

## LESSON PLAN: Exploring Alternative Energy Sources

### Project List

- A list of project ideas appears below.
  - Remind students that as part of their project and presentation, they will need to create a model, experiment, diagram, or some type of interactive or multimedia display that they will use to teach classmates about their alternate energy form/renewable resource.
  - Projects need to be high quality with attention to detail, accurate spelling, grammar, punctuation, etc. Accuracy counts, so students must be sure to thoroughly research their facts.
- A. Research solar energy and how it can be used to power homes, schools, and businesses. Include a thorough explanation of the science that explains how solar energy is collected and used to generate power.
  - B. Research wind power and how it can be used in homes, schools, and businesses. Include a thorough explanation of the science that explains how wind power is used to generate power.
  - C. Research water power and how it can be used as energy for homes, schools, and businesses. Include a thorough explanation of the science that explains how water power is used to generate power.
  - D. Research hydrogen and fuel cells and how they can be used as an alternate energy form. Include a thorough explanation of the science that explains how hydrogen and fuel cells can be used to generate power.
  - E. Research biomass and how it can be used as an alternate energy form. Include a thorough explanation of the science that explains how biomass is collected and used to generate power.
  - F. Research geothermal energy and how it can be used as an alternate energy form. Include a thorough explanation of the science that explains how geothermal energy is used to generate power.
  - G. Research nuclear energy and how it can be used to power homes, schools, and businesses. Include a thorough explanation of the science that explains how nuclear energy is created and used to generate power.
  - H. Research Light Emitting Diodes (LED) and how it could be used in every home, business, and school as an alternate form of energy. Be sure to discuss the positive impact this would have on the environment.
  - I. Research Environmentally Friendly Building Design (also known as “green” buildings). Find out what construction and materials/components make these types of buildings environmentally friendly and what forms of alternative energy they implement.
  - J. Other: allow students to brainstorm about an appropriate topic and get approval from the teacher before beginning work.