B1 - Transport	Answer
1. Name the 3 transport processes by which chemicals move in and out of cells.	Diffusion, osmosis, active transport
2. Which transport process requires energy from respiration to take place?	Active transport
3. By what process do particles move from an area of high concentration to lower concentration ?	diffusion
4. Give 2 examples of where diffusion may happen in the body.	1. Oxygen and carbon dioxide moving through membranes during gas exchange. 2. Movement of waste urea from cells into the blood plasma
5. List 3 factors that affect the rate of diffusion.	1. The concentration gradient (the difference in concentration between two areas) 2. The temperature 3. The surface area of the membrane.
6. Why are single celled organisms able to survive using diffusion alone?	They have a large surface are to volume ratio, so transport of chemicals can happen readily in and out of the cell.
7. How is the small intestine adapted for exchanging materials by diffusion?	1. The walls are thin for a short diffusion path 2. Walls are lined with villi to increase surface area 3. Villi have a good blood supply
8. How are the lungs in mammals adapted for exchanging materials by diffusion?	1. The alveoli are folded for large surface area 2. Alveoli walls are one cell thick – very thin 3. Alveoli have a good blood supply 4. Each alveolus is ventilated
9. How is the leaf adapted for diffusion?	1. They are thin so chemicals do not do not have far to travel 2. Broad to increase surface area
10. How are the roots of plants adapted for diffusion?	They have root hair cells to increase surface area for diffusion
11. What special name is given to the diffusion of water through a partially permeable membrane?	osmosis
12. What is a partially permeable membrane?	A membrane that allows SOME chemicals to pass through it, but not others.
13. What is active transport?	It is the movement of a substance against a concentration gradient – low to high concentration.
14. Give 2 examples where active transport takes place.	1. Mineral ions are absorbed into plant root hairs 2. It allows sugar molecules to be absorbed from low concentrations in the gut into the blood, where the concentration is higher.