1. Fill in the gaps:

a) The ..... (*less / more*) the particles of an object move, the colder it is.

b) If an object cools down, the movement of its atoms and molecules becomes ..... (*more / less*). Therefore they need ..... (*more / less*) room and the object ..... (*expands / contracts*).

c) If an object warms up, it ..... (*expands / contracts*), because the particles' motion ..... (*increases* / *decreases*) and they need ..... (*more* / *less*) room.

2. Robert Brown (Scottish botanist, 1773 - 1858) discovered in 1827, while observing grains of pollen under a microscope, that they were moving about randomly, even though they were not alive. This movement is called *Brownian Motion*.
Explain why the grains of pollen move.

3. Fill in the gaps:

a) The atoms and molecules of a **solid** object move about ..... (*fixed positons / randomly without fixed position)*. The distances between particles are ..... (*large / small*). There are ..... (*no* / *weak* / *strong*) attractive forces acting between the particles.

b) The atoms and molecules of a **liquid** move about ..... (*fixed positons / randomly without fixed position)*. The distances between particles are ..... (*large / small*). There are ..... (*no* / *weak* / *strong*) attractive forces acting between the particles. A surface is formed.

c) The atoms and molecules of a **gas** move about ..... (*fixed positons / randomly without fixed position)*. The distances between particles are ..... (*large / small*). There are ..... (*no* / *weak* / *strong*) attractive forces acting between the particles. No surface is formed, they spread out in the container.

4. Is it possible to compress a liquid? Give reasons for your answer.

5. Is it possible to compress a gas? Give reasons for your answer.

6. When an object expands while warming up, its volume increases.

a) What happens to its mass? Does it increase, decrease, or does it stay the same? Give reasons for your answer.

b) What happens to its density? Does it increase, decrease, or does it stay the same? Give reasons for your answer.

7. Fill in the terms *solid*, *liquid*, *gaseous*, *evaporate*, *condense*, *melt* and *freeze*.