

BMS Science - Year 9 School Curriculum Map 2024-2025

The curriculum is designed for students to have fun and enjoy science lessons. The aim is for students to appreciate the value of science in their everyday lives. We want to help our young learners understand the world around them and make relevant connections. We encourage students to express their own thoughts and ideas, become curious learners; asking questions and developing independence and communication skills. We motivate students to reach their full potential by building on prior learning and skills, supporting and scaffolding their learning so they can achieve at all levels. Students are encouraged to address misconceptions, continue to develop and build upon the scientific skills and key scientific concepts they have developed from the KS3 curriculum and help them to prepare for the next steps after school and into adulthood.

Unit Title	Unit overview	Knowledge and Skills	Assessment	Key Words
<u>Autumn Term</u> 1) Health and Safety	This unit aims to help learners to appreciate hazards associated with using materials and procedures in the home, workplace or laboratory and how they can minimise the chance of harm. Students will cover the following: • Hazard symbols. • Working safely in a workplace. • Fire safety	• Identify the different hazard symbols. • Identify hazards when using equipment in the workplace. • Safely use equipment under close supervision. • Safely use hazardous substances under close supervision. • Identify how risks can be reduced when using hazardous substances. • Locate in a particular workplace fire exits, fires assembly point and meeting points. • Identify different types of extinguisher and dangers associated with using the incorrect fire extinguisher. • Describe actions to take in the event of a fire. • Describe how to use different types of fire extinguishers. • Identify limitations of a water extinguisher.	Teacher assessment through a variety of activities - quizzes, word wall, games, questioning, role play, speaking activities, card sorts, photographs of learners carrying out activities, storyboards, presentations/posters, evaluation sheets and testing.	Hazard Acutely toxic Risk Assessment Flammable Hazardous to the environment Gas stored under pressure Corrosive Moderate Hazard Oxidising Health hazard acid alkali indicator extinguisher
<u>Spring Term</u> 2) Human Body	This unit aims to help learners gain a basic understanding of how science can help us look after our health. Students will become familiar with the main organs and systems of the body looking specifically at the respiratory system and the circulatory system. Students will cover the following:- • Organs of the body • Functions of the major body systems.	• Identify the key functions of the organs of the body. • Outline the key functions and structures of the major body systems . • Describe relationship between two major body systems • State factors that can increase the risk of ill health and describe how they can increase ill health. • Identify and describe actions that can be taken to maintain health. • Gather data about the health of individuals using suitable testing methods. • Make conclusions about the health of individuals.	Teacher assessment through a variety of activities - quizzes, word wall, games, questioning, role play, speaking activities, card sorts, photographs of learners carrying out activities, storyboards, presentations/posters, evaluation sheets and testing.	Organs Lungs Kidneys Liver Bladder Stomach Small intestine Large intestine Digestive system Nervous system Respiratory system circulatory system Muscular system Excretory system

Unit Title	Unit overview	Knowledge and Skills	Assessment	Key Words
	- Factors that affect the health of individuals. - Investigating the health of individuals.			skeletal system reproductive system oxygen carbon dioxide
<u>Summer Term</u> 3) Working with electrical circuits	This unit enables learners to explore themes connected with the use of electrical circuits. Students will cover: - Basic principles of electrical circuits. - Electrical safety - Building simple working circuits.	- Identify components used in electrical circuits. - Identify simple circuits in which electricity can flow. - State the purpose of components in an electrical circuit. - State some energy changes taking place in an electrical circuit and describe them. - Define key terms used in electrical circuits. - Identify hazards associated with the use of electricity. - Suggest and explain how the risks of electricity can be reduced. - Build simple working circuits. - Measure current and voltage in electrical circuits.	Teacher assessment through a variety of activities - quizzes, word wall, games, questioning, role play, speaking activities, card sorts, photographs of learners carrying out activities, storyboards, presentations/posters, evaluation sheets and testing.	Circuit Series circuit Parallel circuit Battery Wire Bulb Switch Motor Buzzer Ammeter Voltmeter Resistor Amps Volts Energy transfer Residual current device