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Curriculum Units by Fellows of the National Initiative
2024 Volume IV: Energy: Past, Present, and Future

The Pros and Cons of Energy: An Investigation of Energy Sources and Human Impact

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The curriculum unit titled, *The Pros and Cons of Energy: An Investigation of Energy Sources and Human Impact* engages students in research about the pros and cons of energy sources. Our current energy crisis will need to be solved using a combination of renewable energy sources. We are experiencing the effects of climate change due to an increase in carbon dioxide in the atmosphere from burning fossil fuels. A change is needed. What will the future of human energy consumption look like?

This unit will use a home energy assessment to measure students' current energy impact on the environment. Next, students will work in groups to create a research project explaining the benefits and drawbacks of each energy type. The energy types investigated are fossil fuels, solar, wind, hydroelectric, geothermal, biomass, and nuclear. Additionally, students will participate in hands-on experiences to demonstrate how renewable energy can be used to meet our energy needs. This unit covers NGSS standard MS-ESS3-5 and Virginia Standards of Science ENV. 7 and 8.

(Developed for Environmental Science and Earth Science, grade 8; recommended for Environmental Science, grade 8)

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