Name: _____ Period: _____ Date: _____

Environmental Science Study Guide

Renewable Energy

Vocabulary

Understand and be able to apply each of these terms.

1. Passive Solar Heating –
2. Active Solar Heating –
3. High-Temperature Solar Energy –
4. Photovoltaic Cells –
5. Fuel Cells –
6. Biomass –
7. Hydropower –
8. Wind Farms –
9. Geothermal Energy –
10. Tidal Energy –
11. Energy Efficiency –

Critical Thinking

Be able to read, analyze, and give complete answers to questions like these.

1. There is more than enough solar energy reaching the earth to provide for our energy needs. Why isn't it utilized more?

2. Compare the three types of rechargeable batteries. Give a specific drawback to each.
    a. Lead-Acid –
    b. Nickel-Metal Hydride –
    c. Lithium-Ion –
3. What waste product is produced by fuel cells? Why aren't they used more?

4. What is the drawback of using biomass like wood and dung for energy?

5. Methane is considered biomass if it is produced how?

6. This is a list of the consequences of building a dam for hydroelectric power. Explain each.
    a. Human Displacement –
    b. Ecosystem Destruction –
    c. Wildlife Losses –
    d. Large-Scale Flooding –
    e. Sedimentation –
    f. Herbicide Contamination –
    g. Evaporative Losses –

7. How does the cost of wind power compare to fossil fuel electricity? Why is it not utilized more?

8. A l00W light bulb only produces the equivalent of 15W of actual light. What would the efficiency of this light bulb be?