

3. The grabber must be made of solid so that it doesn't change shape when it touches the object you are trying to pick up with it.
4. The particles are held together by forces called bonds.
5. The liquid inside the piston can't be squashed so it can be used to move the shovel out (see the paragraph at the top of picture D).
6. If the piston tubes were to be filled with gas instead the gas would squash instead of moving the shovel. (For more information on this find out how hydraulics work.)

1.
 - a) Diffusion is the spreading out of particles (*from an area of high concentration to an area of low concentration*).
 - b) An example is tea spreading through water from inside the teabag or oxygen spreading into your blood from the air in your lungs.
2. Diffusion is quicker in gases because the particles are moving faster in gases than in liquids.
3. Picture C shows that diffusion has happened because the water has changed colour. *It has changed most near the tea bag which shows that diffusion is still taking place.*
4. A plastic sheet might be laid over waste to stop gases diffusing out of the clay.
5. The cola is flat because the gas has diffused out of the liquid.
6. We burn methane gas from landfill sites to produce energy (heat).
7. A and d are examples of diffusion as nothing is moving the substances apart from the random movement of gas particles. In b something is stirring the sugar and in c the breeze is moving the particles.