Explore Renewables: High School Quiz

1. Most of the energy we use today in the United States comes from\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

1. Fossil fuels (coal, oil and natural gas)
2. The sun
3. Wind
4. Biomass

2. How is electricity generated?

1. Copper wire spinning around a magnet
2. Steam causing a turbine to rotate
3. Flowing water forcing a turbine to spin
4. All of the above

3. What is the difference between solar thermal and solar photovoltaic energy?

1. Solar photovoltaic panels can be installed on a roof while solar thermal panels cannot
2. Solar thermal uses the heat from the sun to make electricity (or heat up water) and solar photovoltaics uses light from the sun to make electricity
3. Solar phototovoltaics can be used to make electricity, but solar thermal cannot.
4. Solar photovoltaics is a renewable source of energy, but solar thermal is not.

4. Which of the following is a barrier to using more renewable sources of energy?

1. There isn’t enough possible renewable energy to serve human needs
2. Biofuels require a lot of land and resources
3. Modern wind farms aren’t financially competitive with fossil fuel power plants
4. Oceans are too large for tidal power to be effective

5. Which of the following is a barrier to storing energy from renewable sources?

1. Fuel cells pollute the atmosphere
2. Today’s energy batteries are expensive and heavy
3. Scientists have not discovered any creative ways to store energy
4. None of the above

6. What is “distributed generation?”

1. Generating electricity from many small sources that are located close to customers
2. A way to make electricity from algae found all over the world
3. Generating electricity from a few large power plants located far away from customers
4. Using long power lines to deliver electricity from coal power plants to keep pollution away from populated areas

7. What is a “smart grid?”

1. A type of fence that helps fish avoid hydroelectric dams
2. A modern electrical grid that uses information technology to improve the efficiency and reliability of electricity production and distribution.
3. The best way to arrange solar panels on a roof
4. A map of all the geothermal hotspots in the United States

8. True or false: We’ll need a combination of renewable energy sources to move forward with a secure, sustainable energy supply.

1. True
2. False, our only way of reducing carbon dioxide emissions and slowing down climate change is to find one source of renewable energy that can cover all of our energy needs.

9. If we took away all of the current energy efficiency standards for building and appliances, we would need \_\_\_\_\_\_\_\_\_\_\_energy.

1. More
2. The same amount of
3. Less
4. The same amount but different forms of

10. Which of the following energy strategies will help ensure a long and health future for ourselves and our plant?

1. Energy efficiency
2. Demand response
3. Renewable energy
4. All of the above. This combination of strategies is called Integrated Demand Side Management.