Chapter 14 Notes

**Lesson 1**

Energy is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Energy can change an objects \_\_\_\_\_\_\_, \_\_\_\_\_\_\_, \_\_\_\_\_\_\_, \_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_\_.

Every time energy changes form, some energy is given off as \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

ENERGY CANNOT BE \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ OR \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. IT CAN MOVE FROM ONE OBJECT TO ANOTHER. THIS IS CALLED THE *LAW OF CONSERVATION OF ENERGY*

Examples of the transfer of energy:

1. Energy in a firework changes from chemical energy to \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. Energy in a radio changes from electrical energy to \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

|  |  |  |
| --- | --- | --- |
|  | Definition/Notes | Example |
| Kinetic Energy |  |  |
| Potential Energy |  |  |

|  |  |  |
| --- | --- | --- |
|  | Definition/Notes | Example |
| Chemical Energy |  |  |
| Nuclear Energy |  |  |

**Lesson 2**

|  |  |
| --- | --- |
| Vocabulary Term | Definition |
| Crest |  |
| Trough |  |
| Wavelength |  |
| Decibels |  |

Draw the appropriate wavelength

|  |  |
| --- | --- |
| Loud sound |  |
| Soft sound |  |
| High pitch |  |
| Low pitch |  |

**Lesson 3**

Light travels in the same ways that sound does – in wavelengths and frequencies; however, light is different from sound in many ways.

Light is a combination of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. It travels through space in the form of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

Explain

|  |  |
| --- | --- |
| Electromagnetic radiation |  |

**Different wavelengths of visible light are seen as different colors.**

Draw the electromagnetic spectrum and label the wavelengths

Convex and Concave Lenses



Convex lenses bend light rays to make objects look \_\_\_\_\_\_\_\_\_\_\_\_\_.

Concave lenses bend light rays to make objects look \_\_\_\_\_\_\_\_\_\_\_\_\_.

**Lesson 4**

What is thermal energy? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

A change in thermal energy can lead to a change in \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

When the thermal energy of a substance increases, its particles move \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

When the thermal energy of a substance decreases, its particles move

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

Heat moves in three ways:

|  |  |
| --- | --- |
| Conduction |  |
| Convection |  |
| Radiation |  |