

Year 3 - Progression of Knowledge and Skills DT

Term	Knowledge	Skills
Autumn Structures: Product packaging Exploring how 3D shell structures are created from nets, investigating their use in packaging and applying this understanding to create original designs.	• Beginning to understand how different structures are built. • Strengthening structures by ribbing. • Constructing a range of 3D shapes. • To know that creating accurate shapes improves how they look and sometimes their function. • To know good suggestions help give better feedback. • To know that they can choose to use feedback or not. • To know that a shell structure is a hollow shape with a thin outer layer. • To know that 3D shapes can form structures. • To know structures can be strengthened by manipulating materials and shapes	• Creating simple design criteria that outline basic functionality and appeal to individual users or target audiences. • Beginning to use 2D CAD software to communicate their ideas. • Creating accurate shapes from templates. • Cutting out more complex shapes accurately. • Choosing shapes to suit the function of a product • Explaining why they think certain aspects of a peer's design are effective or why they suggested specific improvements. • Investigating and analysing a range of existing products by looking at their functionality and appeal. • Reflecting on feedback to decide if and how it could be used to improve future iterations

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Spring Digital world: Wearable technology Developing an understanding of programmable products by designing, coding and promoting wearable technology for use in low-light conditions.	• To understand that, in programming, a 'loop' is code that repeats something again and again until stopped. • To know that a micro:bit is a pocket-sized, codeable computer. • To know that a simulator is able to replicate the functions of an existing piece of technology. • To understand what is meant by 'point of sale display.' • To know that CAD stands for 'Computer-aided design'	• Problem solving by suggesting which features on a micro:bit might be useful and justifying my ideas. • Drawing and manipulating 2D shapes, using computer-aided design, to produce a point of sale badge. • Developing design ideas through annotated sketches to create a product concept. • Developing design criteria to respond to a design brief. • Following a list of design requirements. • Writing a program to control (button press) and/or monitor (sense light) that will initiate a flashing LED algorithm.

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Term	Knowledge	Skills
Summer Cooking and Nutrition: Eating Seasonally Investigate seasonal food in the UK to create a seasonal food tart.	• To know that seasonal means foods that grow in a given season in a given country. • To know some seasonal foods that grow in the UK and what season they grow in. • To know that eating seasonal foods can have a positive impact on the environment. • To know how to describe the flavour and texture of foods. • To know how to cut a peel safely. • To know that the appearance of food is as important as taste. • To know that similar coloured fruits and vegetables often have similar nutritional benefits	• Describing how climate affects where foods grow. • Identifying seasonal ingredients from the UK. • Following the instructions within a recipe. • Tasting seasonal ingredients. • Peeling foods by hand or with a peeler. • Cutting ingredients safely. • Choosing ingredients based on a design brief. • Describing the texture and flavour of ingredients. • Describing the benefits of seasonal fruits and vegetables and the impact on the environment.