

# Secondary Poll

## SCIENCE OF ENERGY

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- 1. What is the nuclear reaction that takes place inside the sun's core?**
  - a. fusion
  - b. activation
  - c. fission
  - d. none of the three
- 2. Most of the energy consumed in the U.S. is stored in which form of energy?**
  - a. kinetic
  - b. thermal
  - c. chemical
  - d. mechanical
- 3. Which form of energy is converted to chemical energy during photosynthesis?**
  - a. chemical
  - b. electrical
  - c. radiant
  - d. thermal
- 4. Which type of chemical reaction absorbs thermal energy?**
  - a. activation
  - b. endothermic
  - c. exothermic
  - d. fusion
- 5. As the thermal energy in a substance increases ...**
  - a. molecular motion increases
  - b. molecular motion decreases
  - c. mass increases
  - d. mass decreases

## SOURCES OF ENERGY

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- 6. Photosynthesis produces the energy in which of the following sources?**
  - a. hydropower
  - b. biomass
  - c. geothermal
  - d. wind
- 7. Which sector of the U.S. economy consumes the most petroleum?**
  - a. residential
  - b. commercial
  - c. industrial
  - d. transportation
- 8. Global climate change focuses on an increase in which atmospheric gas?**
  - a. ozone
  - b. sulfur dioxide
  - c. carbon dioxide
  - d. nitrous oxide
- 9. Which two elements are present in all fossil fuels?**
  - a. nitrogen and hydrogen
  - b. carbon and oxygen
  - c. hydrogen and carbon
  - d. carbon and nitrogen
- 10. The energy in which of the following is a result of photosynthesis?**
  - a. coal
  - b. petroleum
  - c. natural gas
  - d. a, b, and c
- 11. Renewable energy sources provide what percentage of total U.S. energy consumption?**
  - a. 1%
  - b. 5-10%
  - c. 15-20%
  - d. 25-30%
- 12. Which energy source is NOT a result of solar energy?**
  - a. hydropower
  - b. biomass
  - c. wind
  - d. geothermal

## ELECTRICITY

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**13. Half of U.S. electricity is produced by which energy source?**

- a. hydropower                      b. coal                                  c. uranium                              d. wind

**14. Why is alternating current used instead of direct current in a power system?**

- a. It can be transported longer distances economically.  
b. It is cheaper to produce.  
c. It has more power per kilowatt-hour.  
d. It is safer to use.

**15. In the core of a nuclear reactor...**

- a. uranium atoms combine and give off heat.  
b. uranium atoms are split apart and give off heat.  
c. uranium atoms are burned and give off heat.  
d. uranium isotopes are burned and give off heat.

**16. What does it mean if a power plant is 35% efficient?**

- a. For every 100 units of energy going into a plant, 35 units are lost during energy transformations.  
b. For every 100 units of energy that go into the plant, 35 units are converted into usable energy.  
c. For every 35 units of energy that go into the plant, 100 units are produced.  
d. For every \$100 invested in the production of energy, \$35 is made in profit.

## EFFICIENCY/CONSERVATION

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**17. In the summer, when is the peak energy demand?**

- a. 12:00 to 6:00 am                      b. 6:00 am to noon                      c. noon to 6:00 pm                      d. 6:00 pm to 12:00 am

**18. The shorter the payback period of an energy-efficient appliance...**

- a. the more energy you save.  
b. the less energy you save.  
c. the longer you need to use the appliance to save money.  
d. the sooner you start to save money.

**19. An incandescent bulb converts 10% of the energy it uses into light and 90% into which form of energy?**

- a. radiant                      b. potential                                  c. thermal                                  d. chemical

**20. What device can control the indoor temperature of a home according to time of day?**

- a. boiler                      b. ventilator                                  c. thermometer                              d. programmable thermostat

## OPINION

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Circle the number that represents your opinion of the statement.

	Strongly Disagree			Strongly Agree	
1. There are a lot of ways to save energy -----	1	2	3	4	5
2. I'd consider a career that involves energy -----	1	2	3	4	5
3. Learning about energy can be interesting -----	1	2	3	4	5
4. I know a lot about energy -----	1	2	3	4	5
5. Energy is essential to our country's economy -----	1	2	3	4	5
6. I want to learn more about how to save energy -----	1	2	3	4	5
7. Learning about energy is important -----	1	2	3	4	5
8. Energy is a complex topic -----	1	2	3	4	5
9. It's best to use a mix of energy sources -----	1	2	3	4	5
10. I know how to find information about energy issues -----	1	2	3	4	5

## LEADERSHIP

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Below are some activities you may do at school. Circle the number that represents how comfortable you are doing them.

	Not Comfortable			Very Comfortable	
1. Organizing students to conduct a school activity -----	1	2	3	4	5
2. Making a presentation to students in your class -----	1	2	3	4	5
3. Making a presentation to teachers at your school -----	1	2	3	4	5
4. Making a presentation to people in the community -----	1	2	3	4	5
5. Planning a lesson for other students -----	1	2	3	4	5
6. Leading a discussion on a topic such as energy -----	1	2	3	4	5
7. Teaching other students to conduct a learning activity -----	1	2	3	4	5
8. Clearly communicating your ideas to other students -----	1	2	3	4	5