

Teacher's Name: _____ Class: _____

Your Name: _____

Today's Date: _____

Total Points Possible: 14**Subtitles:****Running Time: 50 Minutes****Modern Marvels: Renewable Energy****Comprehension Quiz**

Instructions:

1. Print out these questions and obtain a copy of the DVD from the LSC service desk.
2. Watch the video and write the answers to the questions on the answer sheet.
3. **WHEN YOU COMPLETE THIS QUIZ PLEASE RETURN THE COMPLETED ANSWER SHEET TO THE LSC SERVICE DESK.**

Summary:

Global problems require global solutions. Modern Marvels: Renewable Energy, a one-hour History Channel documentary, shows how the combined forces of wind, solar, geothermal, biomass, wave and tidal power are ready to move the world beyond oil, coal and other 19th century technologies.

Vocabulary:

1. Biodiesel – [N] A substitute for diesel fuel made completely or partly from organic products, especially processed vegetable oils such as soybean oil and peanut oil.
 - a. Ex. It is claimed to be a truly sustainable environmentally friendly **biodiesel** and generates no harmful emissions.
2. Synthetic – [N] Made by chemical process, especially to resemble a natural product.
 - a. Ex. The stage was set for totally **synthetic** lubricants to enter the automobile market.
3. Geothermal—[Adj] Relating to heat at the center of the Earth.
 - a. Ex. **This is a geothermal** heat pump which provides underfloor heating.
4. Kinetic— [Adj] Relating to, caused by, or producing movement
 - a. Ex. The **kinetic** energy of the air current cools the air which then descends.
5. Hydraulic—[Adj] Driven by fluid.
 - a. Ex. Thankfully, the fully **hydraulic** brakes are up to the task of stopping the vehicle quickly.

Questions to Answer:

1. As James R. Farley talks about how much power is being used by its distribution site, what did FedEx do to supply the electricity demands? What percentage of FedEx's electricity needs does solar energy supply?

Answer the question here:

2. What are some of the limitless resources mentioned in this video? List at least three.

Answer the question here:

3. Using solar thermal is an ancient practice. How did they use the solar thermal energy from the sun in the ancient days? (The Anasazi, in the Americas, and the Romans)

Answer the question here:

4. There are different types of solar thermal energy absorbers. Describe the type used in California's Mohabi desert.

Answer the question here:

5. Since the wafers are expensive, the company called "Nanosolar" uses something else. What is it, and how do they make it?

Answer the question here:

6. Fill in the blanks:

In central New York, there is a wind power project. The _____ blades help make energy by _____ the wind energy to electricity by the combination of the blades to lift and drag causing the blades to rotate. There is _____ energy inside wind. It

transmits through the main shaft into the gear box, and the gear box changes from one revolution to seven revolutions, and travels to the generator box which then makes_____.

7. *Exponential* means “rapidly increasing.” How is wind power experiencing exponential growth?

Answer the question here:

8. *Viable* means capable of working successfully. How is wind power a *viable* technology?

Answer the question here:

9. Does it seem like the people of Iceland would want to share their geothermal energy? Explain your answer.

Answer the question here:

10. What happens in the heat exchanger?

Answer the question here:

11. “Lovecrafts” is not an ordinary car repair shop; for what reasons is this shop unique?

Answer the question here:

12. Why is using cooking oil/ vegetable oil a solution to a deadly serious problem?

Answer the question here:

13. *Hydropower* is electricity produced from machines that are run by moving water.
How does the wave power collect energy?

Answer the question here:

14. Which of these renewable energy solutions would be viable in your country?
What obstacles, or problems, do you see to implementation? (Implementation means “putting into practice, carrying out”)

Answer the question here:

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