**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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