

Home-School Learning Collaboration – Science

Topics in this cycle: Cell Biology	Taught: Summer 2	Year Group: 9
Key knowledge/concepts to be learnt ('Tell me about....')		Websites/blogs/YouTube links and further reading to deepen and consolidate learning
<p><u>Cell Structure</u></p> <p>Describe the features of prokaryotic and eukaryotic cells.</p> <p>Differentiate between plants and animal cells.</p> <p>Calculate magnification.</p> <p><u>Cell Division</u></p> <p>Describe how body cells divide. (Mitosis and the Cell Cycle)</p> <p>Define stem cells, explain their usefulness and evaluate their risks and benefits.</p> <p>Explain the advantages of using therapeutic cloning</p> <p>Explain how meristems are useful in plants.</p> <p><u>Cell Transport</u></p> <p>Explain how temperature, concentration gradient and surface area affect the rate of diffusion.</p> <p>Define osmosis and apply knowledge to unfamiliar situations.</p> <p>Explain the process of active transport and describe examples in plants and animals.</p>		<p>Cell Structure GCSE Biology - Cell Types and Cell Structure #2 - YouTube</p> <p>Cell Transport Transport in Cells: Diffusion and Osmosis Cells Biology FuseSchool - YouTube</p> <p>Hypertonic Hypertonic, Hypotonic and Isotonic Solutions! - YouTube</p> <p>Cell Biology Cell biology - GCSE Combined Science Revision - AQA Trilogy - BBC Bitesize</p>

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Key Vocabulary and Definitions To Be Learnt		What Will The Assessment Look Like?
Active transport	Active transport movement of particles against a concentration gradient, requires energy.	Extended writing – Cell structure End of Unit test: 40 marks <ul style="list-style-type: none"> • Short answer questions • Multiple choice • Extended writing
Bacterium	Bacterium single celled microorganism.	
Cell cycle	Cell cycle growth and division stages of cells.	
Cell membrane	Cell membrane thin surface which surrounds a cell.	Family Learning Opportunities Making an animal cell cake How to Make an Animal Cell Cake in 10 Steps ~ The Organized Homeschooler Shrinky Dink Cell Model Shrinky Dinks Cell Models • Teacher Thrive Plant cell game Plant Cell - Game - Science - Sheppard Software
Cell wall	Cell wall structure around some plant cells that provides support.	
Cellulose	Cellulose plant molecule that strengthens cell walls, also algae.	
Chlorophyll	Chlorophyll green substance in chloroplasts, absorbs light for photosynthesis.	
Chloroplast	Chloroplast structure in plant and algae cells for photosynthesis, contains chlorophyll.	
Chromosome	Chromosome a long length of coiled up DNA, which carries genes.	
Culture population	Culture population of one type of microorganism, grown under controlled conditions.	
Cytoplasm	Cytoplasm gel-like substance in cell where most chemical reactions take place.	
Differentiation	Differentiation specialisation process in cells.	
Diffusion	Diffusion spreading out of particles from area of high concentration to one of low.	