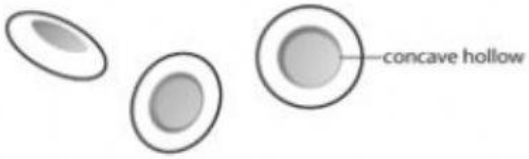
Date:_____

8Bb(10) Blood

Red blood cells carry oxygen. When they are carrying oxygen they are said to be **oxygenated** and when they are not they are said to be **deoxygenated**. They are a bright red colour when they are oxygenated and a dark red colour when they are deoxygenated. Red blood cells contain a special chemical called **haemoglobin** (*hee-mow-**glow**-bin*) which carries oxygen. Haemoglobin contains iron atoms that help it carry the oxygen. The chemical turns into **oxyhaemoglobin** when it is carrying oxygen.



Red blood cells are discs that have a concave hollow on each side and so they are described as **biconcave discs**. This shape gives them a greater surface area than a flat disc and allows all the haemoglobin molecules to be close to the surface of the cell.

Unlike most cells, red blood cells do not have a nucleus. This means they have more room for haemoglobin molecules. They only last for about 120 days before being destroyed by the liver. Red blood cells are extremely small and there are about 5000000 of them in each cubic millimetre of blood. The cells are also flexible and can bend to fit through even the smallest capillary.

1 Why do you think iron is an important mineral in the diet?

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2 There are a number of ways in which red blood cells are **adapted** to their functions. Make a table of the adaptations of a red blood cell and say why these adaptations are useful.