

Science

Core Questions & Vocabulary

Year Group: 9

Composite: Foundations Biology

Composite number: 6 of 6

Core Questions	
1	What are 3 structures found in plant cells but not animal cells? Chloroplast, cell wall & vacuole
2	What are 3 adaptations of a sperm cell? Flagellum (tail) to swim and move, acrosome containing enzymes to allow the sperm to penetrate the cell membrane of the egg cell, mid section containing mitochondria to release energy
3	How would you describe the shape of an enzyme active site and it's substrate? They are complementary.
4	What happens to enzymes at high temperatures? They denature - The active site changes shape.
5	What happens to enzymes at a low or high pH value? Enzymes denature at extremes of ph away from the maximum. This means the active site changes shape.
6	What happens to the mass of a potato when placed in a fresh water solution? The mass will increase as water will move into the potato by osmosis.
7	What happens to the mass of a potato when placed in a salt water solution? The mass will decrease as water will move out of the potato into the solution.
8	How can we prepare a microscope sample slide? Take a thin piece of a specimen and place it onto a glass slide, add a drop of stain/dye, add a cover slip over the top.
9	How do we obtain a clear image when using a microscope? Start on the lowest magnification. Place the slide on the stage, turn the focussing wheel until the image is in focus.
10	Why do we use iodine on a microscope sample? To make the specimen visible.
11	How do we calculate magnification? Magnification = image size divided by the actual size
12	What are the two lenses called on a microscope? Objective and eye piece
Core Vocabulary	
1	Cell - A single building block that makes up all living organisms.
2	Enzyme - Biological catalyst that speeds up chemical reactions.
3	Biological catalyst - A protein used to speed up chemical reactions in living organisms.
4	Osmosis - Movement of water from an area of high to low concentration across a partially permeable membrane.
5	Diffusion - Movement of a substance from an area of high to low concentration.
6	Magnification - The number of times bigger an image is made to appear.

7	Resolution - The ability to distinguish detail.
8	Organelle - Small structure found inside a cell.
9	Denature - When the active site of an enzyme changes shape and the substrate is no longer complementary.
10	Active transport - The movement of a substance from a low to high concentration down a concentration gradient.
11	Complementary shape - When an enzyme active site is complementary to the substrate.