Navigator Curriculum - Formal Curriculum

- A formal academic curriculum for students closer to age related expectations.
- Aspirational and challenging.
- It is typically for our children with high functioning autism or moderate learning difficulties.
- A broad and balanced secondary curriculum.
- Leads to good GCSE, Level 1 and Level 2 outcomes.
- Subjects become more specialist.

7N - Navigator Curriculum – *Science 6 Lessons Weekly*

Click here for SoW access
Click here for baseline

	2020 – 2021 Autumn 1 Unit 1	2020 – 2021 Autumn 2 Unit 2	2020 – 2021 Spring 1 Unit 3	2020 – 2021 Spring 2 Unit 4	2020 – 2021 Summer 1 Unit 5	2020 – 2021 Summer 2 Unit 6
	Knowledge					
Year 7	**Topic:** Intro to Lab **B1** Cells, **B2** Structure and function of body systems. **Key Questions:** **What are cells?** **What are the various systems within the body and what do they do?** **B1** - Describe what a cell is. - Explain how to use a microscope to observe a cell. - Describe the similarities and differences between plant and animal cells. - Describe the functions of the components of a cell.	**Topic:** **B3** Reproduction (plant – focus), **C1** The particle model. **Key Questions:** **How do plants reproduce?** **What are particles and how are they used to model behavior in the states of matter?** **B3** - Name the parts of a flower. - State what is meant by pollination. - Name two methods of pollination. - Describe the process of fertilisation in plants. - Describe how	**Topic:** **C2** Elements, atoms and compounds, **C3** Reactions **Key Questions:** **What are elements, atoms and compounds?** **What is a chemical reaction?** **C2** - State what an element is. - Recall the chemical symbols of six elements. - State what atoms are. - Compare the properties of one atom of an element to the properties of many atoms. - State what elements and	**Topic:** **C4** Acids and alkalis **P1** Forces **Key Questions:** **What are acids and alkalis?** **What do forces do and are the different types of forces?** **C4** - Name some common properties of acids and alkalis. - Describe, in simple terms, what the key words 'concentrated' and 'dilute' mean/ - Describe broad colours of universal indicator for acids, alkalis, and neutral solutions.	**Topic:** **B3** Reproduction - *Link to PSHE during this half term.* **P2** Sound. **Key Questions:** **How do humans reproduce?** **What are the properties of sound?** **B3** - State the definitions for adolescence and puberty. - State changes to the bodies of boys and girls during puberty. - Name the main structures of the male and female reproductive system. - State a function of	**Topic:** **P3** Light, **P4** Space – *Link to man on the moon.* **Key Questions:** **What are the properties of light?** **What do we know about the solar system?** **P3** - Describe what happens when light interacts with materials. - State the speed of light. - Describe the features of a mirror image. - Identify examples of specular reflection and diffuse scattering. - Describe and explain

	- Describe examples of specialised animal cells. - Describe examples of specialised plant cells. - Name some substances that move into and out of cells. - Describe the process of diffusion. - Name an example of a unicellular organism. - Identify some structures in an amoeba. **B2** - Name the parts of the gas exchange system. - State that the parts of the gas exchange system are adapted to their function. - Describe the processes of inhaling and exhaling. - Describe how a bell jar can be used to model what happens during breathing. - Describe the structure of the skeleton. - Describe the functions of the skeletal system. - Describe the role of joints in movement. - Explain how to measure the force exerted by different muscles.	seeds and fruits are formed. - State what is meant by seed dispersal. - Name the methods of seed dispersal. **C1** - Describe how materials are made up of particles. - Use the particle model to explain why different materials have different properties. - Describe the properties of a substance in its three states. - Use ideas about particles to explain the properties of a substance in its three states. - Use the particle model to explain changes of state involving solids and liquids. - Use the particle model to explain boiling. - - Describe changes of state involving gases. - Use the particle model to explain evaporation, condensation, and sublimation. - Use the particle model to explain diffusion. - Describe evidence for diffusion. - Describe simply what gas pressure	compounds are different. - Identify elements within compounds. - State how many different elements are in a compound by looking at a chemical formula. - Name the elements in a compound. **C3** - State what a chemical reaction is. - State what happens to the reactants in a chemical reaction. - State some signs of a chemical reaction. - Identify reactants and products in word equations. - Write word equations to represent chemical reactions. - State what a fuel is. - State what fuels react with when they burn. - State simply what a decomposition reaction is. - Describe the products of a decomposition reaction. - State what happens to the mass of the reactants and products in chemical reactions. - Describe how to find out the mass of a reactant or	- State that indicators will be different colours in acids, alkalis, and neutral solutions. - State simply what happens during a neutralisation reaction. - Give one example of a neutralisation reaction. - State the type of chemical made when an acid and alkali react. - Match the type of salt that will form from the type of acid used. **P1** - Explain what forces do. - Describe what is meant by an interaction pair. - State an example of a force deforming an object. - Recognise a support force. - Describe the effect of drag forces and friction. - Explain why drag forces and friction arise. - Describe the effects of a field. - Describe the effect of gravitational forces on Earth and in space. - Identify familiar situations of balanced and unbalanced forces. - Define equilibrium.	the main structures of the male and female reproductive system. - State the definition of gametes. - State what is meant by fertilisation. - State the definition of gestation. - State how long a pregnancy lasts. - State a simple definition of the menstrual cycle. - State the main stages in the menstrual cycle. - Present key pieces of information in a sequence. **P2** - State some features of waves. - State what happens when waves hit a barrier. - State that waves in the same place affect each other. - Name some sources of sound/ - Name materials that sound can travel through. - State that sound travels more slowly than light. - Describe the link between loudness and amplitude. - Describe the link between frequency and pitch. - Describe how the ear works. - Describe how your	what happens when light is refracted. - Describe what happens when light travels through a lens. - Name parts of the eye. - Describe how the eye works. - Explain what happens when light passes through a prism. - Describe how primary colours add to make secondary colours. **P4** - Name some objects seen in the night sky. - Place some objects seen in the night sky in size order. - Name the objects in the Solar System. - Describe some similarities and differences between the planets of the Solar System. - Describe differences between seasons. - Describe the motions of the Sun, stars, and Moon across the sky. - Describe the phases of the Moon. - Explain why you see phases of the Moon.

	- State the function of major muscle groups. - State the definition of antagonistic muscles. **Key Skills:** Use appropriate techniques, apparatus, and materials during fieldwork and laboratory work, paying attention to health and safety. Present observations and data using appropriate methods, including tables and graphs. -Make and record observations and measurements using a range of methods for different investigations. **Assessment outcome:** Pre and post topic tests.	is. - State examples of gas pressure in everyday situations. **Key Skills:** Interpret data about melting points. Interpret data about changes of state. Select, plan and carry out the most appropriate types of scientific enquiries to test predictions, including identifying independent, dependent, and control variables, where appropriate. **Assessment outcomes:** Pre and post topic tests.	product. - State simply what happens in endothermic and exothermic changes. - Identify a reaction as endothermic or exothermic. **Key Skills:** Make predictions using scientific knowledge and understanding. Present observations and data using appropriate methods, including tables and graphs. **Assessment outcomes:** Pre and post topic tests.	- Identify when the speed or direction of motion of an object changes. **Key Skills:** Evaluate risks. Interpret observations and data, including identifying patterns and using observations, measurements, and data to draw conclusions. Select, plan, and carry out the most appropriate types of scientific enquiries to test predictions, including identifying independent, dependent, and control variables, where appropriate. Present observations and data using appropriate methods, including tables and graphs. **Assessment outcomes:** Pre and post topic tests.	hearing can be damaged. - Describe what ultrasound is. - Describe some uses of ultrasound. **Key Skills:** Interpret observations and data, including identifying patterns and using observations, measurements, and data to draw conclusions. Present reasoned explanations, including explaining data in relation to predictions and hypotheses. Make predictions using scientific knowledge and understanding. **Assessment outcomes:** Pre and post topic tests.	**Key Skills:** Evaluate data, showing awareness of potential sources of random and systematic error. Use appropriate techniques and apparatus during fieldwork and laboratory work, paying attention to health and safety. Present and record observations using appropriate methods, including tables and graphs. **Assessment outcome:** Pre and post topic tests.
	Use icould/ UCAS video to links careers as part of a starter ONE lesson per week.	Use icould/ UCAS video to links careers as part of a starter ONE lesson per week.	Use icould/ UCAS video to links careers as part of a starter ONE lesson per week.	Use icould/ UCAS video to links careers as part of a starter ONE lesson per week.	Use icould/ UCAS video to links careers as part of a starter ONE lesson per week.	Use icould/ UCAS video to links careers as part of a starter ONE lesson per week.
	STEM linked careers trip/ visitor - AM		STEM linked careers trip/ visitor - AM		STEM linked careers trip/ visitor - AM	