



DESIGN AND TECHNOLOGY PROGRESSION MAP



Year Group and Topics	Learning Objectives NC-Unit/Scheme Knowledge-Skill Objectives	Key Vocabulary	Assessment of Core Knowledge and Skills/End Goal
Reception			
See separate EYFS Progression Map			
Year 1			
<u>Autumn</u> Puppets Textiles	<u>National Curriculum Objectives</u> Developing, Planning and Communicating Ideas - To join fabrics together using different methods. - To use a template to create a design. Working With Tools, Equipment, Materials and Components To Make Quality Products - To join two fabrics together accurately - To embellish my design using joining methods Evaluate Processes and Products - To evaluate their puppet	decorate design fabric glue model hand puppet safety pin staple stencil template	- Join fabrics together using pins, staples or glue. - Design a puppet and use a template. - Join their two puppets' faces together as one. - Decorate a puppet to match their design.
<u>Spring</u> Smoothies Cooking and Nutrition	<u>National Curriculum Objectives</u> Developing, Planning and Communicating Ideas - To find out the favourite fruits and vegetables in the class and present the data in a pictogram - To examine, taste and describe a variety of fruits and vegetables - To be able to design a recipe to include fruit and/or vegetables Working with Tools, Equipment, Materials and Components To Make Quality Products - To find out how to handle and prepare a variety of fruits and vegetables - To be able to make a food product based on a design	Fruit Vegetables Taste blender peeling cutting Recipe Smoothie	- Describe fruits and vegetables and explain how to identify fruits. - Name a range of places that fruits and vegetables grow. - Describe basic characteristics of fruit and vegetables. - Prepare fruits and vegetables to make a smoothie.

	Evaluate Processes and Products To be able to evaluate a food product based on a design		
<u>Summer</u> Windmills Structures	<u>National Curriculum Objectives</u> Developing, Planning and Communicating Ideas - To explore different types of windmills and identify shapes and features - To create a stable structure. - To be able to design a windmill Working with Tools, Equipment, Materials and Components To Make Quality Products - To use tools and equipment accurately to make part of a structure. - To join parts of a structure. - To be able to follow a design to create a windmill Evaluate Processes and Products - To be able to evaluate a finished product	base centre design equal evaluate middle rotate rotor rotor blades sails same stable strong structure	- Follow design criteria to meet the needs of a user. - Make a stable structure. - Make functioning sails/blades that attach to the supporting structure. - Improve their windmill
Year 2			
<u>Autumn</u> Baby Bear's Chair Structures	<u>National Curriculum Objectives</u> Developing, Planning and Communicating Ideas - To explore the concept and features of structures and the stability of different shapes. Working with Tools, Equipment, Materials and Components To Make Quality Products - To understand that the shape of the structure affects its strength. - To produce a finished structure and evaluate its strength, stiffness and stability. - To make a structure according to design criteria. Evaluate Processes and Products - To be able to evaluate a finished product	design criteria man-made natural properties structure stable shape model test	- Identify features that make a chair stable. - Work independently to make a stable structure, following a demonstration. - Produce a model that supports a teddy, using the appropriate materials and construction techniques. - Explain how they made their model strong, stiff and stable.
<u>Spring</u> Pouches Textiles	<u>National Curriculum Objectives</u> Developing, Planning and Communicating Ideas - To investigate a range of pouches and their features - To be able to design a pouch Working with Tools, Equipment, Materials and Components To Make Quality Products - To be able to work with fabric to create a pouch	decorate fabric fabric glue knot needle needle threader running stitch sew	- Sew a running stitch with regular-sized stitches and understand that both ends must be knotted. - Prepare and cut fabric to make a pouch from a template. - Use a running stitch to join the two pieces of fabric together.

	- To develop and practise sewing skills - To be able to follow a design to make a pouch Evaluate Processes and Products - To be able to evaluate a finished product	template thread	Decorate their pouch using the materials provided.
<u>Summer</u> Balanced Diets Cooking and Nutrition	<u>National Curriculum Objectives</u> Developing, Planning and Communicating Ideas - To recognise foods and their food groups. - To identify the balance of food groups in a meal. Working with Tools, Equipment, Materials and Components To Make Quality Products - To identify an appropriate piece of equipment to prepare a given food. - To select balanced combinations of ingredients. - To design based on criteria. Evaluate Processes and Products - To evaluate a dish based on design criteria.	appearance balanced carbohydrates chopping board combination cut dairy design design brief diet evaluate feel fruit grater ingredients menu proteins review scissors smell spread taste	- Name the main food groups and identify foods that belong to each group. - Describe the taste, feel and smell of a given food. - Think of three different wrap ideas, considering flavour combinations. - Construct a wrap that meets the design brief and their plan.
Year 3			
<u>Autumn</u> Eating seasonally Cooking and Nutrition	<u>National Curriculum Objectives</u> Developing, Planning and Communicating Ideas - To explain why food comes from different places around the world - To explain the benefits of seasonal foods. Working with Tools, Equipment, Materials and Components To Make Quality Products - To develop cutting and peeling skills. - To evaluate seasonal ingredients.	appearance climate complementary country cut design fruit grate import ingredients Mediterranean mock-up mountain	- 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.

	- To design a mock-up using criteria Evaluate Processes and Products - To evaluate a dish.	peel seasonal seasons taste temperate texture tropical vegetable	
<u>Spring</u> Moving Mechanisms Mechanisms	<u>National Curriculum Objectives</u> Developing, Planning and Communicating Ideas - To investigate a variety of familiar objects that use air to make them work - To investigate techniques for making simple pneumatic systems - To be able to gather ideas for creating moving monsters - To be able to design a monster including a moving pneumatic system Working with Tools, Equipment, Materials and Components To Make Quality Products - To be able to make a monster with a moving pneumatic part Evaluate Processes and Products - To be able to evaluate a finished product	Movement Air Pneumatic Systems Syringes Tubing Controlled Finishing Decoration	- Define a mechanism as a system of parts working together to create movement and a pneumatic system can be used as part of this. - Develop design criteria from a design brief. - Build secure housing for a pneumatic system, consider sustainable resources and work with materials to create different effects by cutting, creasing, folding, etc. - Evaluate how well the design, materials and equipment help to achieve the design brief.
<u>Summer</u> Constructing a castle Structures	<u>National Curriculum Objectives</u> Developing, Planning and Communicating Ideas - To explore castles - To investigate stable structures - To investigate materials for making a mini greenhouse - To design a mini castle Working with Tools, Equipment, Materials and Components to Make Quality Products - To make a mini castle Evaluate Processes and Products - To evaluate a finished product	2D 3D castle design key features net scoring shape stable stiff strong structure tab	- Draw and label a simple castle that includes the most common features. - Recognise that a castle is made up of multiple 3D shapes. - Design a castle with key features which satisfy a given purpose. - Score or cut along lines on the net of a 2D shape. - Use glue to securely assemble geometric shapes. - Utilise skills to build a complex structure from simple geometric shapes. - Evaluate their work by answering simple questions.

Year 4

<u>Autumn</u> Fastenings Textiles	<u>National Curriculum Objectives</u> Developing, Planning and Communicating Ideas - To explain the advantages and disadvantages of different types of fastening type. - To design a product to meet design criteria. Working with Tools, Equipment, Materials and Components To Make Quality Products - To make and test a paper template. - To assemble a book jacket. Evaluate Processes and Products - To evaluate a finished product	criteria fabric fastening fix mock-up stitch template	- Identify the features, benefits and disadvantages of a range of fastening types. - Write design criteria and design a sleeve that satisfies the criteria. - Make a template for their book sleeve. - Assemble their case using any stitch they are comfortable with
<u>Spring</u> Torches Electrical Systems	<u>National Curriculum Objectives</u> Developing, Planning and Communicating Ideas - To learn about electrical items and how they work. - To analyse and evaluate electrical products. - To design a product to fit a set of specific user needs. Working with Tools, Equipment, Materials and Components To Make Quality Products - To select and use tools, equipment, materials and components to make the enclosure of a torch - To make a functioning torch Evaluate Processes and Products - To evaluate a torch	battery bulb buzzer circuit diagram component conductor electrical item electricity electronic item insulator series circuit switch target audience test torch wire	- Designing a torch, giving consideration to the target audience and creating both design and success criteria focusing on features of individual design ideas. - Making a torch with a working electrical circuit and switch. - Using appropriate equipment to cut and attach materials. - Assembling a torch according to the design and success criteria. - Testing and evaluating the success of a final product.
<u>Summer</u> Adapting a recipe Cooking and Nutrition	<u>National Curriculum Objectives</u> Developing, Planning and Communicating Ideas - To evaluate existing biscuit products. - To prepare and cook a dish.	adapt appearance budget combine comment construct	- Describe features of biscuits using taste, texture and appearance. - Follow a recipe with support. - Use a budget to plan a recipe.

	- To select ingredients and follow a budget. Working with Tools, Equipment, Materials and Components To Make Quality Products - To take inspiration from existing products. - To make and test a prototype biscuit. Evaluate Processes and Products - To evaluate a final product.	cream crunchy cut design evaluate layout market research modify opinion sieve sift target audience	Adapt a recipe using additional ingredients.
Year 5			
<u>Autumn</u> Stuffed Toys Textiles	<u>National Curriculum Objectives</u> Developing, Planning and Communicating Ideas - To design a stuffed toy Working with Tools, Equipment, Materials and Components To Make Quality Products - To sew a blanket stitch - To create and add decorations to fabric. Evaluate Processes and Products - To evaluate a stuffed toy	accurate annotate appendage blanket-stitch design criteria detail evaluation fabric sew shape stuffed toy stuffing template	- Design a stuffed toy, considering the main component shapes of their toy. - Create an appropriate template for their stuffed toy. - to assemble their stuffed toy, repairing when needed. - Identify what worked well and areas for improvement.
<u>Spring</u> Great British Dishes Cooking and Nutrition	<u>National Curriculum Objectives</u> Developing, Planning and Communicating Ideas - To understand how ingredients are reared and processed. - To make adaptations to design a recipe. - To evaluate nutritional content. Working with Tools, Equipment, Materials and Components To Make Quality Products - To practise food preparation skills.	Peeling Grating Chopping Taste Test Peeling Cutting Ingredient Recipe National dishes	- Describe the process of beef production. - Research a traditional recipe and make changes to it. - Add nutritional value to a recipe by selecting ingredients. - Prepare and cook a version of bolognese sauce.

	- To design a product label. - To follow and make an adapted recipe. Evaluate Processes and Products - To evaluate a final product.		
<u>Summer</u> Gears and Pulleys Mechanisms	<u>National Curriculum Objectives</u> Developing, Planning and Communicating Ideas - To analyse and create a working gear system and explain its function. - To improve a working gear system and suggest some applications. - To create a working pulley system and explain its function Working with Tools, Equipment, Materials and Components To Make Quality Products - To conduct market research to discover useful tasks an eco-gadget bike could perform. - To design an eco-gadget bike using design criteria Evaluate Processes and Products - To evaluate an eco-gadget bike using design criteria.	annotate axle force gear gear system input machine market research mechanism output problem statement pulley pulley system renewable energy research sustainability teeth	- Give examples of machines that use gears and/or pulleys. - Describe how gears and pulleys work and their purpose. - Design and make a gear and pulley system. - Write a problem statement. - Write questions for market research, provide feedback and research market competitors. - Write and use a design brief to guide design. - Evaluate a product against a set of design criteria, provide useful feedback and incorporate changes. - Draw and annotate an eco-gadget bike design.
Year 6			
<u>Autumn</u> Come Dine with Me Cooking and Nutrition	<u>National Curriculum Objectives</u> Developing, Planning and Communicating Ideas - To explain the use of complementary flavours. - To research and design a three-course meal. - To explain recipe choices. Working with Tools, Equipment, Materials and Components To Make Quality Products - To apply culinary skills and knowledge, to create a starter, main course and dessert.	balance bitter bridge method complement cookbook cross-contamination enhance equipment farm to fork flavours ingredients method pairing preparation	- Writing a recipe, explaining the key steps, method and ingredients. - Including facts and drawings from research undertaken. - Following a recipe, including using the correct quantities of each ingredient. - Adapting a recipe based on research. - Working to a given timescale. - Working safely and hygienically with independence.

	Evaluate Processes and Products To evaluate their product against their design criteria		- Evaluating a recipe, considering: taste, smell, texture and origin of the food group. - Taste testing and scoring final products. - Suggesting and writing up points of improvements in productions.
<u>Spring</u> Playgrounds Structures	<u>National Curriculum Objectives</u> Developing, Planning and Communicating Ideas - To design a playground with a variety of structures. Working with Tools, Equipment, Materials and Components To Make Quality Products - To build a range of structures. - To improve and add detail to structures. - To create a surrounding landscape. Evaluate Processes and Products - To analyse and evaluate products according to design criteria	apparatus design criteria equipment playground landscape features cladding	- Create five apparatus designs, applying the design criteria to their work. - Make suitable changes to their work after peer evaluation. - Make roughly three different structures from their plans using the materials available. - Complete their structures, improving the quality of their rough versions and applying some cladding to a few areas. - Secure their apparatus to a base. - Make a range of landscape features using a variety of materials which will enhance their apparatus.
<u>Summer</u> Steady Hand Game Electrical Systems	<u>National Curriculum Objectives</u> Developing, Planning and Communicating Ideas - To research and analyse a range of children's toys. - To design a steady hand game. Working with Tools, Equipment, Materials and Components To Make Quality Products - To construct a stable base. - To assemble electronics and complete their electronic game. Evaluate Processes and Products - To be able to evaluate their finished product	assemble battery battery pack benefit bulb bulb holder buzzer circuit circuit symbol component conductor copper design design criteria	- Identify the components of a steady hand game. - Design a steady hand game of their own according to their design criteria, using four different perspective drawings. - Create a secure base for their game, with neat edges, that relates to their design. - Make and test a functioning circuit and assemble it within a case.