Year Group: 8	Subject: Science	Term: Summer 2020

Topic	Key Learning points	Assessment
Biology: Photosynthesis	*End Point: Understand that photosynthesis is a biochemical process that stores energy from sunlight in glucose. Give a simple explanation of how specific adaptations and specialised cells facilitate photosynthesis in plants.* • Describe how structures of specialised cells plant cells (root hair cell and palisade) are related to function • Describe photosynthesis using a word equation • Describe the function of stomata • Describe the test for starch • Explain why leaves left in sunlight test positive for starch • Compare gas levels around a plant linking with ideas about rate of photosynthesis and respiration in daytime and night time • Describe limiting factors graphs in terms of limiting the rate of photosynthesis • Describe extremophile plant adaptations	Students will be formatively assessed during each topic by weekly multiple-choice tests in class: • Before each assessment students will complete a revision homework • After each assessment there will be an opportunity for students to review their understanding • Teachers will provide students with targeted feedback, based on their test performance At the end of the term students will have a summative assessment. This will be a 45-mark exam paper (15 marks from each topic), which will be marked by their teacher
Chemistry: Reactions of Metals	*End Point: Identify the properties of metals and describe the different reactions of metals. Know how salts of formed through the reactions of acids and bases and describe how metals can be protected from corrosion.* • Write word equations for the reaction of metals and acids • Predict the name of salts formed • Describe the test for hydrogen (squeaky pop). • Know that a more reactive metal will displace a less reactive metal from a compound • Predict the order of reactivity of metals from displacement reactions • Write word equations for the reaction of acids and metal carbonates • Describe how to test for carbon dioxide (limewater) • Know that a salt is a compound formed by the neutralisation of an acid with a base • Know that all metal oxides are bases and can neutralise acids • Describe how to prepare a soluble salt from an insoluble metal oxide • Know that corrosion is the reaction of oxygen with the surface of a metal • Know the conditions required for rusting • Know that a physical barrier can be used to prevent oxygen and/or water from reaching a metal to stop corrosion	
Physics: Heating and Cooling	*End Point: Understand how energy is transferred between stores of energy both by particles (conduction and convection) and by radiation.* • Recap the particle model and how the arrangement/movement of particles changes during a state change • Describe state changes in terms of energy and recap heating and cooling curves • Recap energy stores and energy transfer mechanisms • Know the difference between heat and temperature • Know the thermal energy is transferred through solids by conduction • Know that thermal energy is transferred through liquids and gases by convection • Know that thermal energy is transferred through a vacuum by radiation • Know that materials can be conductors or insulators of thermal energy • Use practical work to determine how to reduce heat loss, relate this to everyday issues, such as insulating materials used in house building	