

| Blue Pathway | | | | | | | | |
|-----------------------------|---|---|--|---|--|--|--|---|
| Purple Pathway | | | | | | | | |
| Orange Pathway | | | | | | | | |
| | Step 5 | Step 6 | Step 7 | Step 8 | Step 9 | Step 10 | Step 11 | Step 12 |
| AO1 Remember | Recall parts of the body | Describe the role of digestive enzymes | Explain adaptations of lungs in breathing | Describe double circulatory system | Describe blood flow in double circulatory system | Explain how temperature affects enzyme activity | Explain in detail how pH and temp affect enzyme activity | Recall all key areas of Unit B2 |
| | Recall the role of enzymes in preparation for diffusion | Describe functions of heart & blood vessels | Describe how glucose is transported | Describe how a protein's function is related to its molecular shape. | Explain how the incidence of certain diseases can be reduced | Describe sites of production of enzymes | Explain in detail the adaptations of xylem and phloem | Always use appropriate and accurate scientific language and the correct SI units. |
| | Describe leaf adaptations including the role of the stomata | Describe how minerals are transported in plants | Explain roles of enzymes & secretions in digestion | Describe sequence of events causing CHD and methods to treat it | | Describe xylem & phloem | Explain adaptations of small intestine, features of exchange surfaces and circulatory system | |
| AO2 Application | Plot data to show effect of pH on amylase activity | Link adaptations of lungs to their function | Relate structure of blood vessels to function | Recognise different types of blood cells & explain their adaptations | Carry out blood flow calculations | Calculate the rate of water uptake by plants using data from investigations. | Calculate the density of stomata on leaf surfaces. | Apply understanding of surface and appropriate ratios to explain exchange systems in living cells |
| | Describe impact of exercise, asthma and smoking on respiratory system | Describe factors that affect rate of reaction with reference to particles and collisions. | Describe how pH & temperature affect enzymes | Calculate surface area:volume ratio | Use theories to make detailed explanations of events. | | Make effective use of data to support evidence. | |
| | Describe environment for enzymes | Describe how enzyme activity is related to substrate | Describe & explain the lungs of mammals & gills of fish for gas exchange | Identify functions of root hair cells, xylem and phloem | Interpret data and use it to support evidence. | Describe model limitations | | Use appropriate sig figs |
| AO3 Analyse and Evaluate | Recognise anomalous results and spot some causes of error in experimental procedures. | Consistently draw conclusions consistent with the available evidence. | Interpret data on food tests | Interpret data and evaluate impact and effects of exercise, asthma and smoking on respiratory system | Evaluate the reliability of methods in detail | Evaluate experimental methods of enzyme activity | Interpret/evaluate data about factors associated with diseases & cancer | Evaluate strategies for reducing incidence of disease |
| | | | Identify some causes of error in data or experimental procedures. | | | Explain and evaluate treatments of CHD & replacement valves. | Interpret/evaluate data on methods used to control and treat new diseases | Evaluate methods of treating heart diseases |
| AO3 Experimental Procedures | Describe methods for testing foods | Explain the importance of sampling technique and control variables | Select and apply appropriate experimental techniques | Describe the process of transpiration and investigate factors that affect its rate and the structure and function of stomata. | Select and justify sampling technique for enzyme activity | Distinguish between quantitative & qualitative food tests/data | Justify the choice of experimental methods and apparatus | Plan, justify, and carry out a safe, reliable and valid investigation to test a hypothesis |
| | Identify variables in an investigation | | | | Explain the role of a water bath | | | |