

Year 7 Term 1: Cells		
Topics covered 1. Microscopes 2. Animal Cells 3. Plant Cells 4. Specialised Cells 5. Unicellular and Multicellular Organisms	How it links to what you have studied before Previously you have learnt about: • Life Processes that are common to all living things • The different parts within a plant and how they have specific functions. You will learn about the structure and function of the most basic unit of all living things You will build on your knowledge on the structure and organisation of living organisms	How it links to what you will study You will use knowledge from this topic in the following KS3 topics: - The Digestive System - The Respiratory System - Photosynthesis - Plant Reproduction - Cell Transport
Key words: • Nucleus • Cytoplasm • Cell Membrane • Mitochondria • Cell Wall • Chloroplasts • Vacuole		Key skills: • How to observe, interpret and record the structure of a cell using a light microscope. • Practical Lab Skills - How to create an animal and plant cell sample slide.
Assessment focus End of term exam Assessed task on animal and plant cell structure and function		Revision tips Educake (quizzing website) Create Mind Maps/Flashcards (using BBC Bitesize)
Why we study it This unit will provide you with the foundational and fundamental knowledge of the basic structure and function of all living things. You will build on this throughout your secondary science education (and beyond).		
Mastery in this subject • I can identify and explain some of the structural adaptations of specialised cells • I can describe how to create a slide of a sample of animal and/or plant cells		

Year 7 Term 1: Chemistry - Atoms, elements, and compounds		
Topics covered: 1. Lab safety 2. Atoms, elements, and compounds 3. Naming compounds 4. Chemical reactions 5. Polymers 6. Properties of matter	How it links to what has been studied before: • The work builds on student ability to work scientifically (introduced in KS2). • The topic extends the KS2 curriculum where students have studied changes of state, reversible reactions (not chemical) and non-reversible reactions (chemical reactions). • It develops understanding of properties of materials.	How it links to what will be studied: This forms the basis for how students will conduct themselves in a lab environment. It provides the underpinning science for all future chemical reactions and explanations of chemical phenomena.
Key words: Atom, element, compound, mixture, molecule, reactants, products, hazard, word/symbol equations, states of matter, periodic table,		Key skills: Lab safety - how to work in a science lab identify and minimise risk. How to utilise the periodic table to make links with reactions. Develop a range of vocabulary to describe properties of matter and reactions.
Assessment focus End of term exam Assessed work on burning magnesium practical.		Revision tips Use of educake Create mindmaps/flashcards Construct links between similar ideas to show the patterns in chemistry.
Why we study it: Everything we use, eat, interact with everyday is designed using chemical reactions to provide the properties of materials that are required for its purpose. In addition being safe and recognising risk not only in a lab setting but all around us helps to keep us safe (crossing roads to cooking meals)		
Mastery in this subject To master this topic students will be able to utilise the periodic table to show they can apply the information on it to naming substances and predicting reactions that will occur.		

Year 7 Term 1: Forces		
Topics covered: 1. What are Forces? 2. What is Friction? 3. What are balanced and unbalanced forces? 4. What is Hooke's Law?	How it links to what has been studied before: KS2: identify the effects of air resistance, water resistance and friction, that act between moving surfaces recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect.	How it links to what will be studied: KS4: Forces will be completed in more detail but specifically how they interact to create motion, acceleration and speed. Calculations will also be involved here.
Key words: Resultant force, Newton, Weight, Mass, Friction, Upthrust, Reaction Force, Air resistance. Acceleration.		Key skills: Practical skills identifying independent, dependent and control variables. Using weights to see the effects of different forces and the speed objects move.
Assessment focus: Part of a half term test (under review) Formative assessment in class		Revision tips Use diagrams and label diagrams to help recognise where forces are. Use BBC bitesize for content boosting and questions which will help you test your knowledge. Use educake to answer questions and then research the questions you got wrong.
Why we study it: Forces create motion and acceleration. By understanding forces, we understand how objects and humans can move and why at specific speeds.		
Mastery in this subject Students will be able to calculate result force and use this to describe the motion of a moving object. This should then begin to be applied to graphs. Students will confidently be able to label forces that an object is using.		

