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	Stand alone units to support continuous provision Taught through computing curriculum with support of specialist teacher		
	Autumn	**Spring**	**Summer**
YEAR 1	**What is a structure and how do people build them?** As designers, by the end of Year 1, we will: • Understand what a structure is and how it is made • Understand how and why people design and make structures Safety and hygiene	**How can you design and make a portable snack?** As designers, by the end of Year 1, we will know: • How to design and make a portable snack for a specific purpose and an intended user. • As part of the process students will take inspiration from existing products, select appropriate ingredients and techniques to use and take into account safety features. **How can we design and make a solid structure?** As designers, by the end of Year 1, we will: • Understand that a solid structure is made from either one solid object or lots of solid objects joined together. • Know that solid structures are very strong. • Take inspiration from existing products to design and make a solid structure for a particular purpose and user	**How can we design and make a slider mechanism?** As designers, by the end of Year 1, we will: • Understand what a slider mechanism is and how it works • Take inspiration from existing products to design and make a slider mechanism for a particular purpose and user Seasonal food
YEAR 2	**How can we design and make a wheel and axle mechanism by looking at real-life examples?** As designers, by the end of Year 2, we will: • Understand what wheel and axle mechanisms are and how they work • Take inspiration from existing products to design and make a wheel and axle mechanism for a particular purpose and user	**How can we use ideas from existing products to design and build a frame structure that suits a specific purpose and user?** As designers, by the end of Year 2, we will: • Understand how different frame structures are made • Describe the different types of natural and manufactured frames • Take inspiration from existing products to design and make a frame structure for a particular purpose and user Food sources	**How can we design and make a couscous dish that meets the needs of a specific user and purpose?** As designers, by the end of Year 2, we will know: • How to design and make a couscous dish for a specific purpose and an intended user. • As part of the process students will take inspiration from existing products, select appropriate ingredients and techniques to use and take into account safety features.
YEAR 3	**How can we design a vegetable soup for a specific user and purpose, using inspiration, suitable ingredients and safe techniques?** As designers, by the end of Year 3, we will know: • How to design and make a vegetable soup for a specific purpose and an intended user. • As part of the process students will take inspiration from existing products, select appropriate ingredients and techniques to use and take into account safety features. Seasonal food	**How can we design and make a linked lever system that solves a problem for a specific user, inspired by real products?** As designers, by the end of Year 3, we will: • Understand how to make linked levers • Design and evaluate linked levers • Take inspiration from existing products to design and make linked levers for a particular purpose and user App control	**How can we use pneumatics to design a mechanism that solves a real-world problem for a specific user?** As designers, by the end of Year 3, we will: • Understand how to make pneumatics • Design and evaluate hydraulic mechanisms • Take inspiration from existing products to design and make pneumatics or hydraulic mechanisms for a particular purpose and user Seasonal food
YEAR 4	**How can we design, make and evaluate paper LED circuits for a specific purpose and user, using inspiration from existing products?** As designers, by the end of Year 4, we will: • Understand how to make and break paper LED circuits • Design and evaluate paper circuits • Take inspiration from existing products to design and make a paper circuit for a particular purpose and user Safe storage	**How can we design and make a dip that meets the needs of a specific user and purpose?** As designers, by the end of Year 4, we will know: • How to design and make a dip for a specific purpose and an intended user. • As part of the process students will take inspiration from existing products, select appropriate ingredients and techniques to use and take into account safety features.	**How can we design and evaluate a stable frame structure for a specific purpose and user?** As designers, by the end of Year 4, we will: • Understand the importance and techniques used to create stable structures • Design and evaluate truss bridges • Take inspiration from existing products to design and make a frame structure for a particular purpose and user A balanced diet

YEAR 5	**How can we design and make bread for a specific purpose and user, using inspiration, suitable ingredients, techniques and safety considerations?** As designers, by the end of Year 5, we will know: • How to design and make bread for a specific purpose and an intended user. • As part of the process students will take inspiration from existing products, select appropriate ingredients and techniques to use and take into account safety features. Things to remember: food safety, hygiene rules and safe cooking	**How can we design and build a pulley and gear mechanism that solves a real-world problem for a specific user?** As designers, by the end of Year 5, we will: • Understand how to make a pulley and gear mechanism • Design and evaluate a pulley and gear mechanism • Take inspiration from existing products to design and make a pulley and gear mechanism for a particular purpose and user Food throughout the year –Chinese New Year	**How can we use cams to design a moving model that meets the needs of a specific user and purpose?** As designers, by the end of Year 5, we will: • Understand how to make a cams model • Understand how different shaped profiles create different types of movements • Design and evaluate different cams • Take inspiration from existing products to design and make a cams model for a particular purpose and user Food throughout the year –Iftar
YEAR 6	**How can we design and evaluate a stable tetrahedral kite structure for a specific purpose and user, using inspiration from existing products?** As designers, by the end of Year 6, we will: • Understand the importance and techniques used to create stable structures • Design and evaluate tetrahedral kites • Take inspiration from existing products to design and make a frame structure for a particular purpose and user Food throughout the year –Diwali, Christmas and Hanukkah	**How can we use electronic motors to create a purposeful product that meets the needs of a specific user?** As designers, by the end of Year 6, we will: • Understand how to make electronic motors • Design and evaluate different electronic motors and their effects on pulleys, propellers, fans, gears, and axles and wheels. • Take inspiration from existing products to design and make a motorised product for a particular purpose and user	**How can we design and cook a Bolognese dish that meets the needs of a specific user and purpose?** As designers, by the end of Year 6, we will know: • How to design and make a Bolognese dish for a specific purpose and an intended user. • As part of the process students will take inspiration from existing products, select appropriate ingredients and techniques to use and take into account safety features. Kitchen garden Artificial Intelligence