

Progression in Design & Technology

Autumn	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Design	<p><u>Moving Pictures</u> Children to find out what a moving mechanism is and how to create one. They will focus on slider mechanisms, recognising different types and how they work before using a character to create their own moving picture. Children to design a moving picture that has one of the previously learnt moving mechanisms. They will recap what they are and share their ideas to help create their designs.</p>	<p><u>Puppets</u> Children to discuss and explore a range of puppets, their features, what materials are used and what they are used for. They will have the opportunity to choose their favourite puppet, draw and label it. Children will to explore and discuss a variety of different finger puppets. Using the template provided, they will work with fabric to create, make and decorate a finger puppet. Children will learn different sewing techniques to use when creating a puppet. They will practise these skills before making their actual puppet. Children to use the skills they have acquired to design their own glove puppet. They will recap the possible techniques to use and share their ideas to help create their designs.</p>	<p><u>Moving Santas</u> Children will think of objects that use air to make them work, then examine, sketch, label and/or describe a variety of these kinds of objects. Children will learn about simple pneumatic systems. They are then challenged to make a variety of simple pneumatic systems according to given instructions using basic equipment. Children will begin to develop ideas about the use of pneumatic systems in a moving Santa toy/model. They may then either attempt more complex challenges where they will build pneumatic systems according to given instructions, or design pneumatic systems for a given toy design. Children will continue to develop their ideas about the use of pneumatic systems in a moving Santa toy/model. They will then finish drawing, annotating and describing their own designs.</p>	<p><u>Alarms</u> Children will draw and annotate an alarm system design for a purpose of their choosing. Children will look at a variety of alarm systems and consider their uses. They may then either discuss and agree upon appropriate alarms for a range of scenarios, or answer questions about a variety of alarm systems.</p>	<p><u>Bread</u> Children will learn about different types of bread and the cultures and/or regions from which they originate. They will then taste and describe a variety of breads. Children will learn about the nutritional content of bread, then consider some different ways it may be used in meals. Following this, children may either conduct surveys or prepare to collect data about eating bread. Children will learn about the ingredients of bread and how they may be used. They will then make bread, adapting and changing the recipe either according to given instructions or according to their own ideas. Children will create their own bread recipes and develop ideas regarding how it may be turned out, e.g. flat, plaited, as a large 'bun'.</p>	<p><u>Burgers</u> Children to explore and discuss different burgers, restaurants and their preferences. They will analyse different nutrition facts and find out how to check the nutrition fact labels. Children to explore different burger patties including different methods for cooking them. They will then create and taste three different burger patties before tasting and evaluating the recipes. Children to explore and discuss the additional ingredients that may be found in burgers, such as vegetables and sauces, as well as accompanying side dishes. They will make and taste three different burger sauces. Children to explore and discuss a range of burger buns and their suitability. They will taste and analyse different bread buns, thinking about their flavour, texture, appearance, shape and suitability for holding a burger together. Children to use the skills and knowledge they have acquired to plan and design their own burger.</p>
Make	<p><u>Moving Pictures</u> Children to find out what levers and pivots are and how to create this mechanism. They will be challenged to make this particular mechanism using a template, strips of card and some paper fasteners. Children to find out what a wheel mechanism is and how to create one. They will create four different facial expressions for a person before joining the wheel mechanism together to create their moving picture. Children to follow their designs to create their moving picture. They should think about the appropriate materials to use and how to work safely and carefully.</p>	<p><u>Puppets</u> Children will to explore and discuss a variety of different finger puppets. Using the template provided, they will work with fabric to create, make and decorate a finger puppet. Children to follow their designs to create their glove puppet. They should think about the appropriate materials to use and to work safely and carefully.</p>	<p><u>Moving Santas</u> Referring to their designs, children will create their moving Santa</p>	<p><u>Alarms</u> Referring to previously created designs, children will make model alarm systems for a purpose of their choosing.</p>	<p><u>Bread</u> Referring to previously created designs, children will make and bake their own bread.</p>	<p><u>Burgers</u> Children to use their previous designs to create their burgers. They will need to collect their ingredients and equipment carefully and consider food safety and hygiene when making their burgers.</p>
Evaluate	<p><u>Moving Pictures</u> Children to share and demonstrate how their moving pictures work. They will then evaluate their own moving pictures using the worksheet provided.</p>	<p><u>Puppets</u> Children to share and demonstrate their puppets. They will then evaluate their own puppets using the worksheet provided.</p>	<p><u>Moving Santas</u> Children will demonstrate their finished moving Santa toys/models, then evaluate both their process and their finished product, either individually or with a partner.</p>	<p><u>Alarms</u> Children will consider ways in which different switches may be used to control an electrical circuit. They may then either investigate creating working circuits with a variety of switches, or try to create circuits according to given diagrams. Children will evaluate their own design process and finished product according to a number of given, and agreed upon, criteria. They may either do this individually or in small groups.</p>	<p><u>Bread</u> Children will taste and evaluate their own bread recipes. Some children may suggest ways in which their recipe/design may be improved.</p>	<p><u>Burgers</u> Once completed they can get into groups to taste their burgers and evaluate the process.</p>

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Design	<p>Homes Children will investigate how they can create the interior features of a house. They will learn skills and be challenged to think of possible materials to use to create furniture for the interior of their homes. Children will use their previously learnt skills to design a house. They will discuss and consider who the house is for, how many rooms it will have, how it will be decorated and what materials the house will be made from.</p>	<p>Perfect Pizzas Children to discuss their favourite pizza and compile information into a pictogram. They will also consider healthy eating and complete a balanced plate by sorting their favourite pizza ingredients. Children to explore and discuss what pizza bases are made from and where they would be placed on the balanced diet plate. They will explore a variety of bread-based products and decide which would make a good base for a pizza. Children to explore and discuss a variety of pizza toppings. They will look at food categories and balanced diets, and be challenged to sort pizza toppings into groups. Children to design a healthy and balanced pizza, making sure they remember to follow the pizza criteria.</p>	<p>Photograph Frames Children will study a variety of free-standing objects and consider what makes them strong and stable. They may then either sketch and annotate a variety of photograph frame designs, or examine some photograph frames. Children will think of and describe ways of strengthening paper and card, then experiment with strengthening and joining paper and card in order to further develop their ideas. Children will create free-standing 'prototype' photograph frames using paper and card, applying what they learned during the previous lesson. Children will draw and annotate their own designs for a photograph frame, considering how they will ensure it is strong, stable and free-standing.</p>	<p>Money Containers Children will study, describe and compare a variety of different money containers. They may then either examine some money containers – drawing and labelling them, or answer questions about a variety of money containers. Children will draw and annotate designs for money containers for an 'audience' of their choosing. Alternatively, they may design a money container for a given audience and/or purpose.</p>	<p>Fashion and Textiles Children will discover how some natural and synthetic textiles are produced, and consider their uses in clothing. They may then either examine and describe old clothes (and how they are constructed), or sequence descriptions of cotton cloth manufacture. Children will start to learn about the work of fashion designers, then discover some ways in which textiles may be joined and decorated. Following this, they may either practise hand sewing stitches or identify machine stitching patterns on a range of garments. Children will learn how fashion designers use pattern pieces when making products, then either draw designs for a bag make pattern pieces for a bag, or for a specific person or purpose. Children will learn how design features of pattern pieces are transferred to fabric. They may then either transfer their pattern piece designs to fabric, or produce a small, simple bag using a given pattern piece.</p>	<p>Fairground Children to explore and discuss different fairground rides they have been on. They will think about how they move, what are the components that join them together and the mechanisms that make them work by labelling different pictures of fairground rides. Children to explore and investigate electrical motors and how they make fairground rides rotate. They will learn about pulley and belt systems and use appropriate materials to create a circuit that would be suitable for different fairground rides. Children to explore and investigate creating a framework for different fairground rides in preparation for designing and making their own fairground ride. They will work through various challenges to learn different skills that will help with constructing their fairground ride. Children to use all the information they have acquired over the last few lessons to design their own fairground ride. They will need to consider what motor to use for the rotating part as well as what materials will create an effective stable framework.</p>
Make	<p>Homes Children to explore how to join and combine shapes to make a house. They will be challenged to follow a particular card to create a similar house. The children need to think about what materials and tools to use as well as how to join them. Children to follow their designs to create their houses, using the skills they have previously learnt. They will need to also consider building safely and problems that may occur.</p>	<p>Perfect Pizzas Children to make their pizza following their designs, being sure to work safely and hygienically. They will evaluate their pizzas once they have been made.</p>	<p>Photograph Frames Referring to their previously completed designs, children will make photograph frames. They are challenged to consider carefully how they will ensure their frame looks like their design.</p>	<p>Money Containers Children will identify ways in which money containers have been joined by sewing, then either practise joining scrap material by hand sewing, or practising decorative hand sewing techniques. Children will begin to develop ideas for making a money container, either by cutting, folding and joining paper to explore ideas, or constructing model containers using given templates. Children will, based on previously completed designs, make money containers using hand sewing techniques.</p>	<p>Fashion and Textiles Children will learn how to pin and hand-sew fabric pieces together, then either sew pieces they cut out and marked previously, or design and make a simple fabric container. Children will learn how to finish a hand-sewn product, then finish sewing and decorating their own bag designs, or decorate old clothes using a variety of techniques.</p>	<p>Fairground Children to follow their designs to create their fairground ride with a rotating part. They will need to ensure they are working safely and carefully.</p>
Evaluate	<p>Homes Children to explore and investigate the various types of houses people live in around the world, as well as the shapes you find in houses. They will be challenged to match riddle cards to the correct picture card. Children to learn how to evaluate their work and follow steps to do this.</p>	<p>Perfect Pizzas Children to explore and discuss what pizza bases are made from and where they would be placed on the balanced diet plate. They will explore a variety of bread-based products and decide which would make a good base for a pizza. Children to explore and discuss a variety of pizza toppings. They will look at food categories and balanced diets, and be challenged to sort pizza toppings into groups. Children to make their pizza following their designs, being sure to work safely and hygienically. They will evaluate their pizzas once they have been made.</p>	<p>Photograph Frames Children will evaluate their own design process as well as their finished photograph frame according to a range of given, and agreed upon, criteria.</p>	<p>Money Containers Children will show and evaluate their finished money containers, either individually or in small groups.</p>	<p>Fashion and Textiles Children will evaluate their designs.</p>	<p>Fairground Children will demonstrate their finished moving fairground ride then evaluate both their process and their finished product, either individually or with a partner.</p>

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Design	<p><u>Eat More Fruit and Vegetables</u> Children to look at variety of different foods and the importance of eating more fruit and vegetables than certain other groups of foods. They will be challenged to design some new recipes only using fruits and vegetables, making sure they are colourful, tasty and healthy. Children to discuss and make lists of as many fruits and vegetables as they can. They will pick their favourite and then find out the most popular in class, presenting this data in a pictogram.</p>	<p><u>Vehicles</u> Children to explore and discuss a variety of different vehicles, their features and what they are used for. They will choose their favourite vehicle to compare, draw and label. Children to understand how different parts of a vehicles help to make them work. They will practise attaching wheels to axles and chassis. Children to design their own vehicle using the techniques previously explored, as well as following the success criteria.</p>	<p><u>Sandwich Snacks</u> Children will learn about the nutritional content of a variety of sandwiches and fillings, and consider how grouping food can help us plan for a healthy diet. They may then either conduct surveys or design menus according to given criteria. Children will identify, taste, describe and sort a variety of different breads and sandwich fillings. They will then discuss their personal preferences. Children will devise their own sandwich recipe, selecting bread and filling. They may then either write their recipe and draw annotated images to show it, or write and peer review recipes in small groups.</p>	<p><u>Seasonal Food</u> Children will learn how and when a variety of fruits are produced in Britain, including how farming methods are used to slow down or speed up the ripening process. They may then either cook, or visit a pick your own fruit farm. Children will learn about a variety of vegetables grown in Britain, when they are in season, and why they are important in a healthy diet. They may then either cook, or create a seasonal food collage. Children will learn about the nutritional value of meat, eggs and dairy products, as well as discover why some meats are seasonal and some are available all year round. They may then either cook, or try tasting and describing a range of vegetarian foods. Children will learn about how, where and when fish is farmed or caught in Britain, consider some issues associated with fishing, and learn about quality assurance marks on the fish we buy. They may then either cook, or create an information text about eating less fish to combat overfishing.</p>	<p><u>Moving Toys</u> Children will think of and investigate different moving toys. They will learn about cam mechanisms and explore different toys that use them. Children will explore and investigate different types of cam mechanisms and think about the shapes they will produce. They will be testing different shaped cams to see how they affect the linear movement of the follower. Children to explore materials and investigate different ways of strengthening moving toy structures. Children will use their previously learnt knowledge to design a moving toy with a cam mechanism. They will need to think about who the toy is for, what shape the cam will be, the structure, decoration and materials needed to construct it.</p>	<p><u>Bridges</u> Children will learn about how simple bridges are constructed using beams, pillars or piers, then make and test beam bridge designs. Children will learn how trusses are used in bridge design to spread out compression forces. They may then either build and test model truss bridges, or use software to explore how truss bridges may be constructed. Children will learn how arches are used to spread and redirect compression forces acting on bridges. They will then build and test model arch bridges. Children will learn about how suspension bridges use tension to support bridge decks spanning large distances. They may then either build and test model suspension bridges, or research and write about iconic suspension bridges. Having been presented with a design brief, children must develop criteria for a bridge design that will meet the terms of the brief. They will then either design a bridge according to their criteria, or generate more criteria for a range of given design briefs.</p>
Make	<p><u>Eat More Fruit and Vegetables</u> Children to discuss and think about food preparation. They will be practising using different tools safely, and using the appropriate language associated with food preparation.</p>	<p><u>Vehicles</u> Children to explore and discuss the different ways of creating the vehicle's body. They will use a variety of different boxes and modelling equipment to explore different ways of creating the bodies of vehicles. Children to follow their designs to create and make their vehicles using a range of craft materials. They will need to make sure they are working safely and carefully.</p>	<p><u>Sandwich Snacks</u> Referring to their previously written recipes, children will make their own sandwiches.</p>	<p><u>Seasonal Food</u> Children will learn why certain British foods are seasonal, and consider some pros and cons of foods from other parts of the world being available all year round. They may then either cook, or learn more about the process of wheat production.</p>	<p><u>Moving Toys</u> Children will refer to their designs from the previous lesson to create their moving toys.</p>	<p><u>Bridges</u> Following on from the previous lesson, children will consider ways in which they might test their bridge design once constructed. They will then build and test their designs.</p>
Evaluate	<p><u>Eat More Fruit and Vegetables</u> Children to look closely at a variety of different fruits and vegetables. They will use their senses to describe the different features of the fruits and vegetables as well as their sense of taste. The children will also discuss safety and hygiene in relation to food. Children to recap and evaluate all they have learnt about fruits and vegetables. They will be recreating their recipe designs making sure they are being safe and hygienic.</p>	<p><u>Vehicles</u> Children will share their vehicles with their friends, making sure that wheels are working and the chassis is strong. They will then evaluate their vehicle using the worksheets provided, explaining how their vehicle could be improved if they were to make it again.</p>	<p><u>Sandwich Snacks</u> Children will discuss the process of creating and following a recipe, evaluating their own process as well as their finished product. They will then do an end of unit quiz.</p>	<p><u>Seasonal Food</u> Children will learn about some unusual foods that are only in season for a brief period each year. They will then reflect on their prior learning, showing what they have understood through a variety of games and writing activities.</p>	<p><u>Moving Toys</u> Children will demonstrate their finished moving toys, then evaluate both their process and their finished product, either individually or with a partner.</p>	<p><u>Bridges</u> Children test their designs.</p>

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