Unit 2 Review Sheet: Nonrenewable & Renewable Energy

**Review Questions** On a separate paper, answer all parts of the following questions using complete sentences.

**Definitions**

1. Define renewable energy
2. Define nonrenewable energy
3. Identify examples of commonly considered nonrenewable energy sources.
4. Identify examples of renewable sources
5. What are the benefits of using renewable energy sources?
6. What are the general disadvantages of using renewable energy sources?
7. What are the benefits of using nonrenewable sources?
8. What are the general disadvantages of using nonrenewable sources?
9. List at least three factors that influence the cost of a fuel or energy source.

**Underground energy sources**

1. What is meant by the term “fossil fuels”?
2. Which energy sources are typically considered fossil fuels?
3. Explain the main hypotheses regarding how coal forms.
4. Explain the main hypotheses regarding how oil and natural gas form.
5. Why are these 3 fuel sources used widely around the world?
6. List three advantages of using coal, oil, and natural gas as fuel.
7. List three disadvantages of using coal, oil, and natural gas as fuel.

**Above-ground energy sources**

1. What are the various types of solar energy absorption or storage?
2. What sources can be used to produce biomass fuel?
3. How is biomass fuel made from these sources?
4. Compare and contrast how geothermal energy and tidal energy work.

***Energy Conservation***

1. Define and contrast energy efficiency with energy conservation.
2. Identify three ways people can conserve energy
3. Describe three ways to increase energy efficiency in a city.

**Analyzing Data**

1. What are the top three energy sources in the U.S. in 2019?
2. What are the top three renewable energy sources in the U.S. in 2019?
3. Why are wood, biofuels, and biomass waste considered renewable energy sources?
4. How much energy did the U.S. use in 2019 that is not publicly considered renewable?
5. How much energy did the U.S. use in 2019 that is publicly considered renewable?
6. A store uses one hundred 200Watt lightbulbs for 10 hours each day. If the store is open for 300 days a year, explain why they might be reluctant to switch to currently available renewable energy sources. Show your work and calculations to help explain your answer.

|  |  |
| --- | --- |
| **Energy source** | **Cost per kilowatt-hour** |
| Coal | $0.07 (Ga cost) |
| Solar | $400.00 |
| Wind | $0.15 |
| Nuclear | $0.20 |
| Natural gas | $0.07 |

**Energy Sources: Pros and Cons**

Fill out the table below

|  |  |  |  |
| --- | --- | --- | --- |
| Energy Source | Define and explain how this energy source works | Pros/Advantages of using this source | Cons/Disadvantages of using this source |
| Coal |  |  |  |
| Petroleum (oil) |  |  |  |
| Natural Gas |  |  |  |
| Wind |  |  |  |
| Geothermal |  |  |  |
| Tidal |  |  |  |
| Hydroelectric  |  |  |  |
| Nuclear |  |  |  |
| Solar |  |  |  |
| Tidal |  |  |  |
| OTEC |  |  |  |
| Energy Source | Define and explain how this energy source works | Pros/Advantages of using this source | Cons/Disadvantages of using this source |
| Biofuel |  |  |  |
| Hydrogen fuel (for transportation) |  |  |  |
| Hybrid vehicles |  |  |  |
| Electric vehicles |  |  |  |