

Unit Title	Cells				
Subject group and discipline	Sciences	MYP year	3	Unit duration (hrs)	24

Inquiry: Establishing the purpose of the unit

Key concept	Related concept(s)	Global context <i>choose 1 and then drill down to exactly which aspect of these the unit will focus on</i>
Systems	Function Form	Scientific and technical innovation
Statement of inquiry		
Scientific and technical innovations have allowed the understanding of how form relates to function in the system of organelles which make up cells.		
Inquiry questions		
<p>Factual— Which organelles are found in animal, plant and prokaryotic cells? What are the functions of the organelles of a cell? What is a stem cell?</p> <p>Conceptual— How do substances move between and within cells? How are cells specialised to complete a particular function?</p> <p>Debatable— Which type of microscope is more useful? Should we use stem cells to treat currently untreatable diseases? Evaluate the practical risks and benefits, as well as social and ethical issues, of the use of stem cells in medical research and treatments</p>		
Objectives	Summative assessment <i>This does not always have to be a GRASPS task but it does need to involve students demonstrating progress by transferring the skills and knowledge they have learnt to a real-life context. An analytical essay or practice exam questions (not quizzes) counts as real life context. Students need to construct a response using the knowledge and skills they practised in the unit.</i>	

<p><i>Learning objectives for the unit</i></p> <p>Aiii interpret information to make scientifically supported judgments.</p> <p>Bii. explain a problem or question to be tested by a scientific investigation Bii outline a testable prediction using scientific reasoning Biii. explain how to manipulate the variables, and explain how data will be collected</p> <p>Ci. present collected and transformed data Cii. interpret data and explain results using scientific reasoning Civ discuss the validity of the method Cv describe improvements or extensions to the method.</p> <p>Dii describe and summarize the various implications of using science and its application in solving a specific problem or issue</p>	<p>WS IMP: Osmosis required practical write up. Bi, Ci, Cii and Biii.</p> <p>GRASPS: evaluating the use of embryonic and adult stem cells to solve various problems or issues.</p> <p>Recall IMP: interpret information to make judgements about the functions/classification of various unknown cells.</p>	<p>Each assessment looks at a different aspect of cells (cell structure/cell transport/ stem cells) which all link to the system of organelles and how they function. All of this knowledge comes from the technical innovation of microscopes and study of cells.</p>
<p>Approaches to learning (ATL) <i>These can be listed or you could offer some explanation of how they will be developed</i></p>		
<p>Research: Collect record and verify data – investigation into osmosis.</p>		