BENSHAM MANOR School

Science Year 7 Route 2 (7RJ) Curriculum Map 2026-27

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, develop scientific skills and key scientific concepts that can be built upon across the KS3 curriculum and expanded upon in KS4. The KS3 curriculum topics have been carefully sequenced so students gain a firm foundation in year 7 and will help them to progress into year 8. KS1 and KS2 knowledge is secured as appropriate. The desired outcome is cohort-specific; all students progress their way through the science solar steps which are based on knowledge and skills.

Topic Title	Topic overview	Knowledge and Skills	Assessment	Keywords
Autumn term 1) Introduction to science	In this unit students learn how to find their way around a lab, they are introduced to key pieces of equipment and they learn how to work safely.	• Naming equipment and giving uses • Identify dangers in the science lab • List the safety rules of the laboratory **<u>Working scientifically</u>** • Lighting a Bunsen burner • Using and recognising scientific equipment, making observations and recording	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 test tube tripod heatproof mat beaker thermometer measuring cylinder filter funnel + paper safety spectacles Bunsen burner boiling tube gauze pipette spatula tongs splint stop clock
Autumn term 2) Forces	In this unit students will draw on their experience of a range of pushes and they will explore and learn about different types of forces.	• To experience a range of pushes and pulls. • To be able to demonstrate a range of pushes and pulls Working scientifically • To be able to describe, using some scientific vocabulary, a range of pushes and pulls. • To begin to develop the skill of planning.	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	push fast stop twist stretch force backwards roll pull slow go squeeze bend turn forwards
Autumn term 3) Electricity	In this unit students learn about the dangers and uses of electricity. Students build simple circuits.	• To know that electricity can be dangerous. • To know that electricity can produce light, heat, sound, movement. • Make simple circuits. **<u>Working scientifically</u>**	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,	electricity sound move/movement appliance bulb buzzer switch light heat danger, battery wire circuit solar

		● To be able to contribute to class discussion and questioning.	presentations/posters, evaluation sheets and testing	power crocodile clips.
Spring Term 4) Sound	In this unit students explore listening to and making a variety of sounds. They explore how sounds are used in everyday life	● To experience a range of sounds. ● To explore making and changing sounds. ● To be able to identify some common sounds ● To be able to recognise warning sounds **<u>Working scientifically</u>** ● To begin to develop the skill of predicting	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	loud soft quiet, silence vibration near far (away) high low listen hear.
Spring Term 5) Exploring the senses. Grouping and classifying materials and uses of everyday materials	In this unit students will explore a range of different materials and their properties. They will classify and sort materials	● Identify and name materials. **<u>Working scientifically</u>** ● Exploring the properties of materials. ● Sorting and grouping materials. ● Explain why materials are used for particular jobs. ● To classify materials as solids, liquids and gases. ● To use a thermometer	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	hard soft rough smooth light heavy stretchy cold warm same different magnetic strong weak see-through waterproof wet/dry material, shiny/dull sink/float sticky metal plastic wood rock stone paper, fabric wool rubber natural man-made brick concrete glass predict, properties hardness strength flexible rigid elastic scratch conductor insulator graphite thermal temperature thermometer heat cold freezing melting solid liquid gas
Summer Term 6) Changing materials and	In this unit students will explore properties of solids, liquids and gases. They will explore changes of state and	● To describe properties of solids, liquids and gases. ● To be able to explore a range of changes when materials are heated or cooled.	Teacher assessment through a variety of activities - quizzes, word wall, games, questioning, role play, speaking activities, card sorts, photographs of learners	heat cool ice freeze runny pour set hard solid liquid gas mixture dissolve fizz substance

states of matter	differences between physical and chemical change	● To be able to name some reversible changes. ● To be able to name some non-reversible changes. ● To be able to explain melting, boiling, condensing, freezing and evaporating in terms of solids, liquids and gases. **<u>Working scientifically</u>** ● To be able to use the scientific vocabulary in discussion.	carrying out activities, storyboards, presentations/posters, evaluation sheets and testing	temperature thermometer cold freezing melting reversible non-reversible solidify permanent burn smoke firm light volume shape dissolve boil condense evaporating water vapour.
Summer Term 7) Separating materials and properties of materials	In this unit students practically explore different separating techniques and how to apply them. They separate a variety of mixtures using the following techniques - sieving, filtering, evaporating.	● To understand what a mixture is. ● To be able to separate solid mixtures. ● To be able to separate a solid from a liquid. ● Understand what happens when something dissolves. **<u>Working scientifically</u>** ● Separating a dissolved solid from water. ● Explore different methods of separation.	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	solid properties separate sieving soil particles dissolve solution insoluble soluble filters filtering liquid substance separate solution solute solvent evaporate