The kinetic theory of matter

**The three properties of matter are:**

* + **Shape**: whether it holds its own shape or changes to fit the container
  + **Volume**: the amount of space it takes up
  + **Compressibility**: whether it can be made smaller by applying a force

The \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ explains why solids, liquids and gases behave the way they do.

**The four rules of kinetic theory are:**

1. All \_\_\_\_\_\_\_\_\_\_\_\_\_\_ is made of a huge number of tiny \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (too tiny to see)

2. There is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ between the particles.

3. The particles are always \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

4. As temperature \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, the particles move \_\_\_\_\_\_\_\_\_\_\_\_\_.

A picture containing text, vegetable

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**Solid particles** have the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ amount of kinetic energy, so:

* + they are held \_\_\_\_\_\_\_\_\_\_\_\_\_\_ together in a regular (consistent) pattern
  + A picture containing text, vegetable

    Description automatically generatedthey only \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. They do not move around other particles

**Liquid particles** have a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ amount of kinetic energy, so:

* + they are packed \_\_\_\_\_\_\_\_\_\_\_\_\_\_ together in a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ way
  + A picture containing text, vegetable

    Description automatically generatedthey can move \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ each other and other particles

**Gas particles** have a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ amount of kinetic energy, so:

* + they are \_\_\_\_\_\_\_\_\_\_\_\_\_\_ far apart in a random way
  + they are \_\_\_\_\_\_\_\_\_\_\_\_\_\_ moving at \_\_\_\_\_\_\_\_\_\_\_\_ speeds