**DT Progression of Skills and Knowledge Document: EYFS- Year 6**

| Long term Sequence | Autumn 1 | Autumn 2 | Spring 1 | Spring 2 | Summer 1 | Summer 2 |
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| EYFS | ELG Creating with materials<br>• Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form, and function;<br>• Share their creations, explaining the process they have used;<br>• Make use of props and materials when role playing characters in narratives and stories. | | | | | |
| Year 1 | Mechanisms | Structures | Food and Nutrition | Understanding Materials | Textiles | Food and Nutrition |
| Year 2 | Textiles | Food and Nutrition | Mechanisms | Understanding Materials | Food and Nutrition | Structures |
| Year 3 | Textiles | Food and Nutrition | Mechanisms | Food and Nutrition | Flexible art block* | Structures |
| Year 4 | Food and Nutrition | Mechanisms | Textiles | Structures | Electrical systems | Food and Nutrition |
| Year 5 | Food and Nutrition | Systems | Textiles | Mechanisms | Computing systems | Food and Nutrition |
| Year 6 | Food and Nutrition | Mechanisms | Food and Nutrition | Structures | Electrical systems | Textiles |

**KEY**

KNOWLEDGE

SKILLS

FINAL PRODUCT

CONTEXT

TECHNICAL LANGUAGE

## Mechanisms

| Reception | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
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| Exploring pop-up books and greetings cards which feature sliders or sliding mechanisms.<br><br>Big questions:<br><br>What do you need to do to make these work?<br><br>Why do you think some books and cards look this way? | Knowledge: To know a slider is a mechanism that you can push or pull.<br><br>Skill: To use different methods to make a card slider.<br><br>Final product: Making festive cards. | Knowledge: To know how wheels and axles work together.<br><br>Skill: To know how to fit a wheel to an axle.<br><br>Final product: Making a modelled size wheelchair. | Knowledge: To know that linkages and levers can work together to aid movement.<br><br>Skill: To fit together a linkage and lever.<br><br>Final product: Making a modelled sized see-saw. | Knowledge: To know uses for common hinges.<br><br>Skill: To make different hinges using everyday materials.<br><br>Final product: Making cardboard doors. How can we open and close them? | Knowledge: To know that a pulley system is designed to lift loads.<br><br>Skill: To create a simple pulley system.<br><br>Final product: Making crane to lift a load. | Knowledge: To know that a pulley and gears work together to create fluid movement.<br><br>Skill: To create a simple pulley system with gears.<br><br>Final product: Making a Ferris wheel. |

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| Do you like them? Why or why not? | Context: Sell cards at Christmas Fete. | Context: Inclusion. | Context: A see-saw for a local playground. (To research or visit nearby parks in need for renovation.) | Context: Designing a fire safety door. (Safeguarding links.) | Context: Felixstowe Docks. | Context: Felixstowe Ferris Wheel. |
| Pull/push | Bridge, lever, slider, slot, pull/push, rigid | Wheel, axel, , dowel, body/cab, rotate, centre, position | Leaver, linkage, force, load, effort | Hinge, pivot, fastener, knuckle, leaf, barrel | Pulley, fixed pulley, moveable pulley | Pulley, fixed pulley, moveable pulley, block and tackle, gear, rotate, driver gear, driven gear/idle gear (idler) |

## Structures

| Reception | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
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| Building and construction: Building free-standing towers.<br><br>Big questions:<br><br>How high can you build a tower? | Knowledge: To know a freestanding structure is one without any attachments. | Knowledge: To know paper gets stronger once folded.<br><br>Skill: To fold paper to increase stability. | Knowledge: To know that bridges are structures that allow people or vehicles to cross. | Knowledge: To know triangles add stability in a structure.<br><br>Skill: To make a triangle to form and joins trusses. | Knowledge: To know designers use a range of methods to strengthen structures. | Knowledge: To know that structures can be supported with guy lines and flying buttresses. |

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| How many bricks will you use? Does this matter?<br><br>Is a taller tower a better tower?<br><br>What do you notice when you add more bricks? | Skill: To build a freestanding structure using different materials.<br><br>Final product: To replicate a famous freestanding structure.<br><br>Context: Leaning Tower of Pisa. | Final product: To build a bridge structure that can hold a book.<br><br>Context: The Orwell Bridge. | Skill: To make a bridge structure featuring a tower, arch or pier.<br><br>Final product: Can you make a bridge that can hold a toy car? (<br><br>Context: Tower Bridge. | Final product: Making a triangle structure that can free stand.<br><br>Context: The Eiffel Tower (links to French lessons.) | Skill: To be able to add strength to a frame using different techniques.<br><br>Final product: To build a bridge with different frames.<br><br>Context: The Iron Bridge. | Skill: To use different lengths of spaghetti to increase stability.<br><br>Final product: To construct a tower that is at least 1m tall.<br><br>Context: Blackpool Tower. |
| Tower, balance | Tower, topple, lean, foundation, balance | Pillar, storey, load | Deck, pier, suspension, arch | Truss, compression, tension | Frame, brace, gussets, stuts | Guyed mast, flying buttress, aesthetics, ediface |

## Food and Nutrition Unit 1

| Reception | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
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| Making fruit skewers. | Knowledge: To know that colourful | Knowledge: To know why | Knowledge: To know what is meant by balanced. | Knowledge: To know processed foods have | Knowledge: To know foods from other | Knowledge: To know what street food is. |

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| Big questions:<br><br>What does it mean to be healthy?<br><br>What fruits can you name? Do you know where they come from?<br><br>What foods are healthy? Which foods are unhealthy? | food can be healthy.<br><br>Skill: To prepare different fruits.<br><br>Final product: To make a fruit kebab skewer.<br><br>Context: Kebabs from local cultures. | vegetables are good for us.<br><br>Skill: To prepare a range of vegetables.<br><br>Final product: Jam jar salads.<br><br>Context: Making a snack for after school club. | To know fresh foods are better.<br><br>Skill: To add flavour to a dish.<br><br>Final product: Fruity yoghurt.<br><br>Context: Making a snack for breakfast club. | many added ingredients.<br><br>Skill: To make, roll and shape bread dough.<br><br>Final product: Making pizza.<br><br>Context: The history of pizza, its origins- links to Italian families? | cultures can be nutritious.<br><br>Skill: To present food to a high standard.<br><br>Final product: Smorrebrod.<br><br>Context: What is Smorrebrod? How does it differ to other sandwiches? | Skill: To make savoury pastry.<br><br>Final product: Samosas.<br><br>Context: Foods from local cultures: Indian cuisine. |
| Chopping with adult support | Chopping, peeling, grating | Chopping, peeling, grating, seasoning | Chopping, peeling, grating, seasoning, flavouring | Chopping, peeling, grating, seasoning, flavouring, rolling, shaping | Chopping, peeling, grating, seasoning, flavouring, rolling shaping, slicing, ribboning | Chopping, peeling, grating, seasoning, flavouring, rolling shaping, slicing, ribboning, dicing |
| Vitamins | Senses, sensory, vitamins | Wholemeal, processed, vitamins | Nutrition, fibre, mineral, vitamins | Processed, gluten, knead, ingredients | Fibre, knead, culture, presentation | Culture, prove, nutrient |

## Food and Nutrition Unit 2

| Reception | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
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| Pumpkin Soup- making a healthy vegetable soup.<br><br>Big questions:<br><br>What does it mean to be healthy?<br><br>What vegetables can you name? Do you know where they come from?<br><br>What foods are healthy? Which foods are unhealthy? | Knowledge: To know the importance of vegetables in our diet.<br><br>Skill: To peel, grate and season vegetables.<br><br>Final product: To make a vegetable dip.<br><br>Context: Dishes from local cultures. | Knowledge: To know the difference between ultra-processed and fresh foods.<br><br>Skill: To shape and form ingredients.<br><br>Final product: Overnight oats.<br><br>Context: Making a snack for breakfast club. | Knowledge: To know how food can help the mind.<br><br>Skill: To peel, grate and season vegetables.<br><br>Final product: Noodle salad.<br><br>Context: Dishes from local cultures. | Knowledge: To know processed foods have many added ingredients such as salt and sugar.<br><br>Skill: To peel, grate and chop vegetables.<br><br>Final product: Chickpea curry.<br><br>Context: Dishes from local cultures. | Knowledge: To know eating food from different countries can help us be healthy.<br><br>Skill: To slice and ribbon a range of vegetables.<br><br>Final product: Vegetable stir-fry.<br><br>Context: Dishes from local cultures. | Knowledge: To know that food can affect our mood.<br><br>Skill: To slice, dice, grate and peel a range of vegetables.<br><br>Final product: Sensory salad.<br><br>Context: Salads from round the world. |
| Chopping with adult support | Chopping, peeling, grating, seasoning | Chopping, peeling, grating, seasoning flavouring | Chopping, peeling, grating, seasoning, flavouring | Chopping, peeling, grating, seasoning, flavouring, rolling, shaping | Chopping, peeling, grating, seasoning, flavouring, rolling shaping, slicing, ribboning | Chopping, peeling, grating, seasoning, flavouring, rolling shaping, slicing, ribboning, dicing |

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| Vitamins | Texture, vitamins, nutritious | Wholemeal, processed, vitamins, fibre, starch | Balanced, vitamins, seasoning | Texture, fragrant, fusion | Spices, fragrant, culture | Staple, nutrient, translucent, saute |

## Textiles

| Reception | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
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| Making a mother's day coaster.<br><br>Big questions:<br><br>What materials do you know?<br><br>Which materials would be best when keeping you warm? Why? | Knowledge: To know two pieces of material can be joined by a running stitch.<br><br>Skill: To know how to thread a needle.<br>To know how to use a running stitch.<br>Final product: To | Knowledge: To know how to cut out shapes made by a template.<br><br>Skill: To cut out and join fabric shapes.<br><br>Final product: Patchwork blankets.<br><br>Context: Blankets for the homeless. | Knowledge: To know how that fabrics can be stiffened.<br><br>Skill: To use a range of solutions to stiffen.<br><br>Final product: Making a box out of fabric.<br><br>Context: Selling this at Christmas Fete. | Knowledge: To know that fastenings have different functions.<br><br>Skill: To make a shank for a button.<br><br>Final product: Making a fastening for towel to attach to a hook. | Knowledge: How can we waterproof cotton fabric?<br><br>Skill: To use make an insulated lunch bag.<br><br>To repurpose a pillow case.<br><br>Final product: Making a lunch bag.<br><br>Context: Upcycling, | Knowledge: To know plastic items can be recycled and repurposed into practical items.<br><br>Skill: To use plastic bags and snack packets to make practical items.<br><br>Final product: Making a lunch bag.<br><br>Context: Outdoor storage: problems for storing packed lunches? |

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| | make a monster hand warmer.<br><br>Context: Hot and Cold places in Science. | | | Context: Swimming at Crown Pools. | helping the planet. | |
| Running stitch with support | Threading a needle, using a running stitch | Threading a needle, using a running stitch, overstitch cutting, templating. | Threading a needle, using a running stitch, overstitch, cutting, templating, stiffening. | Threading a needle, using a running stitch, basting stitch, cutting, templating. | Threading a needle, using a running stitch, basting stitch, overcast stitch cutting, templating. | Threading a needle, using a running stitch, basting stitch, overcast stitch cutting, templating, sealing. |
| Sewing | Sewing, running stitch, attach, felt | Patchwork, quilt, template, running stitch, overstitch, repurpose | Template, interfacing stiffen, running stich, overstitch | Hook and loop, shank, fastener, running stitch, basting stich | Repurpose, upcycle, functional, insulate | Repurpose, upcycle, reduce, recycle, seal |

## Understanding Materials: EYFS and KS1 only

| Reception | Year 1 | Year 2 |
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| Building the Orwell Bridge | Knowledge: To know materials have different properties and have different uses.<br><br>Skill: To combine materials. | Knowledge: To know materials can be modified to be made waterproof. |

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| Building a House for the Three Little Pigs - can we make it waterproof?<br><br>Big questions:<br><br>What materials are waterproof?<br>What does this mean?<br>What everyday items are waterproof? Why is this important?<br><br>Which materials are strong and sturdy?<br>Why is this important? | Final product: Making a model house.<br><br>Context: Houses in the local area/Ipswich. | Skill: To make paper waterproof by using different mediums.<br><br>To fold paper effectively.<br><br>Final product: Making a waterproof paper hat.<br><br>Context: Designing hats for Reception to wear when accessing outdoor provision. |
| Architect | Architect, construction, properties, modify, solidify | Waterproof, absorbent, flexible, modify, barrier |

## Systems (KS2 only)

| Year 4 | Year 5 | Year 6 |
|---|---|---|
| Knowledge: To know that a switch is an interruption in the circuit.<br><br>To know why switches are useful.<br><br>Skill: To implement a switch component into a circuit.<br><br>Final product: Making a circuit featuring two different types of switches.<br><br>Context: Links to Science. | Knowledge: To know technology can be used to program and control a product.<br><br>Skill: To use Scratch algorithm/coding.<br><br>Final product: To program a game.<br><br>Context: E-safety/gaming. | Knowledge: To know that more than one switch can affect the functionality of a product.<br><br>Skill: To implement a switch component into a circuit.<br><br>Final product: Making a circuit featuring two or more switches.<br><br>Context: Outdoor storage: Links to Science. |
| Switch, circuit, current, component, conductor, interruption, unbroken | Code, coding, algorithm, program, control, debug | Switch, parallel circuit, current, component, conductor, interruption, unbroken, functionality |