**Matter & Energy** (p. 77 – 81)

**I. Kinetic Theory**

**1. Define the term kinetic theory.**

Kinetic Theory –

**2. The higher the temperature of the substance is, the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ the particles**

**move.**

**3. More massive particles move \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ than less massive ones (at the same**

**temperature).**

**II. States Of Matter**

**1. List the four states of matter.**

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

**2. Complete the following table.**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **States Of Matter** | | | | |
| **State Of**  **Matter** | **Type Of**  **Packing** | **Shape** | **Volume** | **Kinetic Energy**  **(1 = Greatest)** |
| **Solid** |  | Definite | Definite | 1 |
| **Liquid** | Tightly Packed |  | Definite |  |
| **Gas** |  | Shape Of  Container |  |  |
| **Plasma** | Loosely Packed |  |  | 4 |

**3. List two examples of fluids.**

1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**4. Define the term plasma.**

Plasma –

**5. \_\_\_\_\_\_\_\_\_\_% of known matter in the universe is made up of plasma.**

**6. List four examples of plasma.**

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

**II. Energy’s Role**

**1. Define the term energy.**

Energy –

**2.** **Match the types of energy with their definitions.** (Not in the book.)

1. \_\_\_\_\_ Elastic A. Energy stored in chemical bonds.

2. \_\_\_\_\_ Chemical B. Reaction in which mass is converted into energy.

3. \_\_\_\_\_ Gravitational C. Energy stored in something that can stretch or compress.

4. \_\_\_\_\_ Photosynthetic D. Differences in electric fields.

5. \_\_\_\_\_ Nuclear E. Energy with electric and magnetic properties.

6. \_\_\_\_\_ Electric Potential F. Energy stored in objects due to position above surface.

7. \_\_\_\_\_ Electromagnetic G. Process in which sunlight is converted into energy.

**3. Define the term temperature.**

Temperature –

**4. The more kinetic energy the particles of an object have, the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ the**

**temperature of the object.**

**5. When the temperature of a substance is lowered, the particles will vibrate more slowly.**

Circle One : True False

**6. Define the term thermal energy.**

**Thermal Energy –**

**7. Why does the cooler ocean have more thermal energy than a hotter tea kettle?**

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