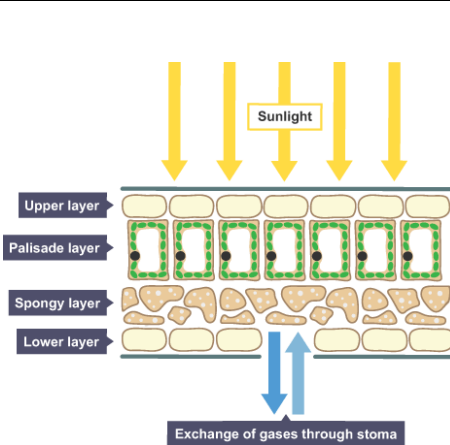
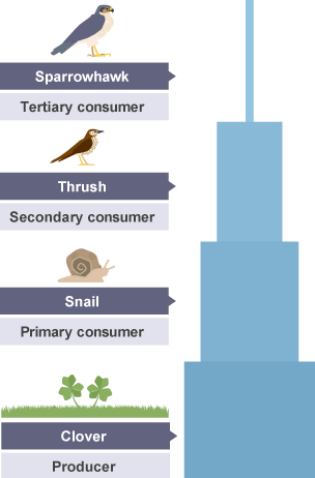
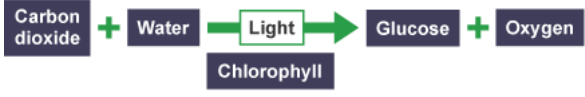
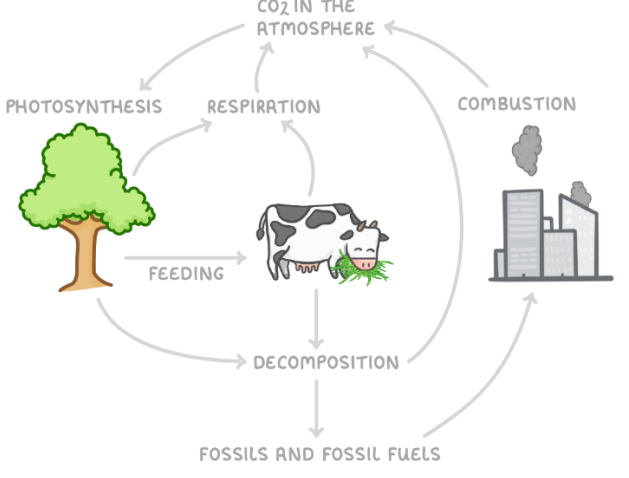

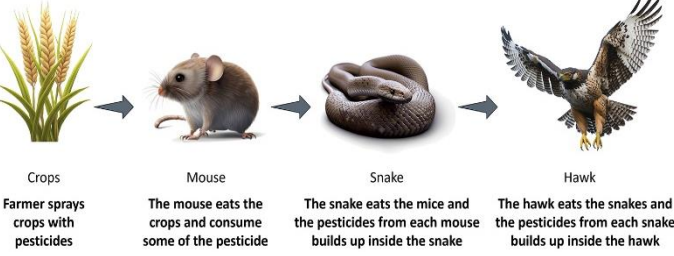


Year 7 Knowledge Organiser: Plants and Ecosystems

Key terms	Leaf structure	Pyramids of biomass		
Photosynthesis is a process where plants use light energy to combine carbon dioxide and water to produce glucose	 <p style="text-align: center;">Sunlight</p> <p>Upper layer</p> <p>Palisade layer</p> <p>Spongy layer</p> <p>Lower layer</p> <p style="text-align: center;">Exchange of gases through stoma</p>	 <p>Sparrowhawk Tertiary consumer</p> <p>Thrush Secondary consumer</p> <p>Snail Primary consumer</p> <p>Clover Producer</p>	<p>The biomass of each level of an ecosystem makes a pyramid as some energy is lost at each level</p>	
Respiration is a process where organisms react glucose with oxygen to release the energy within the molecule			<p>Cells in the palisade layer contain many chloroplasts</p>	<p>Energy transferred to the surroundings as heat, left in waste and within indigestible material cannot be passed on</p>
Xylem is a specialised plant tissue for transporting water and dissolved minerals from the roots to the leaves			<p>Chloroplasts contain chlorophyll, a chemical that can absorb light</p>	<p>As energy is [lost at each level] food chains cannot be more than four levels (quaternary consumer)</p>
Phloem is a specialised plant tissue for transporting sugars from the leaves to the rest of the plant			<p>The spongy layer allows gases to move through the leaf</p>	
An ecosystem a community of living organisms interacting with each other and their non-living environment.				
Interdependence is the idea that all living things depend on other organisms for their survival	Photosynthesis	Carbon cycle		
Producers are organisms in an ecosystem that can make their own food through processes like photosynthesis		 <p style="text-align: center;">CO₂ IN THE ATMOSPHERE</p> <p>PHOTOSYNTHESIS RESPIRATION COMBUSTION</p> <p>FEEDING</p> <p>DECOMPOSITION</p> <p>FOSSILS AND FOSSIL FUELS</p>		
Consumers are organisms that cannot make their own food so must eat (consume) other organisms to survive	Respiration			
Biomass is a measure of the total mass of living material in an organism or a population.				
Pyramid of biomass is a diagram representing the biomass at each trophic level of an ecosystem.	Bioaccumulation			
Bioaccumulation is the build-up of toxins in an organism's tissues. This increases in concentration up a food chain	 <p>Crops Mouse Snake Hawk</p> <p>Farmer sprays crops with pesticides The mouse eats the crops and consume some of the pesticide The snake eats the mice and the pesticides from each mouse builds up inside the snake The hawk eats the snakes and the pesticides from each snake builds up inside the hawk</p>		<p>Shows that only one process removes carbon from the atmosphere (photosynthesis)</p>	
The carbon cycle shows the processes that cycle carbon between the environment to living organisms.				
Decomposition is the process where dead organisms are broken down by bacteria and fungi, releasing the carbon			<p>Shows how the carbon converted into glucose by photosynthesis can move through different organisms before returning to the atmosphere</p>	