

What your child will learn each half term

This overview shows the key topics, skills, and knowledge your child will be learning in **Science** in **Year 7**. It helps families understand what's being taught, how it builds on previous learning, and how you can support your child at home.

- **What we are learning:** The topic or focus for the half term.
- **Key knowledge & skills:** What students should understand and be able to do.
- **How we assess learning:** knowledge checks, practical tasks, written responses and formal assessments.
- **Key words to know:** Vocabulary students will learn and use.

Half term	What we are learning	Key knowledge Key skills	How we will assess learning in this unit	Homework	Key vocabulary for this unit
HT 1	• Introduction to Science • Matter	- Laboratory Safety • Basic Scientific Equipment • Scientific Investigations: ○ Making careful observations ○ Forming hypotheses (educated guesses) ○ Planning and conducting simple experiments ○ Recording results clearly ○ Presenting data using tables and graphs ○ Drawing basic conclusions from evidence • The Particle Model: Understanding how the arrangement and movement of particles explains the behaviour of: • Solids • Liquids • Gases • Changes of State: Learning how materials change between states (melting, freezing, evaporation, condensation) through particle movement. • Diffusion: Exploring how particles move and spread out in gases and liquids.	Multiple choice knowledge check applied a few lessons into the topic out of 10 marks recalling of facts, comprehension and the ability to apply knowledge. Extended writing task – a 6-mark question on a particular aspect of the topic. Requiring pupils to provide more detailed and structured responses, assessing a pupil's ability to organise their ideas clearly, apply scientific vocabulary accurately and encourage a deeper understanding. An end of unit feedback task – composed of a variety of tasks. Assessing pupils understanding of key concepts and skills covered throughout the topic; testing both recall and application of scientific knowledge. Helping to identify strengths and topics that may need further reinforcement or focus for pupils.	Homework is set weekly on a Monday using a website 'Educake' Quizzes will focus on the topic that is being taught and will encourage learning retrieval from previous lessons. Homework's will be a mix of multiple choice and long answer style questions. Teachers will check homework's weekly and feedback to the class. Parents will be contacted if homework's are not being completed by pupils.	Introduction to Science Observation Experiment Variable Equipment Measurement Conclusion Investigation Accurate Record Results Analysis Matter Particle Liquid Freezing Evaporation Condensation Sublimation Diffusion Physical change

HT 2	- Cells - Forces	- Use light microscopes to observe plant and animal cells - Prepare simple microscope slides - Make detailed observations and record findings - Identify and understand the functions of key cell structures. - Compare different types of cells and understand their similarities and differences - Interpret and label scientific diagrams of cells Types of forces: including contact forces (friction, air resistance) and non-contact forces (gravity) - The difference between balanced and unbalanced forces - How forces affect motion and shape - Measure force using a Newton meter - Accurately record data - Represent forces with diagrams, using arrows to show direction and magnitude - Plan and conduct investigations to test how different forces affect motion - Analyse results to explain key ideas - Calculate speed using the equation: Speed=Distance/Time	Multiple choice knowledge check Extended writing task An end of unit feedback task	Homework is set on a Monday and is due the following Monday.	Cells Cell Nucleus Cytoplasm Cell membrane Cell wall Chloroplast Mitochondria Plant cell Animal cell Microscope Tissue Organ Organ system Unicellular Multicellular Observation Slide Magnification Forces Force Gravity Friction Air resistance Balanced force Unbalanced force Resultant force Mass Weight Newton Motion Speed Distance Time Velocity Acceleration Speed = distance ÷ time
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