

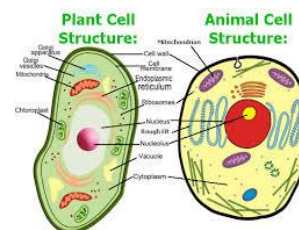
## Unit Overview – Cell Biology

### You will learn about:

- How scientists have developed their understanding of cell structure and function.
- How we develop into a complex organism from just a fertilised egg cell.
- Why it is important to study microorganisms and how we grow them in the lab and commercially.

### You will be able to:

- Prepare plant and animal cells and observe them using a light microscope.



Key learning points		Key Words  DNA, chloroplast, chlorophyll, chromosome, eukaryotic, magnification, mitochondria Ribosome, scanning electron microscope, electron microscope, scale, genome, nucleic acid, plasmid, prokaryotic, cell division, chromosomes, growth, mitosis, nucleus, tissue, stem cell, embryonic, gene, meristems, active transport, diffusion Photosynthesis Respiration
Plant and animal cells (Aerobic respiration + photosynthesis)		
Cell Specialisation		
Magnification		
Culturing microorganisms		
Cell Division Mitosis		
Cancer		
Stem cells		
Primitive cells		
Transport in cells		
Osmosis		
RP Using a light microscope		
Culturing microorganisms (Triple)		
RP Investigate the effect of antibiotics on bacteria growth (Triple)		
<b>Links to other subjects:</b>		
SMSC		
<ul style="list-style-type: none"> <li>• Explain every day and technological applications of science; evaluate associated personal, social, economic and environmental implications; and make decisions based on the evaluation of evidence and arguments.</li> <li>• Appreciate the power and limitations of science and consider any ethical issues which may arise.</li> </ul>		
Literacy		
<ul style="list-style-type: none"> <li>• Use scientific vocabulary, terminology and definitions.</li> <li>• Make and record observations</li> <li>• Present reasoned explanations including relating data to hypotheses.</li> </ul>		
Numeracy		
<ul style="list-style-type: none"> <li>• Make estimates and explain why they may be important.</li> <li>• Describe how to use ratio and proportion to calibrate a microscope.</li> <li>• Convert numbers from decimal to standard form, and vice versa.</li> </ul>		