# Unit 2: Human Biology and Health

## Unit overview

| Overview of Unit number: Unit title | |
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| **Assessment type: External** | |
| **Content Area** | **Topics** |
| A: Organisation of the human body | A1 Cells<br>A2 Tissues<br>A3 Energy in the body<br>A4 Homeostatic mechanisms |
| B: Body systems | B1 The cardiovascular system<br>B2 The respiratory system<br>B3 The nervous system<br>B4 The endocrine and renal systems<br>B5 The musculoskeletal system<br>B6 The function of further body systems |
| C: Disorders of the body and effect on body systems | C1 The main disorders of the body systems |

**Assessment overview**

The unit will be assessed through one examination of 80 marks lasting 1 hour and 30 minutes. Students will be assessed through multiple-choice, short- and long-answer questions. The questions will assess knowledge and understanding of the structure, organisation and function of the human body and common disorders that affect it; application of knowledge on the structure and function of body systems to the primary and secondary effects of common disorders on those body systems; and connections between the primary and secondary effects of common disorders and how they affect interlinked body systems.

The assessment availability is twice a year in January and May/June.

The first assessment availability is May/June 2026.

Sample assessment materials will be available to help centres prepare students for assessment.

## Common student misconceptions

Below are some common misconceptions related to the content of this unit by students and ideas for how you can help your students to avoid and overcome these.

| What is the misconception? | How to help students overcome it |
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| Learners find it difficult to link disorders to the body systems they affect, especially where it is not a direct effect, e.g. the effect of hypertension on sight when the retinal capillaries are damaged. | Discuss what could go wrong with normal processes and the effects it could have on different areas of the body. |
| Learners use the terms, small intestine and large intestine rather than duodenum, ileum and colon. | Ensure learners are using the terms duodenum and ileum (rather than small intestine) and colon (rather than large intestine) when teaching digestion as these are not covered in the unit specification. |
| Learners often believe the CNS sends messages to the brain, but since the brain is part of the CNS, it's more accurate to say the CNS transmits messages within itself. | Ensure learners are clear that the brain and spinal cord are both part of the CNS. |
| Learners find it difficult to link disorders to the body systems they affect, especially where it is not a direct effect, e.g. the effect of hypertension on sight when the retinal capillaries are damaged. | Discuss what could go wrong with normal processes and the effects it could have on different areas of the body. |

## Learning Activities and Resources

This section offers a starting point for delivering the unit by outlining a logical sequence through the unit topics and suggesting practical activities and teacher guidance for covering the main areas of content during guided learning time. Transferable skills are integrated into various activities, with those embedded in a unit indicated by an acronym in square brackets. The acronym combines the letters from the broad skill area and the specific transferable skill, e.g., **[IS-WC]**.

Please note that the activities provided below are suggestions and not mandatory.

| Learning Topic | Activities and guidance for unit content delivery | Resources |
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| A1 Cells | • Whole class teaching and individual activity – Different types of cells<br>• Show learners a range of visual resources showing different types of cells.<br>• Ask learners if they can identify the connection between the images.<br>• Learners should try to identify the different structures to include: Membrane, nucleus, ribosomes, mitochondria.<br>• Provide diagrams of different cell types.<br>• Learners should label the structures listed in the unit content. Use computers/reference books to identify the function of each structure.<br>• Individual activity – 3D models of animal cells<br>o Learners could build 3D models of an animal cell including the organelles mentioned in the unit content.<br>o They could then present their models to the class.<br><br>EL-MOL | Histology guide - electron micrographs, diagrams, pictures of various cell types. The Cell \| Histology Guide<br><br>BBC bitesize – organelles of animal cells and their functions Animal cells - Cell structure - Edexcel - GCSE Biology (Single Science) Revision - Edexcel - BBC Bitesize |

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| A2 Tissues | • Whole class teaching and learning<br>○ Show video/animation showing hierarchy of cells, tissues, organs and organ systems in the human body.<br>○ Learners could produce a diagram to illustrate their understanding.<br>• Peer teaching – different types of tissue<br>• Prepare resource packs containing information about the following tissue types:<br>○ simple and compound epithelial tissue.<br>○ connective tissue – blood, bone, areolar and adipose.<br>○ muscle – striated, non-striated and cardiac.<br>○ nervous tissue – sensory neurones, motor neurones and neuroglia.<br>• Learners to split into 'expert' groups and allocated a tissue type to research.<br>• Learners in each group research and prepare a presentation so they can teach another group.<br>• The presentations should include:<br>○ the name of the tissue type.<br>○ diagrams where appropriate.<br>○ the types of cells that make up the tissue.<br>○ where the tissue is located within the body.<br>○ what the main function of the tissue is.<br>○ how the structure of the tissue enables it to carry out its function effectively.<br>○ an example of a disorder than can affect the tissue. | ABPI – Animation showing hierarchical organisation within the human body Cells, organs and systems<br><br>YouTube – Levels of organisation in the human body GCSE Biology - Levels of Organisation - Cells, Tissues, Organs and Organ Systems<br><br>Anatomy.co.uk – Structure and function of different types of epithelial tissue Epithelial Tissue - Types, Structure, Function, Diagram<br><br>Oregon state university – Functions of blood 18.1 Functions of Blood – Anatomy & Physiology<br><br>Teach me anatomy – Information about the structure of bone Ultrastructure of Bone - Components - Structure - TeachMeAnatomy<br><br>Geeks for geeks- Information about areolar connective tissue Areolar Connective Tissue \| Function and Location - GeeksforGeeks<br><br>Geeks for geeks- Information about adipose tissue Adipose Tissue (Body Fat) |

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| | • One person from each expert group should teach another group about the tissue type they have researched.<br>• Learners should make notes on each of the tissue types as they are listening to each 'expert'.<br>• Paired activity - revision<br>o Learners should be given exam style questions based on cells and tissues to work on in pairs.<br>o Provide mark schemes for learners to check and add to their responses. | - Location, Types, and Function - GeeksforGeeks<br><br>Oregon state university – Information about different types of muscle tissue 4.4 Muscle Tissue – Anatomy & Physiology<br><br>Biology simple – Information about nervous tissue Nervous Tissue - Biology Simple |

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| A3 Energy in the body | • **Whole class teaching and individual activity – Energy change experiments**<br>• Have circus of energy change experiments e.g. chemical, heat, light, sound, electrical which the learners rotate through.<br>• Learner should identify the energy changes that take place.<br>• Discuss the outcomes of the experiments and begin to relate them to the human body, e.g. intake of food converted to movement etc.<br>• Discuss how food might be used to provide energy in the body and introduce the idea of catabolic and anabolic reactions.<br>• Use toy bricks to demonstrate the different types of reaction.<br>• Provide examples of anabolic and catabolic reactions and ask learners to identify the type of reaction.<br>• **Whole class discussion and individual activity – human respiration**<br>• Show video clip to introduce human respiration.<br>• Provide learners with diagrams showing the stages of aerobic and anaerobic respiration for them to annotate.<br>• Learners could produce a table to compare aerobic and anaerobic respiration. This could include:<br>  ○ substrate.<br>  ○ oxidation of glucose.<br>  ○ products.<br>  ○ relative amount of energy produced. | **Science kids** – picture showing example energy changes in the human body Basic Overview of Energy and Human Life - Free Health & Medical Pictures & Diagrams<br><br>**BBC Bitesize** – Information about anabolic and catabolic pathways Anabolic and catabolic pathways - Metabolic pathways - Higher Biology Revision - BBC Bitesize<br><br>**BBC Bitesize (YouTube)** – Human respiration – overview of aerobic and anaerobic respiration GCSE BBC Bitesize Higher Science - Human Respiration<br><br>**Royal society of biology** – PDF notes on aerobic and anaerobic respiration 14_Respiration.pdf<br><br>Biology simple – Information and video clip on respiration Aerobic Respiration - Biology Simple |

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| | ○ where it occurs in the human body.<br>• Project based learning – uses of energy<br>• Provide groups of learners with one of the uses of energy from the unit specification.<br>• Learners should produce a presentation on their use of energy. The presentation should include:<br>○ an overview of the process.<br>○ why the process needs energy.<br>○ where the energy for the process comes from.<br>• Whole class learning and individual activity - BMR<br>• Show audio visual material introducing BMR and how and why it is calculated.<br>• Complete a worked example of calculating BMR.<br>• Provide practice calculations for learners to complete.<br>• Show BMR chart and discuss what the calculations show.<br>• Learners should explain the reasons for BMR to include:<br>○ breathing, circulation, nutrient processing and cell production. | BBC – The energy requirements of cells – introduction The energy requirements of cells - Respiration - National 5 Biology Revision - BBC Bitesize<br><br>Diabetes.co.uk – BMR calculator BMR Calculator<br><br>Studocu – Worksheet for calculating BMR Basal Metabolic Rate Worksheet - Basal Metabolic Rate (BMR) The BMR Calculator - Studocu |

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| A4<br>Homeostatic mechanisms | • Whole class teaching – Introduction to homeostasis<br>• Introduce the concept of homeostasis in the human body and its importance in maintaining a stable internal environment despite any changes to the environment.<br>• Discuss negative feedback and show how this can be demonstrated diagrammatically.<br>• Paired activity – Blood glucose regulation<br>• Provide stimulus material on blood glucose regulation.<br>• Provide blank diagrams for learners to complete which demonstrate what happens in the body when blood glucose is high and low.<br>• Learners could produce a table comparing how the body responds when blood glucose rises and falls.<br>• Learners should include the following in their table:<br>o hormone produced.<br>o response.<br>o outcome.<br>o Suggest what might happen in the body if the blood glucose feedback loop fails.<br>• Whole class teaching and individual activity – Thermoregulation<br>• Discuss with the learners what normal body temperature is and what happens to the body when it gets too cold and too hot.<br>• Explain the mechanism of thermoregulation.<br>• Learners label a cross-sectional diagram of a skin with the following labels. | YouTube – Video introducing to homeostasis What is Homeostasis?<br><br>ABPI – Regulating blood glucose animation Regulating blood glucose levels<br><br>BBC – Information about blood glucose regulation Biological actions in response to changes - Maintaining stable body conditions - National 4 Biology Revision - BBC Bitesize<br><br>ABPI – Body Thermoregulation animation Maintaining a core body temperature<br><br>h |

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| | • Hair, erector muscle, dermis, sweat gland, arteriole, sensory cell, sebaceous gland, epidermis, sweat gland, subcutaneous layer, adipose tissue, capillary network, venule.<br>• Provide learners with an interactive animation showing what happens to the body when temperature changes.<br>• Learners should design a table to compare the changes when the body is too hot and too cold.<br>• Whole class teaching and individual activity – Osmoregulation<br>• Show video clip introducing osmoregulation. Discuss factors that might alter water balance in the body.<br>• Provide learners with an interactive animation showing what happens to the body when water balance changes.<br>• Learners should design a table to compare the changes when there is too much and too little water in the body.<br>• Provide a card sort activity for learners to produce their own negative feedback loop for water regulation. | Anatomy.co.uk - Information about the structure of skin and its role in the human body Skin - Anatomy, Structure, Diagram, Function, Significance<br><br>YouTube – Video explaining thermoregulation Temperature Regulation Of The Human Body \| Physiology \| Biology \| FuseSchool<br><br>BBC Bitesize – Osmoregulation Homeostasis - Why do we need to maintain a constant internal environment? - GCSE Combined Science Revision - OCR 21st Century - BBC Bitesize<br><br>ABPI – osmoregulation animation ADH and control of the water balance |

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| B1 The cardiovascular system | • Whole class teaching and learning- Main components of the cardiovascular system<br>• Introduce the topic and recap on structure of function of the cardiovascular system.<br>• Identify the main components and the function of the cardiovascular system, to include:<br>– heart and cardiac cycle.<br>– blood vessels: arteries, veins, capillaries.<br>– blood: plasma, red blood cells, white blood cells, platelets.<br>• Group activity – Components of blood<br>• Provide a journal article and ask learners to read and identify the main components of blood.<br>• Each learner in the group should research one components of blood mentioned in the unit specification and then present their findings to the rest of the group.<br>• They should include the following in their presentation:<br>– a description of the component.<br>– what it contains.<br>– percentage found in blood.<br>– how each component is adapted for its function.<br>[EL-PRS] | Medical news today – Article outlining the structure and components of blood Blood: Components, functions, groups, and disorders<br><br>Geeks for geeks – information about the composition of blood Blood - Components, Types, & its Functions - GeeksforGeeks |
| Blood vessels | • Small group activity – Blood vessels<br>• Learners should research each blood vessel and produce a presentation which identifies the following:<br>– structure – including histology of the vessel walls.<br>– function of the vessels.<br>– how the vessel is adapted for its function. | BBC – information and video about the structure and function of blood vessels Structure and function of blood vessels - Structure and function of arteries, capillaries and veins - Higher |

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| | – how the vessels are linked.<br>• Learners produce a table comparing each of the blood vessels. They should include the following:<br>– function.<br>– wall structure.<br>– lumen.<br>– other features.<br>[IS-T] | Human Biology Revision - BBC Bitesize |
| The heart and cardiac cycle | • Whole class and individual activity<br>• Provide learners with a diagram of the circulatory system. Identify the main vessels and explain that blood is carried around this system.<br>• Ask learners to list the main functions of the cardiovascular system.<br>• Practical Activity – Effect of exercise on heart rate<br>• Plan and carry out an investigate on the effect of exercise on the heart rate.<br>• Learners record their resting heart rate – this can be carried out as a whole class activity where they are asked to start to count their heart rate and stop after one minute.<br>• Learners then take part in some aerobic exercise such as skipping, jogging on the spot, step ups on and off a bench or walking up and down some steps.<br>• Learners then record their heart rate for 1 minute.<br>• Learners find the class average resting heart rate and exercising heart and discuss why there is a higher heart rate after participation in exercise. | BBC Bitesize - introduction to the circulatory system Structure and function of blood vessels - Structure and function of arteries, capillaries and veins - Higher Human Biology Revision - BBC Bitesize<br><br>Royal Society of Biology – Effects of exercise on heart rate practical activity Observing the effects of exercise on the human body<br><br>Biology corner – Heart dissection step by step Heart Dissection Walk Through |

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| | • Whole class and individual activity – Structure of the heart<br>o Show video clips and/or animated models to establish the structure of the heart.<br>o Provide a diagram for learners to label.<br>• Whole class teaching and learning – Heart dissection<br>o Show dissection of heart – check your Health and Safety regulations/COSSH.<br>o Identify the main structures.<br>• Whole class teaching and individual activity<br>o Show video clips and/or animated models to show cardiovascular system including the systemic and pulmonary circulation.<br>o Provide blank diagrams for learners to annotate.<br>[EL-MOL] | |
| B2 The respiratory system<br><br>Anatomy of the respiratory system | • Individual activity – Respiratory system<br>• Provide a blank diagram of the respiratory system for learners to label.<br>o They should label the following structures and provide brief details of their structure and function:<br>– larynx.<br>– trachea.<br>– bronchi.<br>– lungs.<br>– bronchioles.<br>– alveoli. | BBC – Introduction to the respiratory system<br>Respiratory system structure and function - Respiratory system - Edexcel - GCSE Physical Education Revision - Edexcel - BBC Bitesize |

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| Ventilation of the lungs | • Whole class and individual activity – Ventilation<br>○ Show human lung diagram but this time, include the structures surrounding the lungs – ribs, intercostal muscles, diaphragm, pleural cavities.<br>○ Recap on the function of the lungs and show an animation demonstrating inspiration and expiration.<br>○ Show video clips and/or animations showing the movement of the diaphragm, ribs and intercostal muscles during ventilation.<br>○ Ask learners to produce a table to compare what happens during inspiration and expiration.<br>○ Card sort – steps of inspiration and expiration including movement of ribs/diaphragm and intercostal muscles, volume of thorax, pressure changes, movement of air.<br>• EL-CL | YouTube – Video showing basics of ventilation Basics of ventilation: Mechanics of breathing \| BMJ Learning<br><br>Footprints science – Breathing animation Breathing animation \| Footprints-Science \| GCSE science animations and quizzes |
| Gaseous exchange in the alveoli | • Whole class and individual activity - Alveoli<br>○ Show diagram of respiratory system but zoom in onto one of the alveoli – explain that there are millions of alveoli in each lung.<br>○ Provide slides, pictures, photomicrographs of alveoli tissue. Learners should produce a drawing of an alveolus and label the main components.<br>• Whole class and individual activity – Gaseous exchange<br>○ Show animation of gaseous exchange across the alveolar wall.<br>○ Learners should annotate a diagram showing direction of blood flow in relation to movement of gases at the alveolar surface | BBC – Gas exchange at the alveoli video Gas exchange - The respiratory system in humans – WJEC - GCSE Biology (Single Science) Revision - WJEC - BBC Bitesize |

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| | [EL-MOL] | |
| The nervous system<br><br>The Brain | • Whole class teaching- The brain and spinal cord<br>o Discuss what learners think the brain does and record responses.<br>o Show video clip describing the structure and function of the brain. Add any additional functions to the list.<br>o Provide a blank diagram of the brain for learners to label (include skull, membranes, cerebrum, cerebellum and medulla, hypothalamus, pituitary gland).<br>• Show video clip on spinal cord structure and function. Provide learners with a diagram to annotate.<br>[IS-V&NC] | YouTube shorts – brief introduction to organisation of the nervous system Clinical Cuts: Anatomy and physiology of the nervous system<br><br>ABPI – Anatomy of the brain The central nervous system (CNS) – the brain<br><br>John Hopkins medicine – Brain anatomy and function Brain Anatomy and How the Brain Works \| Johns Hopkins Medicine<br><br>Brain injury help – Information on brain anatomy Brainstem (Brain Stem) and Cerebellum |
| The nervous system<br><br>Peripheral nervous system | • Small group activity – Peripheral nervous system<br>o Each pair should research one each of the following neurones:<br>– sensory.<br>– motor.<br>– mixed.<br>o They should include:<br>– a labelled diagram of the neurone.<br>– the function of the neurone. | |

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| | • They should present their work to each other making notes.<br>• Whole class teaching and individual activity – reflex arc<br>o Show animation of how a reflex arc works. Provide diagrams for learners to label.<br>o Card sequencing activity of the stages of a reflex arc.<br>o Suggest what might happen if a reflex arc did not work correctly.<br>[IS-V&NC] | |
| The nervous system<br><br>Autonomic nervous system | • Whole class teaching and learning – Autonomic nervous system<br>o Introduce the parts of the ANS – sympathetic (fight or flight) and parasympathetic system (rest and digest).<br>o In small groups, each group produce an academic poster on either the sympathetic or parasympathetic part of the ANS.<br>o They should include:<br>– the components of each system.<br>– role.<br>– any neurotransmitters associated with it.<br>– functions/actions.<br>o Provide an example of what my happen if the system did not work properly.<br><br>• Practical activity – Reaction time<br>o Carry out an investigation into reaction times. Learners could use their learning to explain what is happening in their nervous system.<br>[IS-T] | Teach me physiology – Information about the autonomic nervous system Peripheral Nervous System - TeachMePhysiology<br><br>Topend sports – reaction time practical resource Reaction Stick: React Time Ruler Test |

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| B4 The Endocrine and renal systems | • Whole class and individual activity – Endocrine system<br>o Introduce the endocrine system and its main functions.<br>o Discuss the main glands of the endocrine system and ask learners to identify their location in the body (e.g. thyroid, testes, pancreas, thymus ovaries, pituitary gland, thyroid gland, adrenal glands).<br>o Learners could produce a labelled diagram showing the location of the main endocrine glands.<br>o Learners could research and produce a summary table on each of the endocrine glands. They could include:<br>– structure.<br>– function.<br>– location in the body.<br>– associated hormones.<br>• Project based learning – Role of the endocrine system<br>o In groups, learners should produce an academic poster on the role of the endocrine system on one of the following processes:<br>– control and regulation of growth.<br>– osmoregulation.<br>– regulation of blood sugar.<br>– fight or flight response.<br>– blood pressure regulation.<br>o They should include.<br>– a labelled diagram of the glands involved.<br>– an overview of the process.<br>– the hormone(s) involved.<br>– the function of the hormone(s) involved. | YouTube – Video introduction to the endocrine system Endocrine System: What Is It, Functions & Organs \| Video for Kids<br><br>Cleveland clinic – Anatomy and physiology of the endocrine system Endocrine System: What It Is, Function, Organs & Diseases<br><br>John Hopkins medicine – Anatomy of the endocrine system Anatomy of the Endocrine System \| Johns Hopkins Medicine |

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| | – the role (if any) of any organs.<br>– a reference list.<br>o Posters could be presented to the rest of the group<br>[IS-T] | |
| B5 The musculoskeletal system<br><br>Introduction and joints | • Whole class and individual activity – skeletal system<br>o Show model of skeleton and ask learners to identify/label the different bones.<br>o Discuss how bones are joined together and the differences between cartilage and bone.<br>o Learners could label a blank diagram of a skeleton with the structure and function of:<br>– ligaments.<br>– tendons.<br>– cartilage.<br>– bone.<br>• Small group activity – Joints<br>o Learner's research and produce a summary of the different joints found in the body including:<br>– name of the type of joint (fibrous, cartilaginous and synovial).<br>– diagram.<br>– body location.<br>– type of movement. | Model skeleton<br><br>Teach me anatomy – Information about different types of joints Joints - TeachMeAnatomy |
| The musculoskeletal system | • Small group activity – Antagonistic muscle pairs<br>o Learner's research antagonistic muscle pairs.<br>o Brief overview of the function of antagonistic muscle pairs. | BBC – Information about antagonistic muscles Antagonistic muscle pairs - Muscular system - Edexcel - GCSE Physical Education Revision - Edexcel - BBC Bitesize |

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| | ○ Learners take part in exercises to see how muscles work as antagonistic pairs e.g.:<br>– bicep curls – biceps and triceps.<br>– sit up – abdominals and erector spinae.<br>– calf raises – tibialis anterior and gastrocnemius. [IS-T] | Biology simple - Information about antagonistic muscles Antagonistic Muscle - Biology Simple<br><br>Strength minded – Information about antagonistic, synergist and fixator muscles Muscle Roles: Synergist, Agonist, Antagonist, Stabilizer & Fixator |
| B6 The function of further body systems | • Paired activity – The immune system<br>○ In pairs, learners research the immune and prepare a comic strip to show how the immune system functions to fight infection including:<br>– white blood cells.<br>– Antibodies.<br>– antigens. | ABPI – Immune system Pathogens and the immune system<br><br>Study mind – Overview of the immune system Introduction to the Immune System (A-level Biology) - Study Mind |
| | • Whole class and individual activity – The lymphatic system<br>○ Show a video clip/animation providing an overview of the lymphatic system. Discuss the functions of the lymphatic system.<br>○ Learners could label a diagram of the human lymphatic system identifying the main lymphatic organs (mucosa associated lymphoid tissue, thymus, spleen, bone marrow, lymphatic vessels, lymph nodes, intestines).<br>○ Learners could produce a table showing the main functions of the lymphatic system. | YouTube – Video clip showing overview of the lymphatic system Lymphatic system Explained with 3d Animation<br><br>Cleveland clinic – Overview of the lymphatic system Lymphatic System: Function, Conditions & Disorders<br><br>Teach me anatomy – Overview of the lymphatic system and its components |

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| | | Lymphatic System Anatomy - Vessels - Nodes - Organs - TeachMeAnatomy<br><br>Nursing times – Article covering the functions of the lymphatic system in fluid management The lymphatic system 1: structure, function and oedema \| Nursing Times |
| Reproductive system | • Whole class and individual activity – Reproductive System<br>o Introduction to the anatomical male and anatomical female reproductive system and their function.<br>o Learners could label a diagram of the male and female reproductive systems to include:<br>– role of the breasts, uterus, ovaries and vagina in anatomical females, and penis and testes in anatomical males. | BBC Bitesize – anatomical female reproductive system The female reproductive system - The human reproductive system - 3rd level Science Revision - BBC Bitesize<br><br>BBC Bitesize – anatomical male reproductive system The male reproductive system - The human reproductive system - 3rd level Science Revision - BBC Bitesize |
| Digestive system | • Whole class and individual activity – Digestive system<br>o Display a diagram of the digestive system and ask learners to identify the main parts.<br>o Discuss the function of the digestives system in digestion<br>o Learners could label a diagram of the digestive system and annotate where chemical and physical digestion take place to include: | ABPI – Overview of digestion What does your body do with the food you eat?<br><br>Biology Resources – List and resources for different practical activities Biology Experiments. Educational experimental work to download by D G Mackean |

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| | – role of the alimentary canal – oesophagus, stomach, duodenum, ileum, colon.<br>– accessory organs – liver, pancreas, gallbladder and salivary glands. | |
| C1 The main disorders of the body systems<br><br>CHD | • Small group activity – Causes of CHD<br>o Each group should research one of the following topics and produce a presentation to give to the rest of the group:<br>– atherosclerosis.<br>– hypertension.<br>– primary effects of coronary heart disease.<br>– secondary effects of coronary heart disease.<br>• Guest speaker - CHD<br>o Invite a medical professional with knowledge on CHD to come in discuss CHD and the impact on people with this condition.<br>o Learners could produce an information leaflet for patients who have just being diagnosed with CHD. They should include causes, symptoms, treatment and prognosis. | NHS – Information about atherosclerosis Atherosclerosis - NHS<br><br>British heart foundation – Information about atherosclerosis Atherosclerosis - BHF |
| Stroke | • Paired activity – Stroke Case studies<br>o Provide a selection of case studies on patients that have experienced a stroke including the following information:<br>– What caused it - blocked artery (ischaemic stroke) or burst blood vessel (haemorrhagic stroke).<br>– Primary effects e.g. brain damage, bleeding and clotting in the brain.<br>– Secondary effects e.g. muscle weakness, lack of co-ordination, dysphasia, increased incidence of respiratory infections. | Stroke association – Information about strokes Stroke Association / Finding strength through support<br><br>British heart foundation – Information about strokes Stroke - Causes, signs & symptoms - BHF |

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| | ○ Learners to identify the cause of the stroke, the primary and secondary effects on the patient from the information presented in the case study. | |
| Chronic obstructive pulmonary disorder | • Individual activity<br>○ Learners could produce an information leaflet for patients who have just being diagnosed with COPD. They should include:<br>○ causes<br>○ primary effects<br>○ secondary effects | Asthma and lung organisation – information about emphysema Emphysema \| Asthma + Lung UK<br><br>NHS – Information about bronchitis Bronchitis - NHS<br><br>Geeky medics – Information about how COPD affects patients 1 - Chronic Obstructive Pulmonary Disease (COPD) \| Geeky Medics |
| Asthma | • Small group Activity –Asthma awareness<br>○ Students will design and implement an asthma awareness campaign in their college.<br>○ They can create posters, leaflets, and social media posts to educate others about:<br>– asthma's causes<br>– primary effects<br>– secondary effects<br>– management strategies. | NHS – Information about asthma Asthma - NHS<br><br>Asthma and lung org – information about asthma What is asthma? \| Asthma + Lung UK<br><br>WHO asthma Asthma |
| Diabetes | • Paired Activity – Diabetes<br>○ Provide students with case studies of individuals with Type 1 and Type 2 diabetes. | NHS Type 1 diabetes Type 1 diabetes - NHS |

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| | ○ Each case study should include the person's symptoms, lifestyle, and medical history.<br>○ Students will work in groups to analyse the case studies, identify the type of diabetes, and discuss the causes, primary effects, and secondary effects based on the information provided.<br>○ Each group will then present their findings to the class. | **Diabetes UK** Type 1 diabetes Type 1 diabetes \| What it is and what causes it \| Diabetes UK<br><br>**Diabetes UK** Type 2 diabetes Type 2 diabetes \| Diabetes UK<br><br>**ABPI** – Information about diabetes What is diabetes? |
| Dementia | • **Guest speaker – Dementia**<br>○ Arrange for a healthcare professional or carer who specialises in dementia to speak to the class.<br>○ They can provide first-hand knowledge about the causes, primary and secondary effects, and daily management of dementia.<br>○ Students should prepare questions in advance to engage with the speaker project-based learning. | **Alzheimer's society** – information about Alzheimer's disease Alzheimer's Society<br><br>**NHS – Alzheimer's disease** Alzheimer's disease - NHS<br><br>**NHS – Vascular dementia**<br>Vascular dementia - NHS<br><br>**British heart foundation** vascular dementia Vascular dementia - BHF |
| Acquired brain injury | • **Paired Activity – traumatic and non-traumatic brain injury**<br>○ Students create a table that categorises the causes of acquired brain injury into traumatic and non-traumatic:<br>– For the table they will draw two columns, one for traumatic and one for non-traumatic causes.<br>– Under each column, create two sub-columns for primary and secondary effects. Fill in the chart accordingly. | **The brain charity** acquired brain injury Brain injury - Support for neurological conditions \| The Brain Charity<br><br>**Brain injury group** – Information about brain injury<br>Home page - Brain Injury Group |

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| | – They then list the primary and secondary effects associated with each cause. | |
| Cancer | • **Small group Activity – Different types of cancer**<br>o Students are given one of the following types of cancer to research:<br>– Breast<br>– Bowel<br>– Lung<br>o For each type of cancer they are given, learners need to prepare a presentation to give to the rest of the class that covers the following:<br>– Causes<br>– Primary effects and associated body systems affected<br>– Secondary effects<br>• Learners present their research to the rest of the class and have time for Q and A at the end of each presentation. | **Breast cancer now** – information about breast cancer<br>About breast cancer \| Breast Cancer Now<br><br>**Cancer research UK** – Information about breast cancer Breast cancer \| Cancer Research UK<br><br>**Bowel cancer UK –** information about bowel cancer<br>Breast cancer \| Cancer Research UK<br><br>**NHS –** Information about bowel cancel<br>About bowel cancer \| Bowel Cancer UK<br>**Patient,** Patient information sheet for bowel cancer<br><br>**NHS –** Information about lung cancer<br>Lung cancer - NHS<br><br>**Roy Castle lung cancer foundation**<br>Lung cancer signs and symptoms |

## Resources

This section has been created to provide a range of links and resources that are publicly
available that you might find helpful in supporting your teaching and delivery of this unit in the qualification. We leave it to you, as a professional educator, to decide if any of these resources are right for you and your students, and how best to use them.

Pearson is not responsible for the content of any external internet sites. It is essential that you preview each website before using it to ensure the URL is still accurate, relevant, and appropriate. We'd also suggest that you bookmark useful websites and consider enabling students to access them through the school/college intranet.

### Websites

https://www.bhf.org.uk - British Heart Foundation - British charity raising money for research into heart and circulatory diseases.

https://www.immunology.org/ - British Society for Immunology - Society that supports the immunology community in driving scientific discovery and making a positive impact on health.

https://www.cancerresearchuk.org/ - Cancer Research UK - UK-based cancer charity.

https://www.gov.uk/government/organisations/department-of-health-and-social-care - Department of Health and Social Care - UK government department leading national health and social care.

https://geekymedics.com/ - Geeky Medics - Global medical education platform and a leading producer of high-quality educational resources.

https://www.hee.nhs.uk/ - Health Education England - UK agency ensuring the NHS workforce has the knowledge, skills, values, and behaviours needed to provide high-quality care.

https://www.nhs.uk - National Health Service (NHS) - Free healthcare service in the UK.

https://digital.nhs.uk/data - NHS Data Hub - The statutory custodian for health and care data in England.

https://www.nice.org.uk/ - NICE - Helps practitioners and commissioners provide the best care to patients while ensuring value for the taxpayer.

https://patient.info/ - Patient Info - Website providing health information and advice to help UK people get a better understanding of their health.

https://practicalbiology.org/ - Practical Biology - Teacher resources for practical biology from the Royal Society of Biology.

https://www.rsb.org.uk/education/teaching-resources - Royal Society of Biology - Teaching resources for biology across different age groups.

https://www.stem.org.uk/ - STEM Learning - Organisation committed to promoting STEM education.

https://www.abpischools.org.uk/age-groups/age-16plus/ - The Association of the British Pharmaceutical Industry - Interactive science resources for schools.

https://www.gov.uk/government/organisations/uk-health-security-agency - UK Health Security Agency - UK government agency that prevents, prepares for, and responds to infectious diseases and environmental hazards.

https://www.who.int/ - World Health Organisation (WHO) - Global agency promoting worldwide health initiatives.

## Pearson paid resources also available

- Pearson Student book
- ActiveBook (a digital version of the Student Book, via ActiveLearn Digital Service)
- Digital Teacher Pack (via ActiveLearn Digital Service)