Design Technology Subject Overview

Year 1	National Curriculum Objectives	Skills	Key Questions	Suggested learning experiences	Vocabulary (Tier 2/3)
Autumn **Mysteries** **Food technology**	To select and use appropriate fruit and vegetables, processes and tools To use basic food handling, hygienic practices and personal hygiene To use the basic principles of a healthy and varied diet to prepare dishes. To know where fruit and vegetables comes from. Design purposeful, functional, appealing products for themselves and other users based on design criteria.	Chopping, peeling and grating food. Holding the food correctly. Holding the equipment to chop, peel and grate correctly. Using the equipment and moving it or the food in the correct direction to chop, peel or grate effectively.	Where does our food come from? Why are vegetables important for us to eat? How do I cook different vegetables? How can I make a healthy autumn/winter soup?	1.Show pictures of different fruit/vegetables. Can they label them? (sweetcorn, apple, honeydew melon, carrot, tomatoes) Go to tables and taste test these fruit/vegetables. What could you make with these ingredients? Write a list of ideas (apple pie, carrot cake, stew). 2. Explain they are going to make healthy soup to encourage reception to eat more veg. Taste test different soups and produce design criteria of what makes a good healthy soup (describe what they liked about the soup – smooth, sweet, hot not spicy). Can they use seasonal vegetables? 3. Discuss how to make a vegetable soup. Order pictures of instructions – discuss the importance of good hygiene (washing hands as step 1) and hygiene practises (wash the vegetables). Add key words (wash, peel, chop, boil, blend, eat). 4. Practise skills of peeling, chopping, and grating using potatoes and bananas. Cook soup overnight. 5. Show the different vegetables used within the soup. Evaluate by trying the soup and writing a list of what	Tier 2 Peel Chop Grate Soup Taste Boil Blend Eat Tier 3 Design Product Method Ingredients Evaluate

				you liked and what you didn't like. (bits, crunchy, taste, hot, colour). 6. Look at different soup cans and make a success criteria – what do they need to include? (ingredients, name of the soup, how to cook it). Reminder of the what ingredients were in the soup, children to come up with their own name of the soup with pictures to decorate, brief descriptions of how to cook.	
Spring **Freeze Flame** **Mechanisms/ Joining materials**	Generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate,	Cutting. How to cut safely and keep a safe environment. Follow the correct direction when cutting to ensure the product still	How can I make a moving picture book? How can I make different parts move in my picture?	1. What is a mechanism? (A system of parts working together). Show different examples of moving part books. Have you seen books with moving parts before? Show examples of: Pivot. Lever. Sliding. Wheels.	Tier 2 Slider Pivot Lever Wheel Tier 3 Mechanism

	information and communication technology. Explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products.	looks good and doesn't have any rough edges. Using a split pin safely. How to hold the split pin. How to push it through material safely and fold the split pin to ensure the mechanism works efficiently and effectively.		Using pictures and videos. Children to look through books with moving parts in small groups and discuss on tables what they liked and what they didn't like. Which one was their favourite? Why? Which one was their least favourite? Why? Use stem sentences to help explain. 2. Create a sliding mechanism. What is a sliding mechanism? Show pictures/videos of examples of them in picture books. Model how to create a sliding mechanism (car sliding across the road, boat sliding across the water etc). Children to make their own, give them the background, template of picture which will move and children are to colour and cut out around the outlines. Children to use the excess card to cut their own strip which will be used to slide the picture across, think about what thickness they will need. 3. Create a pivot mechanism. What is a pivot mechanism? Show pictures/videos of examples of them in picture books. Model how to create a pivot mechanism (compass, wheel etc). Children to make their own, give them template of circles on coloured card to cut out. Can they piece it together and add a hole in the middle using blue tack underneath and a sharp pencil. 4. Create a lever mechanism. What is a lever mechanism? Show pictures/videos of examples of them in picture books. Model how to create a lever mechanism (e.g. animals on either side of the world link to Poles Apart).	

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				Give them the template of the world and animals. Children are to colour and cut around the pictures. Using the excess card to cut their own strip of card to use for the lever, choosing the correct thickness. Create background in ICT (look at Art: Monet, Northern Lights) 5. Choose which mechanism they would like to use (option of either a lever or slider). Example: slider – shooting star; lever – moon and inuit. Model both and let children make their final piece.	
Summer **FIRE** **Construction/**	Generate, develop, model and communicate their ideas through talking, drawing templates.	Constructing – using wheels and axles correctly. How to hold the wheel and axel correctly so the	What do fire engines need to have? How do they differ from other vehicles? How do fire engines move?	1. Show different pictures of vehicles. What is similar what is different? Look at a picture of a fire engine and watch a child friendly video which identifies the name of different parts and what the different parts are for. Label the different parts of a fire truck and some to explain what the parts are for.	Tier 2 Wheels Axels Vehicles Fire engine Smooth Rigid

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Mechanisms	Build structures, exploring how they can be made stronger, stiffer and more stable. Explore and evaluate a range of existing products. Evaluate their ideas and products against design criteria Design purposeful, functional, appealing products for themselves and other users based on design criteria.	axel can be inserted through the wheel. How it should look when it is done so it works correctly. How to do this in a safe environment.		2. Look at pictures of different wheels – what are wheels for? Have an investigation about which wheels would be best to use to make a fire engine? (tinfoil, cotton wheel, ball, cube, cylinder, ruler, scissors, wooden wheel). Discuss the main property a wheel needs to have to work? (smooth, can roll, cylinder like). Use a tick list to show which one works best as a wheel. Which one will you use for your fire engine and why? 3. What is an axle? Look at pictures of different axles – what are they used for? Have an investigation about which axels would be best to use to make a fire engine? (stick, pencil, paint brush, wooden rod, string). Discuss the main property an axel needs to have to work? (thin, long, rigid, smooth, stiff). Use a tick list to show which one works best as an axel. Which one will you use for your fire engine and why? 4. Look at different pictures of homemade fire engines. Design own fire engines – think carefully about the different materials they could use for the different parts thinking carefully about the properties of the material. What could they use for the body? (cardboard boxes). What could they use for the wheels/axels? Think back to previous lessons. Could they use extra bits of cardboard or different material for hoses/ladders. Label designs.	Tier 3 Evaluate Design Property Investigate Structure

				5. Make fire engines in groups using their chosen materials (get parents to bring in cardboard boxes before this lesson). Evaluate how well it moves and whether the materials they chose were appropriate.	