

5. The particles of solids and liquids are joined relatively strongly by forces of attraction that make them virtually incompressible. In a gas, the particles move independently of each other and are spaced far apart.
  
8. On the one hand, the temperature of a substance corresponds to the degree of agitation of its particles: the higher the temperature, the greater the speed of the particles. On the other hand, the kinetic energy of the particles varies in proportion to the square of their velocity. Thus, the mean kinetic energy of the particles increases when the temperature rises.
  
9. Curve 3 shows the highest gas temperature because the mean kinetic energy of the gas particles (the top of the curve) of this curve is the greatest (the farthest to the right).
  
10. *b)* Gas particles are not attracted to each other, because there is no force of attraction or repulsion between them.