

Topic/Project: Cell structure	Timescale: 10 hours <u>Term: 1</u>				
Learning Intentions/Outcomes	Activities	Resources (including ICT)	Extension Activities / Homework	Assessment for Learning Opportunities	Cross Curricular Links (SMSCD, with other subjects)
1. To compare the resolutions of microscopes	<ul style="list-style-type: none"> Teacher to go over expectations of pupils throughout 6th form Pupils to get to know each other using teacher instruction (this is to get pupils to know each other and teacher to know pupils, their aspirations and to break the ice with the newbies) Pupils to look through books and get familiar with layout of topics and topics within Pupils to be given glossary. This covers all of the cells topics. Teacher explain that these are to be fully completed before the end of the topics. Pupils to use the textbook to write down the difference between resolution and magnification Pupils to use a table and write down the maximum magnification and resolution able to be achieved by each microscope Teacher to explain the math of measuring cells and assess pupil's understanding of organelles 	Cell glossary Textbooks	QM1 An 800 word essay on the following title 'Compare and contrast the structure and function of the light, transmission electron and scanning electron microscopes'. Include dates, annotated diagrams and what is visible (Teacher may set this for next lesson or lesson 3 depending on the timeframe for next lesson)		
2. To correctly use a	<ul style="list-style-type: none"> Pupils to use mark scheme and 	Essay mark		Pupils to use mark	The understanding of the world due to

<p>microscope to view cells and undertake cell measuring activities</p>	<ul style="list-style-type: none"> • peer assess essay using green pen • Pupils to use/ complete booklet given and information in textbook to work out the sizes of cells • Teacher to explain the purpose of staining • Pupils to view cells using microscopes and graticules. Teacher to either explain or use power point to explain how graticules work. This is a small part of the spec but should still be undertaken. Pupils complete microscope activities given. • Link to PAG 1.2 preparation of Blood smears. • Use PAG1.1 sheet to calibrate 	<p>scheme Cell sizes booklet Microscopes, prepared slides and graticules PAG1.1 Graticule instructions PAG 1.2 Tick sheet 1.2</p>		<p>scheme to add to anything missed to essay Glossary</p>	<p>advancements in microscopes</p>
<p>3. To identify different organelles To explain the function of the cytoskeleton</p>	<ul style="list-style-type: none"> • Pupils to answer question ‘what do you think the cytoskeleton is/ does?’ • Pupils are given diagrams of different organelles and need to use the book to identify them 	<p>Magnification table Organelle diagrams</p>	<p>Complete given table on magnification</p>		
<p>4. To use given criteria to complete a presentation on a given organelle</p>	<ul style="list-style-type: none"> • Pupils to assess homework using green pen and mark scheme. Make corrections • Pupils to make a presentation on the organelle they are given. Due next lesson. • Teacher to instruct pupils on criteria for presentation (2 mins max, not to put too much writing on board, use cue cards to read from, key diagrams on power 	<p>Mark scheme of organelle table Computer room/ laptops</p>	<p>Complete presentation</p>	<p>Self-assessment using mark schemes</p>	

	point, eye contact, speak clearly, stay still)				
5. To present information on given organelle	<ul style="list-style-type: none"> • Presentations 	Diagrams of organelles	Complete labelling diagrams of organelles		
6. QM2	<ul style="list-style-type: none"> • Pupils to complete crossword given • Pupils to revise for a mini test • Pupils complete mini test in silence. No books. To be given into teacher 	Crossword Mini test and mark scheme	Revision for test in a couple of lessons and glossary completion		
7. To describe the structure and function of cell structures To describe how organelles work together in sequence in a cell To recall the structure and function of prokaryotic cell structures	<ul style="list-style-type: none"> • Pupils to complete corrections on mini test using mark scheme and green pen • Pupils complete labelling of the cell on A3 paper. Then annotate functions of the structures. If pupils are stuck, they may use hint cards. • Pupils to then write out a flow chart of how organelles work together in cells • Teacher to explain prokaryotic cells • Pupils to use page 20 in green textbook and jot down information on prokaryotic cells (5 mins) • Pupils will then close books and annotate A3 laminated diagram of a bacterium • Read over laminated paragraph of prokaryotic cell and highlight the areas that are incorrect • Use mark scheme to assess 	Mini test mark scheme A3 cell pictures A3 laminated bacterium Literacy task on prokaryotic cells and mark scheme Table comparing pro- and eukaryotic cells	Complete table comparing prokaryotic and eukaryotic cells Revise for topic test		

8. Revision	<ul style="list-style-type: none"> • Pupils self- assess homework • Pupils to complete revision test. Self- assess with mark scheme and green pen. Make corrections 	Mark scheme of pro and eukaryotic cells Revision test	Revise		
9. QM3	<ul style="list-style-type: none"> • Pupil may have time to revise before topic test, in silence, no books. Give in for teacher assessment 	Topic test and mark scheme	Glossary		
10. Feedback	<ul style="list-style-type: none"> • Complete feedback tasks • Complete any outstanding PAG work 	Teacher assessment		Teacher assessment	