H420 Module 1-Devlopment of practical skills in Biology will be integrated within other modules of the specification

Calendar	Big Question/ Theme	Small Questions	Assessment Opportunities and Criteria. Teacher feedback point (TFP)	Homework
Autumn 1 **Module 5 Communication, homeostasis and energy** *Chapter 13* *Neural communication*	How do organisms respond to stimuli in their environment?	***13.1 Coordination*** Why do multicellular organisms need communication? How do cells communicate with each other? ***13.2 Neurones*** What is the structure and function of the sensory, relay and motor neurones? What is multiple sclerosis and what impact does this have on sufferers? ***13.3 Sensory receptors*** What are the features of sensory receptors? What are the 4 main types of sensory receptors and what do they detect? What sequence of events happen in the Pacinian corpuscle and why do we refer to it as a 'transducer'? What is a generator potential? ***13.4 Nervous transmission*** What happens in the axon when a neurone is at rest (resting potential)? What happens in the axon when a neurone is stimulated (action potential)? What happens in the refractory period? How are action potentials propagated along an axon (salutatory conduction)? What is the 'all or nothing' principle? ***13.5 Synapses*** What is the structure and role of a synapse in neurotransmission? What is a neurotransmitter? What is the sequence of events that take place in a synapse? What is the effect of drugs on synapses? ***13.6 Organisation of the nervous system*** How is the mammalian nervous system organised structurally and functionally?	Topic tests these are from OCR and include short answer questions that test student misconceptions in the topic area. Teacher will mark exam questions and provide a class feedback sheet. Students will NTG by responding to marking. Practical assessments (PAGs) Optional: Zig Zag end of topic tests are available to use	Homework: Revision of the topic's knowledge organiser. Students will be quizzed weekly /10 Student results will be recorded on a tracking sheet. Students to make Cornell notes of sections covered in class and complete summary questions in the text book. Students complete any extra exam questions set by the teacher.

		13.7 Structure of the brain What is the gross structure and function of the human brain? What techniques are used to study the brain? ***13.8 Reflexes*** What is the pathway of neurones involved in the reflex arc? What is the importance of the reflex arc? How can we test the speed of reflex actions? ***13.9 Voluntary and involuntary muscles*** What are the 3 types of muscle in the body? What is the structure of mammalian muscle? What is the structure of a sarcomere? What is the difference between slow twitch and fast twitch muscles? ***13.10 Sliding filament model*** What is the mechanism of muscle contraction?		
Calendar	**Big Question/ Theme**	**Small Questions**	**Assessment Opportunities and Criteria. Teacher feedback point (TFP)**	**Homework**
<u>Autumn 1</u> **Module 5 Communication, homeostasis and energy** *Chapter 17* *Energy for biological processes.*	Where do organisms get their energy for biological processes?	17.1 Energy cycles Why do we need cellular respiration? What is the relationship between the processes of respiration and photosynthesis? 17.2 ATP synthesis How is ATP produced? What is the chemosynthetic theory? What happens along the electron transport chain? 17.3 Photosynthesis What is the equation that summarises photosynthesis? What is the structure of a chloroplast? What are the 2 main stages of photosynthesis and where in the chloroplast do these occur? What is the importance of photosynthetic pigments in photosynthesis? What happens in the light-dependant stage of photosynthesis? What happens in the light-independent stage of photosynthesis? What are the uses of triose phosphate? How can we investigate photosynthetic pigments? 17.4 Factors affecting photosynthesis What factors affect photosynthesis?	Topic tests these are from OCR and include short answer questions that test student misconceptions in the topic area. Teacher will mark exam questions and provide a class feedback sheet. Students will NTG by responding to marking. Practical assessments (PAGs)	Homework: Revision of the topic's knowledge organiser. Students will be quizzed weekly /10 Student results will be recorded on a tracking sheet. Students to make Cornell notes of sections covered in class and complete summary questions in the text book. Students complete any extra exam

		How can we investigate the factors affecting photosynthesis?	Optional: Zig Zag end of topic tests are available to use.	questions set by the teacher.