Year 9: Living World- Body Systems and Responses

	Check	Date
ASSUMED KNOWLEDGE STAGE 4 OUTCOMES **SC4-14LW** relates the structure and function of living things to their classification, survival and reproduction **SC4-15LW** explains how new biological evidence changes people's understanding of the world	☐	
LW1 Multicellular organisms rely on coordinated and interdependent internal systems to respond to changes in their environment. (ACSSU175)		
COORDINATION SYSTEMS		
5LW1d. describe the role of, and interaction between, the coordination systems in maintaining humans as functioning organisms	☐	
NERVOUS SYSTEM		
Identify the two components of the nervous system (CNS and PNS)	☐	
Define the terms nervous system, CNS and PNS	☐	
Identify the main features of the central nervous system (CNS)	☐	
Describe the role of the nervous system in maintaining humans as functioning organisms	☐	
CODE: 9LW1 First-Hand investigation: Response time. In pairs, drop 30cm ruler between partner's fingers and record length taken to catch. Repeat, average and compare with other students (Oxford pg137)	☐	
Identify the basic features of a neuron	☐	
Label the parts of a neuron on a diagram	☐	
Identify the different types of neurons (sensory neuron, interneuron and motor neuron)	☐	
Describe the roles of the three types of neurons in the coordination systems	☐	
Label the different parts of the human brain on a diagram	☐	
Identify the role of each lobe of the cerebrum	☐	
CODE: 9LW2 First-Hand investigation: Experiment 4.1.1 Sheep brain dissection	☐	
Identify the two parts of the peripheral nervous system (PNS)	☐	
Describe why a reflex action works so quickly	☐	
Outline how spinal cord injuries impact upon an individual's ability to function	☐	
CODE: 9LW3 First-Hand investigation: Testing reflexes. In pairs, examine pupil of eye with lights being turned on and off (Oxford pg145)	☐	

ENDOCRINE SYSTEM		
Define the terms endocrine system and hormone	☐	
Identify the features of the endocrine system	☐	
Identify three hormones in the body: • the organ they are produced in • the target tissue • the main effect of the hormone and • health problems if hormone not functioning correctly	☐	
Describe the role of the endocrine system in maintaining humans as functioning organisms	☐	
Describe the flight or fight response and discuss its likely purpose	☐	
Assessment: Oxford online test- Coordination systems Students to achieve 100% in Support and Consolidate **OR** Consolidate and Extend	☐	
RESPONDING TO CHANGE		
5LW1a. describe some examples of how multicellular organisms respond to changes in their environment	☐	
Define the following terms stimuli, receptor and response	☐	
Identify the five human senses, the type of stimulus they detect and the type of sensory neuron involved	☐	
Describe some responses to stimuli in humans	☐	
Describe some responses to stimuli in other animals	☐	
Describe some responses to stimuli in plants	☐	
CODE: 9LW4 First-Hand Investigation: Exploring the senses (Optional)	☐	
5LW1b. describe how the coordinated function of internal systems in multicellular organisms provides cells with requirements for life, including gases, nutrients and water, and removes cell wastes	☐	
Identify that all living things are made of cells	☐	
Identify that substances move into and out of cells (gases, nutrients, water and wastes)	☐	
Recall the basic features and role of the **digestive, respiratory, circulatory** and **excretory** system in maintaining humans as functioning organisms	☐	
Outline how humans respond to internal changes (homeostasis) using body temperature as an example	☐	
Identify conditions necessary for gas exchange: moist membrane, thin membrane and concentration gradient	☐	
Describe why multicellular organisms require specialised organs and systems (diffusion)	☐	
Describe the main roles of the digestive, circulatory, respiratory and excretory systems in maintaining a constant internal environment	☐	
LITERACY SET 1: COSMOS ARTICLE	☐	
Assessment: Oxford online test- Responding to change. Students to achieve 100% in Support and Consolidate **OR** Consolidate and Extend	☐	

RESPONDING TO DISEASE		
5LW1c. outline some responses of the human body to infectious and non-infectious diseases	☐	
Define the terms disease, non-infectious and infectious	☐	
Distinguish between infectious and non-infectious diseases	☐	
INFECTIOUS DISEASE		
Define the term pathogen	☐	
Identify three examples of pathogens and the diseases they cause	☐	
Distinguish between the main features of bacteria, virus, fungi, protozoa and prion	☐	
CODE: 9LW5 First-Hand investigation: Modelling the spread of infectious diseases	☐	
Describe the body's responses to invading pathogens. Include: • **1st line of defence:** Skin, Cilia, Mucous lining • **2nd line of defence:** Phagocytosis, Inflammation • **3rd line of defence:** B and T lymphocytes	☐	
Relate the function of B and T lymphocytes to reasons why no cure exists for HIV/AIDS	☐	
NON-INFECTIOUS DISEASE		
Recall how non-infectious diseases are acquired	☐	
Outline the causes of three non-infectious diseases	☐	
Distinguish between genetic, environmental and nutritional disease, using examples	☐	
LITERACY SET 2: MIXED ACTIVITIES	☐	
5LW1e. discuss, using examples, how the values and needs of contemporary society can influence the focus of scientific research, e.g. the occurrence of diseases affecting animals and plants, an epidemic or pandemic disease in humans or lifestyle related non-infectious diseases in humans	☐	
Identify how science is currently helping society to respond to outbreaks of disease	☐	
Outline historical developments in the field of science	☐	
Describe how vaccinations and antibiotics work	☐	
Discuss how the values and needs of contemporary society can influence the focus of scientific research	☐	
5LWadd1 debate why any investigation relating to biological research and involving or affecting animals, must be humane, justified and ethical	☐	
Debate why any investigation relating to biological research and involving or affecting animals, must be humane, justified and ethical. Conversation to centre on rights of animals and the need for research on diseases	☐	
NUMERACY AND SKILLS SET	☐	
Assessment: Oxford online test- Responding to change Students to achieve 100% in Support and Consolidate **OR** Consolidate and Extend	☐	
Assessment: Body Systems and Responses Chapter Test	☐	

Comments and Suggested improvements

Name: **Signature:** **Date:**