Sir William Ramsay School

EMPOWERING EVERYONE TO ACHIEVE

Year 7	Science Grade Descriptors
Progress Grade	**Data Drop 1 - Autumn Term**
Working Towards	A student can: • Label the parts of the microscope, a plant, an animal and a unicellular cell and view these under a microscope. • Identify the arrangement, change of state, separation and movement of particles in the three states of matter. • Identify examples of forces (balanced/unbalanced) and their effects on objects.
Expected	A student can: • Use a microscope to compare the parts of plant and animal cells and describe the function of specialised cells. • Describe the arrangement, change of state, separation and movement of particles in the three states of matter. • Describe examples and effects of forces and describe how to measure forces and give the unit of force.
Above	A student can: • Use a microscope and calculate the total magnification used to observe an object. • Compare the plant and animal cells and describe the adaptations of specialised and unicellular cells. • Use the particle model to explain the properties and their change of state of a substance in its three states. • Describe the effects of the forces of friction, drag, gravitational and magnetic on objects.
Exceptional	A student can: • Use a microscope to focus an image to compare the functions and adaptations of plant, animal and unicellular cells. • Compare the arrangement, separation, change of state and movement of particles in the three states of matter, using the particle model. • Apply ideas about particles to compare the friction and drag caused by different states of matter. • Explain the effects of balanced and unbalanced forces in unfamiliar situations.

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Year 7	Science Grade Descriptors
Progress Grade	**Data Drop 2 - Spring Term**
Working Towards	A student can: • Identify a function of the female and male reproductive systems, identifying the main structures involved in pregnancy. • Identify the parts of a flower which will develop into the seeds and the fruits. • Identify examples of chemical reaction and write word equations. • Identify how sounds are caused and how it travels in different states of matter. • Identify the key features of light and structures of the eye.
Expected	A student can: • Describe the main stages of reproduction in animals to include, puberty, menstruation, fertilisation implantation and pregnancy. • Describe the main structures in a flower and the process of pollination and seed dispersal in plant reproduction. • Describe chemical reactions and write word equations for oxidation, combustion and decomposition reactions. • Describe how sound is produced and travels and how the ear and a microphone work. • Describe how light is emitted, travels and is detected or absorbed, including how light is reflected and refracted.
Above	A student can: • Explain what occurs in the main stages of reproduction in animals to include, puberty, menstruation, fertilisation implantation and pregnancy. • Describe the main structures in a flower and the process of pollination and seed dispersal in plant reproduction. • Describe chemical reactions and write word equations for oxidation, combustion and decomposition reactions. • Explain the journey of light from an emitter to a receiver and apply the ideas of reflection and refraction. • Give details of how sound is produced and travels and how the ear and a microphone work.
Exceptional	A student can: • Outline the main stages of reproduction in animals to include, puberty, menstruation, fertilisation implantation and pregnancy. • Explain the main structures in a flower and its role in pollination in plant reproduction. • Predict the reactants and products of oxidation, combustion, and decomposition reactions. • Explain the journey of light from an emitter to a receiver and apply the ideas of reflection and refraction. • Give details of how sound is produced and travels and how the ear and a microphone work.

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Year 7	Science Grade Descriptors
Progress Grade	**Data Drop 3 - Summer Term**
Working Towards	A student can: • Name some common properties of acids and alkalis and the type of substances made when an acid and alkali react. • Label hazard symbols and describe the hazards relating to them. • Name some objects in the Solar System and identify some patterns. • Describe the motion of the Sun, stars and Moon across the sky. • Name and describe differences between the seasons.
Expected	A student can: • Compare the properties of different types of acids and alkalis. • Describe the steps in making a salt in a neutralisation reaction. • Identify and describe the meaning of hazard symbols and offer suitable safety precautions. • Describe how objects in the solar system are arranged. • Explain the motion of the sun, stars and moon across the sky. • Describe the appearance from diagrams of the Earth, Sun and Moon.
Above	A student can: • Explain the difference between acid strength and acid concentration. • Explain how neutralisation reactions are used in a range of situations. • Explain the formation of salts from the displacement of acids. • Predict the effect of the Earth's tilt on temperature and day length. • Explain how the properties and features of planets are linked to their place in the solar system. • Explain how total eclipses are linked to phases of the moon.
Exceptional	A student can: • Compare the use of a variety of indicators and a pH probe to measure acidity and alkalinity. • Deduce the hazards of different acids using data about their concentration and pH. • Interpret a graph of pH changes during a neutralisation reaction. • Compare explanations about the motion and structure of the Universe from different periods in history. • Explain how the properties and features of planets are linked to their place in the Solar System.