**Chapter 13 Reading Guide**

**Module 37**

|  |  |  |  |
| --- | --- | --- | --- |
| 1. Energy Conservation | 2. Tiered Rate System | 3. Peak Demand | 4. Passive Solar Design |
| 5. Thermal Mass | 6. Potentially Renewable | 7. Nondepletable | 8. Renewable |

**Module 38**

|  |  |  |  |
| --- | --- | --- | --- |
| 1. Biofuel | 2. Modern Carbon | 3. Fossil Carbon | 4. Net Removal |
| 5. Ethanol | 6. Biodiesel | 7. Flex-fuel Vehicle | 8. Hydroelectricity |
| 9. Run-of-the-river | 10. Water Impoundment | 11. Tidal Energy | 12. Siltation |
| 13. Carbon Neutral |  |  |  |

**Module 39**

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| --- | --- | --- | --- |
| 1. Active Solar Energy | 2. Photovoltaic Solar Cell | 3. Wind Energy | 4. Wind Turbine |
| 5. Geothermal Energy | 6. Ground Source Heat Pump | 7. Fuel Cell | 8. Electrolysis |

**Module 40**

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| 1. Smart Grid |  |  |  |

**Opening Story**

1. Summarize the opening story about creating wind power. Why was William so successful? How does this have the potential to help his community and other communities in developing nations?

**Module 37**

1. How can energy resources be improved as far as efficiency and conservation?
2. Explain what sustainable design is and steps that can be taken to implement this.
3. Distinguish and give examples of nonrenewable, potentially renewable, and non-depletable resources.

**Module 37 Review**

1. \_\_\_\_\_\_\_\_\_\_ 2. \_\_\_\_\_\_\_\_\_\_ 3. \_\_\_\_\_\_\_\_\_\_\_ 4. \_\_\_\_\_\_\_\_\_\_\_ 5. \_\_\_\_\_\_\_\_\_\_\_\_

**Module 38**

1. What is the difference between modern carbon and fossilized carbon?
2. Explain the difference between ethanol and biodiesel.
3. Explain how hydroelectricity is generated in a dam.
4. How is “run of the river” different from tidal energy?
5. Is hydroelectricity sustainable? Explain.

**Module 38 Review**

1. \_\_\_\_\_\_\_\_ 2. \_\_\_\_\_\_\_\_\_\_ 3. \_\_\_\_\_\_\_\_\_\_\_\_ 4. \_\_\_\_\_\_\_\_\_\_\_\_ 5. \_\_\_\_\_\_\_\_\_\_\_\_\_

**Module 39**

1. List the different from of solar energy and their applications.
2. Describe how wind energy is harnessed and its contemporary uses.
3. Discuss the methods of harnessing the internal energy from Earth.
4. Explain the advantages and disadvantages of energy from hydrogen. Give the equation of how this method works.

**Module 39 Review**

1. \_\_\_\_\_\_\_\_\_\_ 2. \_\_\_\_\_\_\_\_\_\_\_ 3. \_\_\_\_\_\_\_\_\_\_\_\_\_ 4. \_\_\_\_\_\_\_\_\_\_\_\_\_ 5. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Module 40**

1. Discuss the environmental and economic options we must assess in planning our energy future.
2. Consider and list the challenges of a renewable energy strategy.

1. \_\_\_\_\_\_\_\_\_\_\_\_\_ 2. \_\_\_\_\_\_\_\_\_\_\_ 3. \_\_\_\_\_\_\_\_\_\_\_\_\_ 4. \_\_\_\_\_\_\_\_\_\_\_\_ 5. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_