

	Year 8 Biology					
	Autumn Term 1	Autumn Term 2	Spring Term 1	Spring Term 2	Summer Term 1	Summer Term 2
BIG Q Content <i>(max 5)</i> Please log into Seneca to support your child to understand this learning	<i>How do we breathe?</i> Describe the mechanism for breathing in and out. Explain how changes in pressure help us to breathe. Describe what is meant by lung volume and identify some simple methods to measure it. Describe the features of the human gas exchange system and explain how the features enable gases to be exchanged. Describe and explain the physical effects of disease and lifestyle on the breathing system.	<i>Why is the food we eat so important?</i> Describe the components of a healthy diet. Describe the importance of each component. Describe the physical effects of eating too much or eating too little. Identify the causes and effects of some deficiencies in the diet.	<i>What happens to the food we eat?</i> Identify the organs of the human digestive system and describe the process of digestion. Describe the roles of the organs of the digestive system and explain how the structure of each organ is adapted to its function. Describe the importance of enzymes and gut bacteria in digestion.	<i>Why are feeding relationships important in ecosystems?</i> Describe how food webs are made up of a number of food chains. Analyse and evaluate changes in a food web. Describe how toxins pass along the food chain. Explain how toxins enter and accumulate in food chains. Evaluate the advantages and disadvantages of using pesticides.	<i>Why is ecological balance important?</i> Describe ways in which organisms affect their environment. Explain why prey populations affect predator populations. Describe the role of pollination in crop production. Explain why artificial pollination is used for some crops. Evaluate the risks of monoculture on world food security.	<i>How are seeds made and dispersed?</i> Identify parts of flowering plants. Describe the function of the parts of flowering plants. Evaluate the differences between wind-pollinated plants and insect-pollinated plants. Describe the process of fertilisation in plants. Explain how seeds are formed and the different mechanisms used to disperse them.
Vocabulary <i>(max 10)</i> Please log into MAPPER to support your child to learn these words	Alveoli Asthma Breathing Bronchi Bronchioles Cilia Diaphragm Lung volume (vital capacity) Ribs Trachea	Balanced diet Carbohydrates Deficiency disease Kilojoule (kJ) Lipids Malnutrition Obesity Protein Starvation Vitamins	Chemical digestion Digestion Digestive System Enzyme Gut bacteria Oesophagus Physical digestion Large intestine Small intestine Stomach	Bioaccumulation Consumer Fertiliser Food Chain Food Web Insecticide Pesticide Population Producer Toxin Trophic level	Ecology Ecosystem Environment Food security Interdependence Pollination Predator Prey Monoculture	Anther Dispersal Fertilisation Fruit Germination Pollen Pollen tube Pollination Seeds Stigma
Catholic Link	Creation: respiratory system	Option for the poor: healthy diet / malnutrition	Creation: digestive system	Creation & the environment: food chains & webs	Creation & the environment: pollination & insect importance	Creation & the environment: plant fertilisation & seed development
Careers Link	Respiratory therapist, nurse	General practitioner, dietician	Nutritionist, food product developer	Conservation scientist	Agronomist, Eco toxicologist	Horticulturalist, plant geneticist

Ways to enrich the Y8 Biology curriculum at home:

- Measure your breathing/heart rate whilst resting. Perform an exercise of your choice and measure heart rate again- what have you noticed? Why is this the case?
- Create a mini ecosystem- state the animals that would live there. Name the producers, consumers, and predators.
- Go outside and look at a few flowering plants - can you identify the different structures of the plant e.g. the stamen, carpel, petals, anther etc.