult to think of a part of our day that we do not use mass-produced energy. While the use of energy makes our lives easier, there are negative consequences to the environment associated with it. For fossil fuels, there is the release of carbon dioxide, a greenhouse gas, as well as other pollutants. Others, such as wind and hydropower can disrupt the environment and negatively impact wildlife populations. In general, one downside of more environmentally-friendly sources of energy is a higher production cost. Therefore, there are economic and environmental costs to consider when determining the best sources. The United States contains 5% of the world's population; however, it consumes 26% of the world's energy each year. With increases in population, technological advances, and the desire to provide a reasonable standard of living for the average American, our energy consumption will continue to increase. In fact, it is predicted that our energy consumption will increase by 11% before 2030. Most of our current energy usage comes from non-renewable sources. This means we are quickly depleting our energy sources, and increasing pollution in the process. While there are ways to make the use of fossil fuels cleaner, this does not solve the issue surrounding their limited supply."^

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