



# Knowledge and Skills Progression Year 1 to Year 6

## Design & Technology Curriculum

Year	Term	Unit	Cooking and Nutrition
2	Spr 2	Perfect Pizzas	<p>I know the different parts of a pizza.</p> <p>I know foods belong to different food groups.</p> <p>I can discuss different types of pizzas and begin to categorise them into healthy and unhealthy.</p> <p>I can name and describe a variety of breads.</p> <p>I can say which breads I like.</p> <p>I can use the features of the bread to decide if it is fit for purpose.</p> <p>I can name and describe a variety of toppings.</p> <p>I can express opinions and preferences about different toppings.</p> <p>I know that eating healthily means having a balanced diet.</p> <p>I can design a healthy pizza.</p> <p>I can identify what ingredients and tools I will need to make my pizza.</p> <p>I can design and make a healthy pizza following given criteria.</p> <p>I can evaluate my finished pizza, saying what I feel and think about it.</p>
3	Aut 2	Sandwich Snacks	<p>I know that food can be divided into different groups.</p> <p>I know different food groups and their purpose.</p> <p>I can evaluate different sandwiches.</p> <p>I can taste and describe different foods.</p> <p>I know that different combinations of ingredients affect the taste and texture of the product.</p> <p>With help, I can choose a purpose for my sandwich design.</p> <p>I can plan and describe each step in the process of making my sandwich.</p> <p>I can design a healthy sandwich.</p> <p>I know how to work safely and appropriately with food.</p> <p>I can follow my design to create my sandwich.</p> <p>I can think about presenting my sandwich in an appealing way.</p> <p>I can evaluate their work fairly and constructively, suggesting improvements to my design.</p>
6	Aut 2	Gingerbread Houses	<p>I can design a product which meets design criteria.</p> <p>I can plan a simple method of construction for my product.</p> <p>I can draw inspiration from existing products and incorporate similar features into my own design.</p> <p>I can come up with success criteria based on existing ideas.</p> <p>I can create accurate shapes and measurements by making a 3D model.</p> <p>I can to amend a design based on testing.</p> <p>I can identify challenges and think of solutions to challenges they've come across?</p> <p>I can follow a simple method or recipe measuring ingredients or dimensions accurately.</p> <p>I can follow my design throughout the making process.</p> <p>I can use tools for a specific purpose depending on their suitability for a task.</p> <p>I can evaluate an edible house against the original criteria.</p> <p>I can evaluate my finished product by suggesting ways to improve it and explain what I would do differently if I were to make the house again.</p>

Year	Term	Unit	Stable Structures
1	Spr 2	Homes	<p>I can identify different types of homes and their features.</p> <p>I can identify and name shapes within houses.</p> <p>I can draw a house using a variety of shapes.</p> <p>I can make decisions about which materials to use for a particular purpose.</p> <p>I can select and use a variety of techniques for joining materials together successfully.</p> <p>I can suggest ways of improving structures or making them stronger.</p> <p>I know how to make effective hinges?</p> <p>I can choose materials and joining methods for creating items of furniture.</p> <p>I can gather and develop ideas for how to decorate the interior of a house.</p> <p>I can design a house for a particular person or purpose.</p> <p>I can follow a design to create a house.</p> <p>I can choose appropriate materials, tools and techniques to create a model house.</p> <p>I can use finishing techniques to improve the overall quality of their product?</p> <p>I can say what I think and feel about my finished house and suggest ways in which I could improve my product if I were to make it again.</p> <p>I can evaluate the work of others and give my opinions in a constructive way.</p>
3	Sum 2	Mini Greenhouses	<p>I know what a greenhouse is used for and how a greenhouse helps plants to grow.</p> <p>I can analyse and discuss different types of greenhouses.</p> <p>I know what the term 'stable' means and can identify factors that make a structure stable.</p> <p>I can suggest how to make a structure more/less stable.</p> <p>I can identify suitable materials for a mini greenhouse and explain why these materials are suitable.</p> <p>I can identify ways of joining these two materials together.</p> <p>I can apply knowledge of stable structures and suitable materials when designing a mini greenhouse.</p> <p>I can follow specific design criteria.</p> <p>I can follow a design to create a successful product.</p> <p>I can amend my design to improve a product and solve problems/challenges as they arise.</p> <p>I can work safely and sensibly with a range of materials and tools.</p> <p>I can evaluate my finished product by identifying what has been successful and suggest improvements that could be made to the design.</p>

Year	Term	Unit	Programming and Electrical Systems
4	Sum 2	Light Up Signs	<p>I can explore and analyse illuminated signs.</p> <p>I can create a simple circuit with incandescent bulbs and a switch.</p> <p>I can describe the difference between and LED and incandescent bulb.</p> <p>I can create a simple circuit with an LED bulb and a resistor.</p> <p>I can make a circuit with a string of LED lights.</p> <p>I can design an illuminated light box against a set of criteria.</p> <p>I can select materials, tools and components to create a free standing structure.</p> <p>I can make a stable, free-standing structure to house an electrical circuit.</p> <p>I can strip, twist and join wire to make permanent connections.</p> <p>I can insert an electrical circuit into a free standing structure to create an illuminated light box.</p> <p>I can evaluate the effectiveness of my finished product against the design criteria.</p>
6	Spr 2	Programming Pioneers	<p>I can explain how computers and computer programs are used in a variety of products.</p> <p>I can explain how modern memory chips work to store information.</p> <p>I can write an algorithm to suggest how various appliances might work.</p> <p>I know what a computer engineer is and what they do.</p> <p>I can describe some examples of how computer hardware and software specialists work together to create new products.</p> <p>I can develop and build a prototype pedestrian crossing using computer programming.</p> <p>I can develop, model and communicate ideas for an embedded system which monitors and controls a door, room or both.</p> <p>I can describe the typical design process for computer-controlled electronic products.</p> <p>I can debug errors in an algorithm.</p> <p>I can suggest ways to change an algorithm to improve a system.</p> <p>I can select and use electronic components to construct a prototype of an embedded computer-controlled room system.</p> <p>I can evaluate my design for a computer controlled system and consider the views of others to improve my work.</p>

Year	Term	Unit	<b>Mechanical Systems</b>
1	Aut 2	<b>Moving Pictures</b>	<p>I can make a sliding mechanism out of card.</p> <p>I know what a pivot and lever are.</p> <p>I can use a pivot and lever mechanism using card and a split pin.</p> <p>I can make a wheel mechanism using card and a split pin.</p> <p>I can match a mechanism to the type of movement they produce.</p> <p>I can design a moving Christmas picture to include a variety of moving mechanisms.</p> <p>I can follow my design to create a Christmas picture for a particular purpose.</p> <p>I can evaluate my finished moving picture by identifying things that worked well and things that could be improved.</p>
5	Aut 2	<b>Moving Toys</b>	<p>I can recognise the movement of a mechanism within a toy or model.</p> <p>I know that a cam mechanism will change rotary motion into linear motion.</p> <p>I can describe how cams work using appropriate vocabulary.</p> <p>I can explore how different shaped cams affect the movement of the follower.</p> <p>I can suggest how different cams could be used for different kinds of toys.</p> <p>I can make suggestions for how they could make a sturdy structure for a moving toy.</p> <p>I can experiment with a variety of materials, tools and techniques to strengthen a structure.</p> <p>I can design a moving toy with a cam mechanism specifying purpose and audience.</p> <p>I can plan how I will create their toy and what materials and tools I will need.</p> <p>I can follow a design to create a moving toy.</p> <p>I know how to work safely with a variety of materials and tools.</p> <p>I can evaluate my finished toy by recognising what has been successful and ways they could improve their product if they were to make it again.</p>
5	Spr 2	<b>Chinese Inventions</b>	<p>I can explore how different transmissions create different movements.</p> <p>I can use a crank to change the motion on a transmission from circular to linear motion.</p>

Year	Term	Unit	Textiles
2	Aut 2	Puppets	<p>I can explore a variety of puppets, identifying and labelling their features.</p> <p>I can cut out felt using a simple template.</p> <p>I can stick pieces of felt together to make a finger puppet.</p> <p>I can add pieces of felt and other materials to a finger puppet to create features, such as eyes, hats and mouths.</p> <p>I can use running stitch to join two pieces of fabric together.</p> <p>I can use overstitch to join two pieces of fabric together.</p> <p>I can sew a button onto a piece of fabric.</p> <p>I can design a puppet for a particular purpose.</p> <p>I can follow a design to make a glove puppet by sewing two pieces of fabric together and adding decorations.</p> <p>I can evaluate my finished glove puppet by identifying what went well and what could be improved.</p>
4	Spr 2	Money Containers	<p>I can explore a variety of money containers and identify their purpose.</p> <p>I can identify features common to all money containers.</p> <p>I can name some different types of stitching and use a range of different sewing stitches.</p> <p>I know how to prepare and finish off their stitching.</p> <p>I can make a template for a model to try out different ideas.</p> <p>I know a template needs to include a seam allowance.</p> <p>I can mark out measurements accurately.</p> <p>Can children produce a detailed design for their money container for a specific purpose/user.</p> <p>I can follow my design to create a money container and explain how I will make it.</p> <p>I can use accuracy and control when working with textiles.</p> <p>I can use finishing techniques to make their money container aesthetically pleasing.</p> <p>I can evaluate my own finished product and the work of others by identifying what worked well and what could be improved.</p>

<b>Year</b>	<b>Term</b>	<b>Unit</b>	<b>Inventions &amp; Achievements</b>
<b>5</b>	<b>Spr 2</b>	<b>Chinese Inventions</b>	<p>I can explain the invention of paper helped shape the world.</p> <p>I can explain the traditional method for making paper.</p> <p>I can test a variety of types of paper for strength, absorbency, opacity etc.</p> <p>I can make recycled paper.</p> <p>I know how gunpowder was invented.</p> <p>I can explain how the invention of gunpowder helped shape the world.</p> <p>I can explain how the invention of the compass changed the world.</p> <p>I can make a hanging/floating compass.</p> <p>I can design and label my own compass.</p> <p>I can explain what water-powered machines are and how they helped change the world.</p> <p>I can explain why kites were first invented and how they were made.</p> <p>I can make a variety of kite prototypes and test their effectiveness.</p> <p>I can design, make and evaluate a kite according to specific design criteria.</p>
<b>6</b>	<b>Spr 2</b>	<b>Programmable Pioneers</b>	<p>I know that Charles Babbage created the first mechanical computer.</p> <p>I know that Ada Lovelace is referred to as the world's first computer programmer.</p> <p>I know that Steve Jobs and Steve Wozniak co-founded Apple, to make the first Apple computers.</p>

**Please see 'Materials Overview' where additional designers, inventions and architects have been linked to relevant DT units.**