DT Autumn Overview

DT	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Unit	Cooking and nutrition: Soup	Constructing a windmill	Structures: Baby bear's chair	Cooking and nutrition: Eating seasonally	Mechanical systems: Making a slingshot car	Electrical systems: Doodlers	Textiles: Waistcoats
Outline	In this unit, children explore the differences between fruits and vegetables using their senses (taste, texture, smell etc.). They listen to the story 'The best pumpkin soup' and discuss the key ingredients the characters used before developing a class-based vegetable soup recipe.	Designing, decorating and building a windmill for their mouse client to live in, developing an understanding of different types of windmill, how they work and their key features.	Using the tale of Goldilocks and the Three Bears as inspiration, children help Baby Bear by making him a brand new chair. When designing the chair, they consider his needs and what he likes and explore ways of building it so that it is strong	Pupils discover when and where fruits and vegetables are grown and learn about seasonality in the UK. They respond to a design brief to design a seasonal food tart using ingredients harvested in the UK in May and June.	Making and designing mechanical cars that use different methods of movement or creating and developing a car with a working slingshot mechanism.	Using inspiration of historical monuments and modern installations, children plan by researching and drawing, a sculpture to fit a design brief. They investigate scale, the display environment and possibilities for viewer interaction with their piece.	Selecting suitable fabrics, using templates, pinning, decorating and stitching to create a waistcoat for a person or purpose of their choice.
Learning objectives	• To explore fruits and vegetables and the differences between them. • To use adjectives to describe how fruits and vegetables look, feel, smell and taste. • To listen to and recall elements	• To include individual preferences and requirements in my design. • To make a stable • structure. • To assemble the components of my structure. • To evaluate my project and adapt my design	• To explore the concept and features of structures and the stability of different shapes. • To understand that the shape of the structure affects its strength. • To make a structure according to design criteria. To produce a finished structure and evaluate its strength,	• To explain why food comes from different places around the world. • To explain the benefits of seasonal foods. To develop cutting and peeling skills. • To evaluate seasonal ingredients. • To design a mock-up using criteria. • To evaluate a dish.	• To build a car chassis. • To design a shape that reduces air resistance. • To make a model based on a chosen design. • To assemble and test my completed product.	• To understand how motors are used in electrical products. • To investigate an existing product to determine the factors that affect the product's form and function. • To apply the findings from research to develop a unique product. • To develop a DIY kit for another individual to assemble their product.	• To design a waistcoat. • To mark and cut fabric according to a design. • To assemble a waistcoat. • To decorate your waistcoat.

DT Autumn Overview

	from the story 'The Best Pumpkin Soup.' • To explore a pumpkin and describe it using the five senses.		stiffness and stability.				
Key Skills	• To design a fruit and vegetable soup recipe. • To practise cutting with a knife. • To learn how to use a knife safely. • To observe and help (where appropriate) with the use of tools to prepare ingredients. • To describe the finished product and evaluate the process. • To design food packaging.	• Identify some features that would appeal to the client (a mouse) and create a suitable design. • Explain how their design appeals to the mouse. • Make stable structures, which will eventually support the turbine, out of card, tape and glue. • Make functioning turbines and axles that are assembled into the main supporting structure.	• Identify man-made and natural structures. • Identify stable and unstable structural shapes. • Contribute to discussions. • Identify features that make a chair stable. • Work independently to make a stable structure, following a demonstration. • Explain how their ideas would be suitable for Baby Bear. • Produce a model that	• Explain that fruits and vegetables grow in different countries based on their climates. • Understand that seasonal fruits and vegetables grow in a given season. • Understand that eating seasonal fruit and vegetables positively affects the environment. • Design a tart recipe using seasonal ingredients	• Designing a shape that reduces air resistance • Drawing a net to create a structure from • Choosing shapes that increase or decrease speed as a result of air resistance • Personalising a design • Measuring, marking, cutting and assembling with increasing	• Identify simple circuit components (battery, bulb and switch) with a basic explanation of their function. • Explain that a series circuit is assembled in a loop to allow the electricity to flow along one path. • Describe a motor as a circuit component that changes electrical energy into movement. • Provide examples of motorised products that use movement to rotate or spin different parts. • Remove and replace different parts of a Doodler,	• Consider a range of factors in their design criteria and use this to create a waistcoat design. • Use a template to mark and cut out a design. • Use a running stitch to join fabric to make a functional waistcoat. • Attach a secure fastening, as well as decorative objects. • Evaluate their final product.

		• Say what is good about their windmill and what they could do better.	supports a teddy, using the appropriate materials and construction techniques. • Explain how they made their model strong, stiff and stable.		accuracy • Making a model based on a chosen design • Evaluating the speed of a final product based on: the effect of shape on speed and the accuracy of workmanship on performance	as part of a team. Suggest ways to switch the configuration to amend the form or function of the Doodler. • Explain, in an investigation report, each of the changes they made and the effect this had on the Doodler's ability to draw scribbles (function) and appearance (form). • Develop design criteria with consideration for the target user, the purpose of their Doodler, a key function and the Doodler's form and final appearance (e.g. fun, bright, soft). • Explain simply why their Doodler has a certain configuration based on the findings of their investigation (e.g. I used four pens because the Doodler would fall over with two).	

DT Autumn Overview

						• Create a functional Doodler that creates scribbles on paper with or without a switch. Identify and list each of the required materials, tools and circuit components required to build a Doodler. • Explain simply the steps to assemble a Doodler as part of a set of instructions (or storyboard). • Write instructions to build a functional circuit, explaining how to identify if it is functional or not. • Provide suggestions to improve a peer's set of instructions after testing how effective they are at guiding someone	
Key Vocab	seeds roots leaves stem plant flower bud juicy	axle bridge design design criteria model net packaging structure	design criteria man-made natural properties structure stable shape model	appearance arid climate complementary country cut design evaluate	chassis energy kinetic mechanism air resistance design structure graphics	circuit component configuration current develop DIY investigate motor motorised	annotate decorate design criteria fabric target customer waistcoat waterproof

DT Autumn Overview

	sweet sour dry wet bitter chewy watery	template unstable stable strong weak	test	export fruit grate import ingredients Mediterranean	research model template	problem solve product analysis series circuit stable target user	
Key Questions	Questions will be created organically based upon the children's learning. Staff to use high quality interactions and the SHREC approach.	What is a structure? What is a windmill? What is a client? What is a design criteria? What are the three main parts of a windmill? What is an evaluation? What is meant by stable?	Which one is a man-made object? Which one is a natural object? What do we mean by strong? What do we mean by weak? What do we mean by stable?	Which of these food is available in June in the UK? Which climate zone is the UK in? Which of these best describes the flavour of potato?	What is a mechanism? What is an exploded diagram? What do we mean by aesthetics? What do we mean by graphics? Air resistance is… What is a template? Which view of the car can you see (x3) Why is important to test and evaluate a product?	What is an electrical system? What do we mean by product analysis? What doe DIY mean?	What is meant by an object's form? What is fabric? What is a template? What do we call a material that does not allow water through it?