



Design and
Technology

Content



EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Manipulate materials to achieve a planned effect – shadow puppets Construct a model with a purpose in mind, using materials of their choice – written label select tools and techniques need to shape and join materials together	Design and make a beach buggy for competition (to include free running wheels) Design and make hand/ stick puppets for Puppet Show – to include split pins for movement Come up with design criterion and be able to evaluate against it Use knowledge of fruit to make different flavours of ice-cream– follow a recipe/instructions	Create a design/ success criteria for purposeful design Create moving books to include pop-ups and hinges Use appropriate tools and methods to cut and join Scientific Tea Party (link to science) research and prepare a selection of food that go through changes of state (scones, chocolate, preserves etc.)	Use research to develop designs (look at a range of theatres) - trip to Waterside Follow a design brief and come up with appropriate success criteria Design and make a future-proof theatre (prototype) Prototypes to include pop-ups, levers, linkages, 3D nets Research, prepare and make pies with a range of sweet/savoury fillings	Use bulbs/circuits to design and make a light box for film premier night Design and make an interactive diorama, to include more complex pop-ups, sliders, levers and wheels to move characters Use of 3D nets to create pop-ups Evaluate and review the designs about design criteria	(Discover project) Design and make modern day pulley system to move a boat from water to land – based on Sutton Hoo Designs to include annotated sketches Use a variety of tools/resources safely, e.g. craft knife, glue gun etc Combine materials with moving joints Research street food recipes from a variety of cultures Create own ‘street food’ recipe and make using a variety of savoury ingredients	Research, design and make a working musical instrument from recycled materials Designs to include annotated sketches Use a variety of tools/resources safely, e.g. craft knife, glue gun etc Design and make moving runway (prototype) to include a battery-operated motor and turning wheel Research a selection of canapes and create own recipe for professional caterers to prepare in bulk

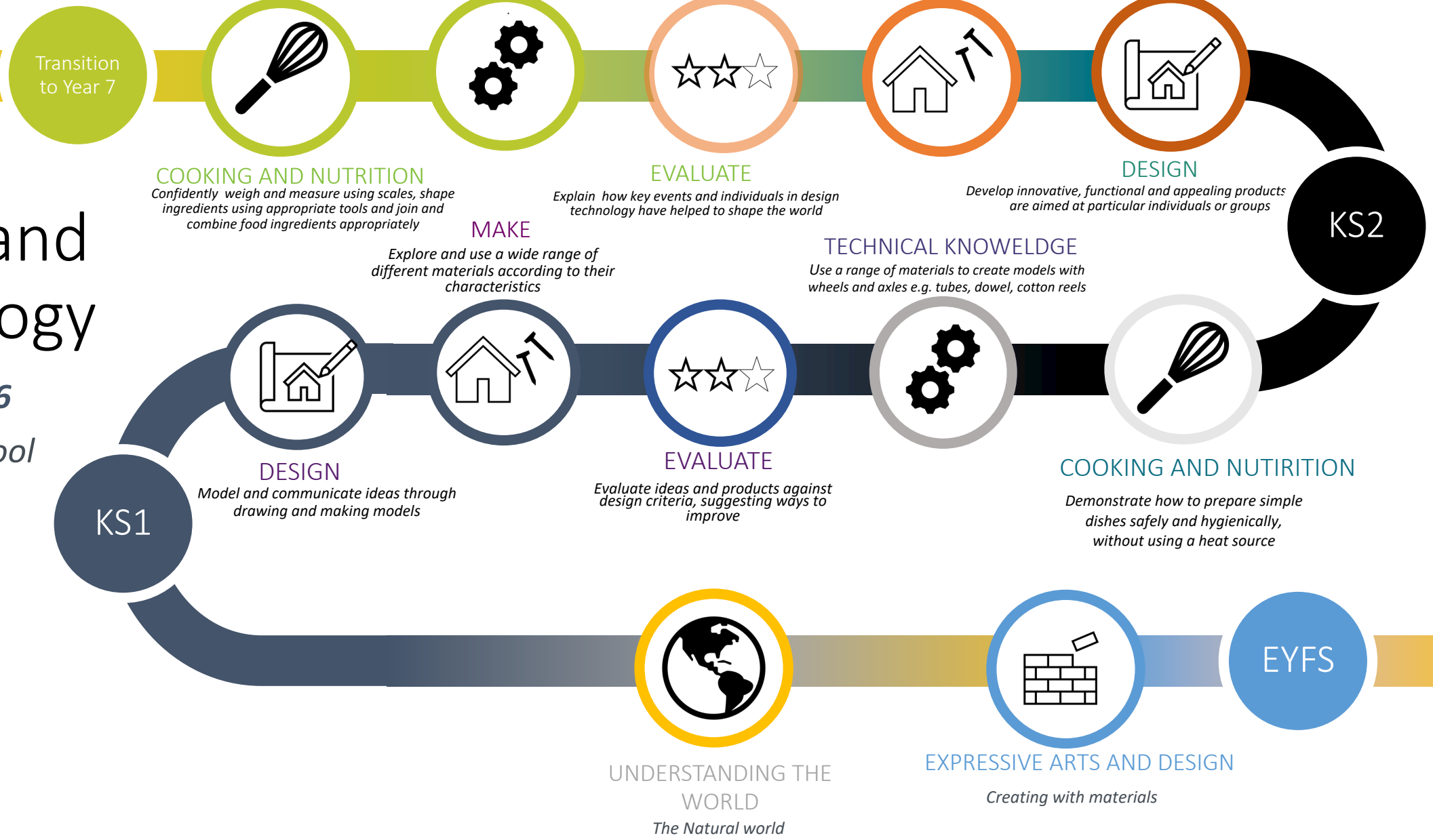
Design and Technology is an inspiring, rigorous and practical subject that encourages children to learn, think and intervene creatively to solve problems.



Design and Technology

EYFS – YEAR 6

Elmhurst School



Create Projects Outline



Year group	Focus	Key Concepts	Enquiry Questions
EYFS	Expressive arts and design	beauty, sustainability, creativity	Can we capture summer?
Year 1	Seaside – puppet show	tradition, choice, happiness	What happens at the seaside?
Year 2	Self-expression in Art/ DT	individuality, creativity, dreams	How can I express myself?
Year 3	Theatre design	beauty, dreams, love	What makes something beautiful?
Year 4	Film/ animation	virtue, strength, justice	Heroes and Villains: is it always as simple as good versus evil?
Year 5	Street performance (D&T technical focus in Discover Project)	freedom, community, class	How does context influence reception?
Year 6	Life on landfills Junk Orchestra Trashion Show / moving runway	sustainability, truth, creativity	What do we treasure the most?

Skills Progression



Understanding the World

Expressive Arts and Design

2YO

Explore materials with different properties.
Explore natural materials, indoors and outside.
Explore and respond to different natural phenomena in their setting and on trips.
Notices detailed features of objects in their environment
Can talk about some of the things they have observed such as natural and found objects
Enjoys playing with small world reconstructions, building on first-hand experiences

Notice patterns with strong contrasts and be attracted by patterns resembling the human face.
Explore different materials, using all their senses to investigate them.
Manipulate and play with different materials.
Experiments with ways to enclose a space, create shapes and represent actions, sounds and objects
Uses 3D and 2D structures to explore materials and/or to express ideas
Use their imagination as they consider what they can do with different materials.
Make simple models which express their ideas.

Nursery

Use all their senses in hands-on exploration of natural materials.
Explore collections of materials with similar and/or different properties.
Talk about what they see, using a wide vocabulary.
Explore how things work.
Explore and talk about different forces they can feel.
Talk about the differences between materials and changes they notice.
Comments and asks questions about aspects of their familiar world such as the place where they live or the natural world
Talks about why things happen and how things work

Explore different materials freely, to develop their ideas about how to use them and what to make.
Develop their own ideas and then decide which materials to use to express them.
Join different materials and explore different textures.
Create closed shapes with continuous lines and begin to use these shapes to represent objects, based on imagination, observation and experience
Uses various construction materials, e.g. joining pieces, stacking vertically and horizontally, balancing, making enclosures and creating spaces
Uses tools for a purpose

Reception

Explore the natural world around them.
Recognise some environments that are different from the one in which they live.
Knows about similarities and differences in relation to places, objects, materials and living things
Talks about the features of their own immediate environment and how environments might vary from one another

Expresses and communicates working theories, feelings, ideas and understandings
Return to and build on their previous learning, refining ideas and developing their ability to represent them.
Create collaboratively, sharing ideas, resources and skills.
Uses their increasing knowledge and understanding of tools and materials to explore their interests and enquiries and develop their thinking
Develops their own ideas through experimentation with diverse materials, e.g. light, projected image, loose parts, watercolours, powder paint, to express and communicate their discoveries and understanding.

Skills Progression



	Design	Make	Evaluate	Technical Knowledge	Cooking and Nutrition
Y1	Develop purposeful products based on criteria Model and communicate ideas through drawing and making models Begin to use technology to communicate ideas	Fold, tear and cut paper and card. Mark out materials to be cut using a template. Cut along lines, straight and curved paper Insert paper fasteners for card linkages. Join appropriately for different materials and situations e.g. glue, tape etc.	Explore and evaluate a range of existing products , discussing likes and dislikes Discuss ideas and products with others Start to evaluate ideas and products in relation to purpose and design	Make vehicles with construction kits which contain free running wheels. Explore a range of materials to create models with wheels and axles e.g. tubes, dowel, cotton reels. Explore and use sliders and levers in their products and build simple structures Explore ways of making their structure stronger and more stable	Begin to understand that all food comes from plants or animals and that it has to be farmed/grown Group familiar food products e.g. fruit and vegetables. Cut, peel, grate and chop a range of ingredients. Work safely and hygienically. Understand the need for a variety of foods in a diet
Y2	Continue to develop purposeful products based on criteria Identify a purpose for what they intend to design and make. Develop ideas through talking Model and communicate ideas through drawing and making models Begin to use technology to communicate ideas	Mark out materials to be cut using a template. Cut along lines, straight and curved paper Insert paper fasteners for card linkages Create hinges and simple pop-ups Join appropriately for different materials and situations, exploring how they can be made stronger Explore and use a wide range of different materials according to their characteristics Explore different ways of finishing their product	Explore and evaluate a range of existing products, discussing strengths and areas for improvement Discuss ideas and products with others Evaluate ideas and products against design criteria, suggesting ways to improve	Use a range of materials to create models with wheels and axles e.g. tubes, dowel, cotton reels. Use sliders and levers in their products and build simple structures Explore ways of making their structure stronger and more stable With help measure, cut and score with some accuracy. Use hand tools safely and appropriately. Start to assemble, join and combine materials in order to make a product.	Understand that all food comes from plants or animals and that it has to be farmed/grown Develop a food vocabulary using taste, smell, texture and feel. Understand how to name and sort foods into the five groups. Cut, peel, grate and chop a range of ingredients. Work safely and hygienically. Understand the need for a variety of foods in a diet Measure and weigh food items using non statutory measures e.g. spoons, cups. Demonstrate how to prepare simple dishes safely and hygienically, without using a heat source

Skills Progression



	Design	Make	Evaluate	Technical Knowledge	Cooking and Nutrition
Y3	Begin to use research to develop designs Begin to explore innovative, functional and appealing products that are design for a particular purpose Generate, develop and communicate ideas through discussion with others Start to order the main stages of making a product Learn about inventors, designers, engineers, chefs and manufacturers who have developed ground-breaking product When planning explain their choice of materials and components including function and aesthetics.	Cut slots and internal shapes Use lolly sticks/card to make levers and linkages. . Explore more complex pop ups. Create nets to support the design process. Explore different ways of joining materials Explore different finishes for their product using a range of materials	Investigate and evaluate a range of existing products Evaluate their ideas and products against design criteria and begin seek the views of others to improve their work Understand how key events and individuals in design technology have helped to shape the world	Use mechanical systems in their products (e.g. levers and linkages) Create shell or frame structures/ prototypes Make structures more stable by giving them a wide base. Prototype frame and shell structure	Start to know that food is grown (such as tomatoes, wheat and potatoes), reared (such as pigs, chickens and cattle) and caught (such as fish) in the UK, Europe and the wider world. Develop sensory vocabulary/knowledge using, smell, taste, texture and feel. Follow instructions. Make healthy eating choices from an understanding of a balanced diet Join and combine a range of ingredients. Work safely and hygienically. Measure and weigh ingredients appropriately.
Y4	Use research to develop designs Explore innovative, functional and appealing products that are design for a particular purpose Generate, develop and communicate ideas through discussion with others Use annotated sketches, prototypes, pattern pieces and technology to generate, develop and communicate ideas. Learn about inventors, designers, engineers, chefs and manufacturers who have developed ground-breaking product When planning explain their choice of materials and components according to function and aesthetic.	Cut slots and internal shapes Use linkages and sliders to make movements larger or more varied. Use and create more complex pop ups. Create nets to support the design process. Explore and evaluate different ways of joining materials Explore and evaluate different finishes for their product using a range of materials	Investigate and evaluate a range of existing products Evaluate their ideas and products against design criteria and seek the views of others to improve their work Understand how key events and individuals in design technology have helped to shape the world	Include the use of buzzers/ bulbs in their products Use mechanical systems in their products (e.g. levers and linkages) Create shell or frame structures/ prototypes strengthen frames with diagonal struts. Evaluate how to improve the stability of structures, e.g. a wide base.	Understand that food is grown., reared and caught in the UK, Europe and the wider world. Analyse the taste, texture, smell and appearance of a range of foods. Follow instructions. Make healthy eating choices from an understanding of a balanced diet Join and combine a range of ingredients Work safely and hygienically. Confidently weigh and measure ingredients

Skills Progression



	Design	Make	Evaluate	Technical Knowledge	Cooking and Nutrition
Y 5	Use research and develop criteria to inform design Begin to develop innovative, functional and appealing products that are aimed at particular individuals or groups Generate, develop, and communicate ideas through discussion, seeking the views of others. Use annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and technology to generate, develop, model and communicate ideas.	Cut accurately and safely to a marked line. Join and combine materials with temporary, fixed or moving joining's. Use craft knife, cutting mat and safety ruler under supervision if appropriate. Use a glue gun with close supervision. Use nets and models to build prototypes Begin to select from a wide range of materials Explore and use different finishes	Investigate and analyse a range of existing products based on functional and aesthetic qualities Evaluate their ideas and products against their own design criteria Consider the views of others to improve their work Understand how key events and individuals in design technology have helped to shape the world	Control and monitor a product using a computer. Understand and use mechanical systems in their products (e.g. gears, pulleys and cams) Apply their understanding of how to reinforce and strengthen increasingly complex structures using a range of materials	Evaluate and analyse food products Begin to understand that seasons may affect the food available Begin to understand how food is processed into ingredient that can be eaten or used in cooking Weigh and measure using scales Cut and shape ingredients using appropriate tools and equipment e.g. grating Join and combine food ingredients appropriately e.g. beating, rubbing in. Decorate appropriately. Work safely and hygienically.
Y 6	Use research and develop criteria to inform design Develop innovative, functional and appealing products that are aimed at particular individuals or groups Generate, develop, and communicate ideas through discussion, actively seeking the views of others. Confidently use annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and technology to generate, develop, model and communicate ideas.	Cut accurately and safely to a marked line. Join and combine materials with temporary, fixed or moving joining's. Use craft knife, cutting mat and safety ruler under supervision if appropriate. Use a glue gun with close supervision. Use nets and models to build prototypes Select from a wide range of materials based on functional and aesthetic properties Explore and use different finishes taking into account the aesthetics of their product	Investigate and analyse a range of existing products based on functional and aesthetic qualities Evaluate their ideas and products against their own design criteria Actively seek and consider the views of others to improve their work Explain how key events and individuals in design technology have helped to shape the world	Control and monitor a product using a computer. Understand and use mechanical systems in their products(e.g. gears, pulleys and cams) Apply their understanding of how to reinforce and strengthen increasingly complex structures using a range of materials	Analyse food products taking into account the properties of ingredients and sensory characteristics Understand that seasons may affect the food available. Understand how food is processed into ingredients that can be eaten or used in cooking. Confidently weigh and measure using scales Cut and shape ingredients using appropriate tools and equipment e.g. grating Join and combine food ingredients appropriately e.g. beating, rubbing in. Decorate appropriately. Work safely and hygienically.