Amber- some understanding, Green- I am confidentKnow that cell theory is a unifying concept stating that cells are a fundamental unit of structure, function and organisation in all living organisms.REDAMBERGREENUnderstand the ultrastructure and function of organelles in the following cells:REDAMBERGREEN1. prokaryote cells (bacterial cell) - nucleoid, plasmids, 70S ribosomes, capsule, cell wallREDAMBERGREEN2. eukaryotic cells (plant and animal cells) – plasma membrane, cytoplasm, nucleus, nucleolus, endoplasmic reticulum (smooth and rough), Golgi apparatus, vesicles, lysosomes, 80S ribosomes, mitochondria, centrioleREDAMBERGREEN3. eukaryotic cells (plant-cell specific) – cell wall, chloroplasts, vacuole, tonoplast, amyloplasts, plasmodesmata, pits.REDAMBERGREEN	Objective	My personal RAG rating (Red- do not understand,			
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Otherstand the diffustion of organelles in the following cells:       AMBER       GREEN         1. prokaryote cells (bacterial cell) – nucleoid, plasmids, 70S ribosomes, capsule, cell wall       -       -         2. eukaryotic cells (plant and animal cells) – plasma membrane, cytoplasm, nucleus, nucleolus, endoplasmic reticulum (smooth and rough), Golgi apparatus, vesicles, lysosomes, 80S ribosomes, mitochondria, centriole       -         3. eukaryotic cells (plant-cell specific) – cell wall, chloroplasts, vacuole, tonoplast, amyloplasts, plasmodesmata, pits.       RED       AMBER       GREEN	Understand the ultrastructure			CREEN	
ribosomes, capsule, cell wall 2. eukaryotic cells (plant and animal cells) – plasma membrane, cytoplasm, nucleus, nucleolus, endoplasmic reticulum (smooth and rough), Golgi apparatus, vesicles, lysosomes, 80S ribosomes, mitochondria, centriole 3. eukaryotic cells (plant-cell specific) – cell wall, chloroplasts, vacuole, tonoplast, amyloplasts, plasmodesmata, pits. Recognise cell organelles from electron micrographs and the use	<ul> <li>and function of organelles in the following cells:</li> <li>1. prokaryote cells (bacterial cell) – nucleoid, plasmids, 70S</li> </ul>				
2. eukaryotic cells (plant and animal cells) – plasma membrane, cytoplasm, nucleus, nucleolus, endoplasmic reticulum (smooth and rough), Golgi apparatus, vesicles, lysosomes, 80S ribosomes, mitochondria, centriole 3. eukaryotic cells (plant-cell specific) – cell wall, chloroplasts, vacuole, tonoplast, amyloplasts, plasmodesmata, pits.AMBERGREEN	ribosomes, capsule,				
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3. eukaryotic cells (plant-cell specific) – cell wall, chloroplasts, vacuole, tonoplast, amyloplasts, plasmodesmata, pits.       Image: Comparison of the second seco	lysosomes, 80S ribosomes, mitochondria, centriole				
specific) - cell wall, chloroplasts, vacuole, tonoplast, amyloplasts, plasmodesmata, pits.klock Plasmodesmata, REDAMBERGREEN	3. eukaryotic cells (plant-cell				
vacuole, tonoplast, amyloplasts, plasmodesmata, pits. Recognise cell organelles from RED AMBER GREEN	specific) – cell wall, chloroplasts,				
amyloplasts, plasmodesmata,     pits.       Recognise cell organelles from     RED       AMBER     GREEN	vacuole, tonoplast,				
pits.     Recognise cell organelles from     RED     AMBER     GREEN	amyloplasts, plasmodesmata,				
Recognise cell organelles from RED AMBER GREEN	pits.				
algebran micrographs and the use	Recognise cell organelles from	RED	AMBER	GREEN	
electron micrographs and the use	electron micrographs and the use		, and En	GREEN	
of light microscopes.	of light microscopes.				
Understand the similarities and RED AMBER GREEN	Understand the similarities and	RED	AMBER	GREEN	
differences between plant and	differences between plant and				
animal cell structure and	animal cell structure and				
function.	function.				
Understand how to distinguish RED AMBER GREEN	Understand how to distinguish	RED	AMBER	GREEN	
between gram-positive and gram-	between gram-positive and gram-				
negative bacterial cell walls and	negative bacterial cell walls and				
why each type reacts differently	why each type reacts differently				
to some antibiotics.	to some antibiotics.				
Calculate magnification and size RED AMBER GREEN	Calculate magnification and size	RED	AMBER	GREEN	
of cells and organelles from	of cells and organelles from				
drawings or images.	drawings or images.				
Understand cell specialisation in RED AMBER GREEN	Understand cell specialisation in	RED	AMBER	GREEN	
terms of structure and function,	terms of structure and function,				
to include:	to include:				
1. palisade mesophyll cells in a	1. palisade mesophyll cells in a				
leaf	leaf				
2.sperm and egg cells in	2.sperm and egg cells in				
3. root hair cells in plants	3, root hair cells in plants				

4.white blood cells			
Understand the structure and function of epithelial tissue, to include: 1. squamous as illustrated by the role of alveolar epithelium in gas exchange to include the effect of chronic obstructive pulmonary disease (COPD) in smokers 2. columnar as illustrated by goblet cells and ciliated cells in the lungs to include their role in protecting lungs from pathogens.	RED	AMBER	GREEN
Understand the structure and function of endothelial tissue, as illustrated by blood vessels in the cardiovascular system, including the risk factors that damage endothelial cells and affect the development of atherosclerosis.	RED	AMBER	GREEN
Understand the structure and function of muscular tissue, to include: o the microscopic structure of a skeletal muscle fibre o structural and physiological differences between fast- and slow-twitch muscle fibres and their relevance in sport.	RED	AMBER	GREEN
Understand the structure and function of nervous tissue, to include: 1. non-myelinated and myelinated neurones 2.the conduction of a nerve impulse (action potential) along an axon, including changes in membrane permeability to sodium and potassium ions and the role of the myelination in saltatory conduction 3. interpretation of graphical displays of a nerve impulse and electrocardiogram (ECG) recordings 4.synaptic structure and the role of neurotransmitters, including acetylcholine	RED	AMBER	GREEN

5. how imbalances in certain,		
naturally occurring brain		
chemicals can contribute to ill		
health, including dopamine in		
Parkinson's disease and serotonin		
in depression		
o the effects of drugs on synaptic		
transmission, including the use of		
L-Dopa in the		
treatment of Parkinson's disease.		