

# North Lancing Primary School – Knowledge Progression in Design and Technology (Reception)



Reception	Topic:	Prior Knowledge:	Key New Knowledge:	Key Vocabulary:	Working Technically:
Autumn 1	All about me Let's explore	Match their developing physical skills to tasks and activities in the setting. Self-select resources	Exposure to and exploration of basic tools and materials To learn the names and uses of different tools and techniques that can be used to create. To know some healthy and unhealthy foods To follow a simple recipe. To create a stable model	Resources, choose, select, recipe, construction.	To discuss how decisions have been made when creating. To use a range of construction tools To use simple tools and techniques competently and appropriately.
Autumn 2	Let's explore	Choose the right resources	To learn the names and uses of different tools and techniques that can be used to create. To know some healthy and unhealthy foods To follow a simple recipe. To create a stable model.	Scissors, glue, paint, recipe, instructions	To use a range of construction tools To use simple tools and techniques competently and appropriately. To create a animal den.
Spring 1	Let's investigate People who help us	Explore different materials and textures Talk about the differences between materials and changes they notice.	To understand that materials can be combined to create a structure with purpose. To understand why we follow a recipe when cooking . To describe ways of safely using and exploring a variety of materials. To attach 2 objects together (junk modelling).	Building, den, stick, weak, sharp, structure, strong, plan, how, connecting, stable	Explore mechanism through play Explore a range of mechanisms in construction resources and toys. Making jam tarts- food hygiene and following a recipe. To use a variety of materials to independently create and build props and structures ( <i>junk modelling</i> ),
Spring 2	People who help us	Talk about the differences between materials and changes they notice.	To describe ways of safely using and exploring a variety of materials. To attach 2 objects together (junk modelling)	Scissors, cutting, safe, sharp, grip, forward, attach, stick, tape, glue,	To use a variety of materials to independently create and build props and structures ( <i>junk modelling</i> ),
Summer 1	Once upon a time Our World	Develop their fine motor skills so that they can use a range of tools competently, safely and confidently.	To know the different uses and purposes of a range of media and materials. Begin to understand that cooking is a life skill that enables them to feed themselves. To follow the DT cycle- design, make, evaluate to make a sustainable bag.	Tape, glue, string, attach, join, together, separate, assemble, planning, weak, strong, flap, design, evaluate	Selects appropriate resources and adapts work where necessary. Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. Discuss the purpose of different textiles Choose appropriate textiles for different tasks. plan and design.Pupils evaluate the effectiveness of their design. Pupils discuss design with peers.
Summer 2	Our World	Develop their small motor skills so that they can use a range of tools competently, safely and confidently.	To follow the DT cycle- design, make, evaluate o make a sustainable bag	Tape, glue, string, attach, join, together, separate, assemble, planning, weak, strong, flap, design, evaluate	Discuss the purpose of different textiles Choose appropriate textiles for different tasks Pupils plan and design. Pupils evaluate the effectiveness of their design Pupils discuss design with peers.

## North Lancing Primary School – Knowledge Progression in Design Technology (Year 1)

Year 1	Topic:	Prior Knowledge:	Key New Knowledge:	Key Vocabulary:	Working technically:
Autumn	<b>Fabulous Food</b>	Children will have an awareness of how to cook and a basic understanding of what are healthy and unhealthy foods.	Design, make and evaluate. To understand that DT has a process of concept, imagine, design, make and evaluate. To put ideas down on a design sheet. To copy design to create a product. To talk about how they can improve it.	Design, make and evaluate, biscuit, icing, decoration, record, process, product, improve, hygiene.	Design purposeful and appealing biscuits for themselves and others based upon design criteria. Select a limited range of resources and ingredients available. Carry out a simple evaluation of their own product.
Spring 2	<b>Heroes and Villains</b>	Understand that materials can be combined to create a structure with purpose. Select tools and techniques needed to shape, assemble and join materials.	Design, make and critically evaluate. Focus on design and product correlation. Critique, evaluate ideas and products. Know how to fix/attach materials successfully Using peer evaluation on appeal of product and translation of design.	Design, make, evaluate, decorate, fabric, glue, felt tip pens, sequins, scissors, pipe cleaners, cape, improve	Generate, develop and communicate their ideas through talking, drawing, labelling. Select from a range of materials/tools including materials based upon characteristics focusing on design and product relation. Designing a superhero with a cape using wooden spoon as a basis, peer evaluation comparing to design.
Summer 1	<b>Wonderful world and amazing animals</b>	Describe ways of safely using and exploring a variety of materials. Know the different uses and purposes of a range of media and materials.	Cooking and nutrition: Use the basic principles of a healthy diet and to understand how to prepare dishes and understand where food comes from. To know traditional cuisine from Asia (noodles), Europe (bread), North America (tortillas).	Ingredients, recipe, flour, water, yeast, scissors, snip, shape, bake, changes in state, taste, improve, noodles, Asia, Europe, North America, tortillas.	Instil a love of cooking and a life skill to enable pupils to feed themselves. Select/use a range of tools/equipment for practical tasks – making bread

# North Lancing Primary School – Knowledge Progression in Design and Technology (Year 2)

Year 2	Topic:	Prior Knowledge:	Key New Knowledge:	Key Vocabulary:	Technical knowledge:
Autumn	Castles & This is Me	To design, make and evaluate a product (superhero cape / bird feeder) using appropriate joining techniques.	How can I make a cardboard castle strong enough for Reception children to play with? To design a castle which demonstrates understanding of key features of a castle. To use knowledge of colour symbolism in heraldry to colour own coat of arms.	Cardboard, join, scissors, tape, flange, tab, slot, L bracket, turrets, towers, curtain wall, arrow slits, portcullis, battlements, moat, drawbridge, strong, rigid	To use knowledge of castle feature, joining techniques and my design to make a castle. To be able name and join 2 pieces of cardboard together in a variety of ways. To talk about the choices I have made, and evaluate how my castle could be made stronger, stiffer and more stable in response to the design brief.
Spring	Ice & Fire	To design, make and evaluate an appealing bis healthy fruit salad. against success criteria. To use a range of appropriate materials based upon scientific knowledge. Use skills to join, strengthen. Know the principles of a healthy diet. To understand where food comes from.	Can I make an appealing bread roll for Samuel Pepys to have with his cheese. Cooking and nutrition: Design, make and evaluate To know how to prepare food safely and follow instructions on a recipe. Weigh, measure, mix, decorate. To understand why we must wash our hands before handling food.	Recipe, flour, milk, yeast, egg, mix, kneed, ingredients, design, make, evaluate, improvements, appealing,	To follow a recipe when making a variety of foods. To weigh and measure with increasing accuracy. To evaluate against success criteria and think of ways to improve.
Summer	Seasides & Wild Wonders	To design, make and evaluate a sustainable product using only natural or degradable materials. To know about suitability of product for the user.	How can I change the purpose of a plastic bottle making nit useful? Design, make and evaluate using a plastic milk bottle to create a new product. Use a range of materials and tools. Evaluate final product against their design criteria.	Plastic bottle, scissors, glue, paper, paint, wool, bottle tops, design, make, evaluate Designing, making and evaluating – take a bottle and change it into a new product.	To know how to select from and use a range of tools and equipment to perform practical tasks [e.g. cutting, shaping, joining and finishing]. Know how to select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to characteristics

## North Lancing Primary School – Knowledge Progression in Design and Technology (Year 3)

Year 3	Topic:	Prior Knowledge:	Key New Knowledge:	Key Vocabulary:	Working technically:
<b>Autumn 1</b>	<b>Sewing</b>	Plan, make and evaluate according to a plan. To be critical in their evaluation.	Sewing; Apply their understanding of patterns to design a book mark. Understanding of how to use cross stitch to create their product. Understanding the technique of how to use the needle and thread (up and down). Using their criteria to evaluate their own work and others. Plan how to use materials, equipment and processes and suggest alternative methods.	Binca, cross stitch, thread, running stitch, needle, design, plan, evaluate, tools, equipment, technique	Design a pattern to create an appealing book mark made from binca, using cross stitch techniques. Design and annotate designs. Make a bookmark using a range of tools and equipment to perform the practical task with accuracy. Evaluate against own design criteria and consider the views of others to improve work
<b>Spring</b>	<b>Stone Age to Iron Age</b>	To explore and create Stone Age jewellery.	To create a Stone Age necklace using appropriate materials. Designing beads and decorating them after 'marking' in different designs. To put them in a repeating pattern of shape of beads they make.	Jewellery, design, shape, markings, symmetrical, random, nodes, patterns.	Design beads into shapes (sphere, squares, tooth shapes) and 'mark' them out using tools to indent. Using clay, following their designs. Painting. Evaluate their finished product against own designs, consider improvements.
<b>Summer</b>	<b>Ancient Greeks</b>	To use a range of tools and equipment to perform practical tasks when creating a greek bowl. Know how to prepare food safely and follow instructions on a recipe Design and make, weighing, measuring, mixing, decorating	To know how to use a range of tools and equipment to perform practical tasks. Design, make and evaluate a paper Mache Greek bowl decorating with a geometric design.  Cooking and nutrition: Greek food tasting – to know how to slice and chop food. To cook a selection of Greek food.	Paper, glue, design, paint, evaluate, paper Mache, Greek, patterns, geometric designs  A selection of Greek food, hummus, pitta, honey, yogurt, olives, feta, knife, slice, chop,	Design their product and annotate Make their designs using a range of materials and equipment Evaluate their product against their own design.  Discuss and prepare Greek food for tasting.

# North Lancing Primary School – Knowledge Progression in Design and Technology (Year 4)



Year 4	Topic:	Prior Knowledge:	Key New Knowledge:	Key Vocabulary:	Working technically:
Spring	World War 2	<p>To understand how to reinforce complex structures. Apply their understanding of how to strengthen, stiffen and reinforce more complex structures. Plan, Design, Make and Evaluate</p> <p>To know how to prepare food safely. To know where food comes from.</p>	<p>Research and understand the different shelters used in World War 2 and their purposes. Apply their understanding to design and make a model Anderson shelter. Understand how they can strengthen, stiffen and reinforce their structure. Understand and use electrical systems in their products. Know how to Join and combine materials and components. Know how to sew using basic stitches.</p> <p>Understand seasonality and know where and how a variety of ingredients are grown. To understand the nutritional value in a meal/ recipe.</p>	<p>Generate, design, plan, cross-sectional design, purpose, strengthen, stiffen, reinforce, labelled diagrams, annotate, features, components, evaluate, methods, tools, stitches, needles, materials,</p>	<p>Generate ideas, considering the purposes for which they are designing. Make labelled drawings from different views showing specific features. Plan how to use materials, equipment and processes and suggest alternative methods. Select appropriate tools and techniques for making their shelter. Measure, mark out, cut and shape a range of materials using appropriate tools and techniques. Evaluate their work both during and at the end of the assignment. Evaluate their products carrying out appropriate tests. Prepare and cook a range of savoury dishes using a range of techniques.</p>
Summer	Volcanoes and Earthquakes	<p>To understand how to reinforce complex structures. Apply their understanding of how to strengthen, stiffen and reinforce more complex structures. Plan, Design, Make and Evaluate</p>	<p>Understand the cross sections of a volcano and the different types of volcanoes. Apply their understanding of how to make a model volcano and how to strengthen, stiffen and reinforce their structure. Know how to make labelled drawings from different views, including a cross-sectional diagram showing specific features. Know how to select appropriate tools and techniques for making their volcano.</p>	<p>Generate, design, plan, purpose, strengthen, stiffen, reinforce, labelled diagrams, cross-sectional diagrams, features, components, evaluate, methods, tools,</p>	<p>Generate ideas, considering the purposes for which they are designing. Plan how to use materials, equipment and processes and suggest alternative methods. Measure, mark out, cut and shape a range of materials using appropriate tools and techniques. Join and combine materials and components. Evaluate their work both during and at the end of the assignment. Evaluate their products carrying out appropriate tests.</p>

# North Lancing Primary School – Knowledge Progression in Design and Technology (Year 5)



Year 5	Topic:	Prior Knowledge:	Key New Knowledge:	Key Vocabulary:	Working technically:
Autumn	Christmas baking	To know how to use a range of tools and equipment to perform practical tasks. Know how to prepare food safely and follow instructions on a recipe.	Research and design from current products on the market. Analysing current products. Survey and collate ideas from an audience to establish design criteria for a desirable design. Designing the product – annotate the design. Designing effective packaging . Weighing and mixing ingredients. Record step-by-step instructions as a recipe. Evaluate the success of the product.	Seasonal Decorative Design Collate Annotate Packaging Recipe	Following a recipe Measuring and mixing ingredients Using baking tools safely Baking Finishing of product
Spring	Space – sewing/ applique	Know how to sew using basic stitches. Measure, mark out, cut and shape a range of materials using appropriate tools and techniques.	Use a range of media to explore the theme Space. Draw and annotate space applique design using the space theme. Experimenting with different multimedia to create the design. Practise different stitch styles – running stitch, backstitch – on calico. Making and adapting design, using felt to make the design 3D in places Evaluating design for its quality and closeness to the design.	running stitch, backstitch Calico, Applique , Colour scheme, Applique, Tacking, Stuffing, Felt.	Back stitch Running stitch Applique Needle work
Summer	Robot Wars	Understand and use electrical systems in their products. Know how to Join and combine materials and components.	Draw out a scaled plan of the base of the robot. Annotate the design to record the key measurements are accurate. Design the top part of the robot to make it aesthetically pleasing. Design a simple circuit that includes a switch. Accurately measure and cut the frame using a hacksaw. Stick and reinforce the joints using a hot glue gun. Construction and placement of axles using dowel rod and axle holders. Create an electrical circuit powered by batteries. Discover how to use the motor to power the robot. Troubleshoot problems and adapting the design of the robot if required	Design Key measurements Circuits Dowel Axle Troubleshooting Square corners Scaled plan Base design motor	Measuring accurately to given lengths Cutting squarely Using a hacksaw safely Using a gluegun Creating a circuit to power a motor

# North Lancing Primary School – Knowledge Progression in Design and Technology (Year6)



Year 6	Topic:	Prior Knowledge:	Key New Knowledge:	Key Vocabulary:	Working technically:
Autumn	<b>Christmas Carousel Construction</b>	Design a simple circuit that includes a switch. Know how to Join and combine materials and components.	Research and design from current products on the market. Analysing current products Survey and collate ideas from an audience to establish design criteria for a desirable design. Cross sectional drawing of different angles of carousel design. Annotated designs. Use of Techcard and dowel and washers for ease of movement and reduction of friction. Switches, series circuits for lights. Making and adapting design – finishing Evaluating design for its functional properties. Aesthetic requirements for a Christmas Carousel.	Tech card Cross sectional design Annotated design Washers, dowel, friction Finishing elements Analysing Functional properties Aesthetic qualities Switches, series circuits for lights, Strengthening, stiffening product elements	Evaluating current designs Designing and annotating designs Making with dowel, Techcard and washers Evaluating against a set criteria for aesthetic and functioning skills
Spring	<b>Maya hanging - Sewing</b>	Know how to sew using basic stitches. Measure, mark out, cut and shape a range of materials using appropriate tools and techniques.	Research and design from current products on the market. Analysing current products Survey and collate ideas from an audience to establish design criteria for a desirable design. Maya art themed print addition and enhancement through. Stitch styles – running stitch, backstitch. Applique design. Annotated designs. Making and adapting design – finishing. Evaluating design for its functional properties. Aesthetic requirements for art piece – colour/thematic scheme.	Machine stitching, running stitch, backstitch Pinking sheers Bias Binding Pattern Pieces Colour scheme Thematic design, Applique, Tacking	Back stitch Running stitch Refine Yr5 Applique
Summer	<b>Cooking and Nutrition - Pizza</b>	Know how to prepare food safely and follow instructions on a recipe. Know how to Join and combine materials and components.	Research and design from current products on the market. Analysing current products. Survey and collate ideas from an audience to establish design criteria for a desirable design – base, sauce and toppings. Designs for base, sauce and toppings – nutritional balance. Annotated designs. Use of different flours including adaptations for sweet and savoury designs and dietary requirements – gluten free. Making and adapting design – finishing. Evaluating design for its nutritional requirements. Aesthetic requirements for a pizza including name of pizza and box design - extension	Dough, Kneading Wholemeal/ plain/ self raising/ gluten free/ spelt/ rye, BBQ, tomato/ chilli sauce, Toppings – nutritional value/ vitamins/ fibre/ carbohydrate/ Seasonality of products according to availability for season. Processed products – e.g. pepperoni. Budget and affordability.	Nutritional value of food Kneading dough Budgeting and affordability of design Baking Understanding seasonality Finishing of product