DUNTON AND WRESTLINGWORTH SCHOOLS FEDERATION D.T Rationale and Curriculum Coverage

D.T 2024-25	Autumn	Spring	Summer
EYFS	  **Textiles Cookery Mechanisms and movement Structures**	  **Textiles Cookery Mechanisms and movement Structures**	  **Textiles Cookery Mechanisms and movement Structures**
Educational programme	Design Technology threads through many parts of the Early Years provision. Understanding the world involves guiding children to make sense of their physical world and their community. In addition, listening to a broad selection of stories, non-fiction, rhymes and poems will foster their understanding of our culturally, socially, technologically and ecologically diverse world. The development of children's gross motor skills provides the foundation for developing healthy bodies and social and emotional well-being. Fine motor control and precision helps with hand-eye co-ordination, which is later linked to early literacy. Repeated and varied opportunities to explore and play with small world activities, puzzles, arts and crafts and the practice of using small tools, with feedback and support from adults, allow children to develop proficiency, control and confidence. It is important that the curriculum includes rich opportunities for children to develop their spatial reasoning skills including shape, space and measures. The development of children's artistic and cultural awareness supports their imagination and creativity. It is important that children have regular opportunities to engage with the arts, enabling them to explore and play with a wide range of media and materials. The quality and variety of what children see, hear and participate in is crucial for developing their understanding, self-expression, vocabulary and ability to communicate through the arts. The frequency, repetition and depth of their experiences are fundamental to their progress in interpreting and appreciating what they hear, respond to and observe.		
Curriculum Goals	Mathematics – A master of maths will be able to spot connections, find patterns, measure effectively, use positional language and compare quantities. Understanding the World - To become an 'Exceptional Explorer' who explores and discovers the world around them, asking questions and investigating the answers. Physical development - To become a 'Talented Tool User' who can hold a pencil effectively, use a range of tools (for example scissors, cutlery, paintbrushes, tweezers, hammer, screwdrivers) safely and with confidence. Expressive Arts and Design - To become a 'Dynamic Designer' who can choose and safely use the resources they need to make their creations, talk about what they have made and how they have made it.		
	VOCABULARY Appearance, design, make, build, model, cut, join, shape, create, decorate, tools, ingredients, recipe, construct, large, ambulance, emergency vehicle, fire engine, helicopter, lifeboat, police car, police motorbike, wheel, explore, design, axle, moon buggy, travel, wheel, adapt, add, attach, choose, cover, select, spacecraft	**VOCABULARY** Appearance, design, make, build, model, cut, join, shape, create, decorate, tools, ingredients, recipe, discussion, idea, share, add, alter, adapt, change, explore, mend, transform, material, axle, carriage, move, transport, travel, wheel, comfortable, different, same, uncomfortable, record, share, stronger, strongest, discuss, idea, material, share, test, fabric, protection, safe, Strongest, axle, transport,wheel, breakfast, food, fruit, healthy, Ingredient, bridge, build, building, castle, construct, roof, strong, wall, tower, building, cathedral, construction, house, mill, palace, pyramid, strong, sturdy, temple, windmill	**VOCABULARY** Appearance, design, make, build, model, cut, join, shape, create, decorate, tools, ingredients, recipe, describe, design, discussion, explain, explore, idea, camera, eReader, handheld fan, headtorch, sun hat, wind up radio, adapt, change, improve, compare, different, loud, material, similar, soft, sound, adapt, change, decide, explore, like, collect, mix, pour, prepare, rinse, separate, shake, spread, taste, wash, whisk, choose, combine, loud, purpose, quantity, soft, sound, attachment, axle, bucket, combine harvester, cutter, farm vehicle, tractor, trailer, vehicle, wheel, appearance, boil, change, colour, cook, creamy, fresh, fruit, healthy, heat, juicy

DUNTON AND WRESTLINGWORTH SCHOOLS FEDERATION D.T Rationale and Curriculum Coverage

Year 1 and 2	 **Structures** – This project teaches children about the purpose of shelters and their materials. They name and describe shelters and design and make shelter prototypes. Children then design and build a play den as a group and evaluate their completed product. **Textiles** – how to attach material to structure	 **Mechanisms and Movement** – This project teaches children about wheels, axles and chassis and how they work together to make a vehicle move.	 **Cookery** - This project teaches children about sources of food and the preparatory skills of peeling, tearing, slicing, chopping, mashing and grating. They use this knowledge and techniques to design and make a supermarket sandwich according to specific design criteria.
	• Compare and contrast a variety of permanent and non-permanent shelters • Identify a range of materials used in shelters • Create a design to fit a design brief • Select and use a range of materials, beginning to explain their choices • Construct simple structures, models or other products using a range of materials • Identify strengths and weaknesses in their finished shelter/den/tent	• Investigate a selection of wheels, axles and chassis • Use wheels and axles to make a simple moving model • Explore different ways to fix axles and wheels to a chassis (fixed wheel moving axle/fixed axle moving wheel) • Design a moving vehicle • Use wheels and axles to make a simple moving model • Identify strengths and weaknesses in their finished vehicle	• Sort foods into groups by whether they are from an animal or plant source • Use tools to prepare food following safety and hygiene rules • Measure and weigh a selection of salad items using non-standard measures • Taste and evaluate supermarket sandwiches • Design and make own sandwich following a design brief • Identify strengths and weaknesses in their finished product
	VOCABULARY Compare, different, similar, change, criteria, difficulty, evaluate, Evaluation, improve, strength, weakness, function, permanent, protection, purpose, shelter, structure, temporary, design, design criteria, drawing, frame, function, idea, label, material, plan, purpose, shape, size, brick, construction, fabric, rope, stick, tarpaulin, wooden cane, appearance, construction, entry point, finish, functionality, joining, model, product, roof, safety, structure, tools, wall	**VOCABULARY** Compare, difference, similarity, change, improve, strength, weakness, axle, chassis, vehicle, wheel, criteria, design, diagram, idea, attach, evaluate, strong, tool, weak, material, purpose, axle, chassis, connect, move, roll, wheel, product, taxi, transport, vehicle, safety, tool, model, part, test	**VOCABULARY** Evaluate, evaluation, improve, success, design, design criteria, Diagram, label, chop, grate, grater, knife, mash, masher, peel, Peeler, slice, tear, flavour,fruit, healthy, ingredient, salad, vegetable, animal, dairy product, fish, flower, fruit, leaf, meat, nut, plant, root, seed, source, stem, hygiene, rule, safety,

DUNTON AND WRESTLINGWORTH SCHOOLS FEDERATION D.T Rationale and Curriculum Coverage

Year 3 & 4

Mechanisms and movement – This project teaches children about cam mechanisms. They experiment with different shaped cams before designing, making and evaluating a child's automaton toy. (you will need: shoe boxes, dowel, cardboard cams and finishing resources eg fabric coloured papers etc)

- Explore and use mechanisms (cams and axles) in models or products.
- Design toy with cams and axles
- Plan, choose and use appropriate materials and tools safely
- Suggest improvements to their products and describe how to implement them

VOCABULARY
Demonstrate, discussion, evaluate, explain, feedback, finish, improve, improvement, quality, reflect, strength, structure, design, design criteria, diagram, component, cut, join, material, test, automaton toy, axle, cam, component, down, elliptical cam, follower, heart cam, hexagonal cam, lever, linkage, machine, mechanical, mechanism, motion, movement, off-centre circular , cam, pear cam, rotational, slider, snail cam, square cam, wheel

Cookery - This project teaches children about food groups and the Eatwell guide. They learn about methods of cooking and explore these by cooking potatoes and other vegetables. The children choose and make a hot meal according to specific design criteria. (eg a vegetarian stew or soup)

- Identify the main food groups (carbohydrates, protein, dairy, fruits and vegetables, fats and sugars).
- Describe how key events in design and technology have shaped the world.
- Explain the importance and characteristics of a healthy, balanced diet.
- Prepare and cook a simple savoury dish.
- Use appliances safely with adult supervision.

VOCABULARY
Evaluate, evaluation, improve, success, bake, design, design criteria, Diagram, health and safety, plan, barbecue, boil, chop, cook, deseed, dice, fry, grate, grill, hob, ingredient, method, microwave, mix, oven, peel, prepare, roast, skin, slice, slow cooker, steam, balanced, calcium, carbohydrate, dairy, diet, Eatwell guide, fibre, food group, fruit, healthy, nutrient, nutrition, oil, protein, vegetable, vitamin, Food Standards Agency

Structures –This project teaches children about the purpose, structure and design features of greenhouses, and compares the work of two significant greenhouse designers. They learn techniques to strengthen structures and use tools safely. They use their learning to design and construct a mini greenhouse.

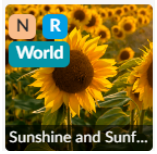
- Explain how an existing product benefits the user
- Compare architects and identify significant characteristics of the same style of structure
- Explain the similarities and differences between the work of two designers. (The Great Conservatory of Chatsworth House and the biomes of the Eden Project)
- Create framework using diagonal struts to strengthen (use knex to explore)
- Use tools safely for cutting and joining materials and components (glue gun, card corners)
- Plan which materials will be needed for a task and explain why
- Suggest improvements to their products and describe how to implement them

VOCABULARY
Change, design criteria, effective, evaluation, findings, improvement, observation, suitability, biome, compare, conservatory, designer, difference, purpose, similarity, structure, style, cloche, cold frame, greenhouse, design, design criteria, diagram, dimension, plan, bench hook, butt joint, explore, G clamp, gluing, hacksaw, hot glue gun, improve, investigate, joining, reinforcing, strengthening, test, triangular corner, glass, hardwearing, material, plastic, property, purpose, strength, transparent, waterproof, safety rules, supervision, diagonal strut, frame structure, stability, strength, three-dimensional, triangular shape

DUNTON AND WRESTLINGWORTH SCHOOLS FEDERATION D.T Rationale and Curriculum Coverage

Year 5	 **Moving mechanisms** Mechanisms and movement – This project is linked to 'Dynamic Dynasties' This project teaches children about pneumatic systems. They experiment with pneumatics before designing, making and evaluating a pneumatic machine that performs a useful function. (make a Pneumatic Machine - Build a DIY Air Pressure Powered STEM Project for Kids https://www.youtube.com/watch?v=y3jDcj6wkFM)	 **Eat the seasons** **Cookery** - This project is linked to 'sow, grow and farm' This project teaches children about the meaning and benefits of seasonal eating, including food preparation and cooking techniques. (make sweet or savoury pasties)	 Architecture **Structures** – This project is linked to 'Ground-breaking Greeks'. This project teaches children about how architectural style and technology has developed over time and then use this knowledge to design a building with specific features.
	• Explore how pneumatic systems use compressed air to exert a force • Design and make a pneumatic prototype • Test and evaluate products against a detailed design specification and make adaptations as they develop the product • Select and combine materials with precision • Survey users in a range of focus groups and compare results.	• Describe what seasonality means and explain some of the reasons why it is beneficial. • Evaluate meals and consider if they contribute towards a balanced diet. • Use an increasing range of preparation and cooking techniques to cook a sweet or savoury dish. • Evaluate meals and consider if they contribute towards a balanced diet	• Compare and contrast architecture through different time periods • Explore how the ancient Greeks developed the Classical form of architecture that has been copied for thousands of years. • Know that support, stiffness and stability can be created by using triangular shapes to create strong frameworks, columns to support roofs and overlapping brickwork patterns. • Build a framework using a range of materials to support mechanisms. • Select and combine materials with precision. • evaluate their design and construction
	VOCABULARY Difference, similarity, adjust design, analysis, deployment, evaluate, Evaluation, feedback, focus group, improvement, iterative process, problem-solve, product, prototype, success, test, heavy lifting equipment, jack, jack hammer, machinery, paint sprayer, pneumatic machine, pneumatic system, equipment, investigate, problem-solve, technique, test, version, actuator, air, air pressure, compress, compressor, force, gas, hinge, lever, movement, piston, plunger, pneumatics, pneumatic system, power, reservoir, syringe, valve, brace, lifting arm, load, stable, strong, structure, strut, sturdy, triangle	**VOCABULARY** Blend, boil, brown, chop, cooked, dice, food hygiene, food, preparation, grate, health and safety, mash, peel, puree, raw, sauté, Simmer, steam, carbohydrate, fat, fibre, fresh, fruit, healthy, kilocalorie, kilojoule, mineral, nutrient, nutritional value, protein, salt, saturated fat, seasonal food, soup, sugar, vegetable, vitamin, produce, seasonal fruit, seasonality, seasonal vegetable	**VOCABULARY** Discuss, evaluation, improve, ancient Egyptian, architecture, Baroque, building, caryatid, Classical, Corinthian column, Doric column, entablature, frieze, Gothic, Industrial, Ionic column, Modernist, pediment, Postmodern, prehistoric, Renaissance, style, sustainable, temple, computer-aided design, design, product, appearance, functional, stability, stiffness, column, framework, lintel, post, stability, stiffness, structure, support
D.T 2025-26	Autumn	Spring	Summer

DUNTON AND WRESTLINGWORTH SCHOOLS FEDERATION D.T Rationale and Curriculum Coverage

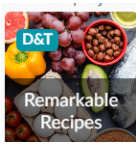
EYFS	  **Textiles Cookery Mechanisms and movement Structures**	  **Textiles Cookery Mechanisms and movement Structures**	  **Textiles Cookery Mechanisms and movement Structures**
Educational programme	Design Technology threads through many parts of the Early Years provision. Understanding the world involves guiding children to make sense of their physical world and their community. In addition, listening to a broad selection of stories, non-fiction, rhymes and poems will foster their understanding of our culturally, socially, technologically and ecologically diverse world. The development of children's gross motor skills provides the foundation for developing healthy bodies and social and emotional well-being. Fine motor control and precision helps with hand-eye co-ordination, which is later linked to early literacy. Repeated and varied opportunities to explore and play with small world activities, puzzles, arts and crafts and the practice of using small tools, with feedback and support from adults, allow children to develop proficiency, control and confidence. It is important that the curriculum includes rich opportunities for children to develop their spatial reasoning skills including shape, space and measures. The development of children's artistic and cultural awareness supports their imagination and creativity. It is important that children have regular opportunities to engage with the arts, enabling them to explore and play with a wide range of media and materials. The quality and variety of what children see, hear and participate in is crucial for developing their understanding, self-expression, vocabulary and ability to communicate through the arts. The frequency, repetition and depth of their experiences are fundamental to their progress in interpreting and appreciating what they hear, respond to and observe.		
Curriculum Goals	Mathematics – A master of maths will be able to spot connections, find patterns, measure effectively, use positional language and compare quantities. Understanding the World - To become an 'Exceptional Explorer' who explores and discovers the world around them, asking questions and investigating the answers. Physical development - To become a 'Talented Tool User' who can hold a pencil effectively, use a range of tools (for example scissors, cutlery, paintbrushes, tweezers, hammer, screwdrivers) safely and with confidence. Expressive Arts and Design - To become a 'Dynamic Designer' who can choose and safely use the resources they need to make their creations, talk about what they have made and how they have made it.		
	VOCABULARY Appearance, design, make, build, model, cut, join, shape, create, decorate, tools, ingredients, recipe, construct, large, ambulance, emergency vehicle, fire engine, helicopter, lifeboat, police car, police motorbike, wheel, explore, design, axle, moon buggy, travel, wheel, adapt, add, attach, choose, cover, select, spacecraft	**VOCABULARY** Appearance, design, make, build, model, cut, join, shape, create, decorate, tools, ingredients, recipe, discussion, idea, share, add, alter, adapt, change, explore, mend, transform, material, axle, carriage, move, transport, travel, wheel, comfortable, different, same, uncomfortable, record, share, stronger, strongest, discuss, idea, material, share, test, fabric, protection, safe, Strongest, axle, transport,wheel, breakfast, food, fruit, healthy, Ingredient, bridge, build, building, castle, construct, roof, strong, wall, tower, building, cathedral, construction, house, mill, palace, pyramid, strong, sturdy, temple, windmill	**VOCABULARY** Appearance, design, make, build, model, cut, join, shape, create, decorate, tools, ingredients, recipe, describe, design, discussion, explain, explore, idea, camera, eReader, handheld fan, headtorch, sun hat, wind up radio, adapt, change, improve, compare, different, loud, material, similar, soft, sound, adapt, change, decide, explore, like, collect, mix, pour, prepare, rinse, separate, shake, spread, taste, wash, whisk, choose, combine, loud, purpose, quantity, soft, sound, attachment, axle, bucket, combine harvester, cutter, farm vehicle, tractor, trailer, vehicle, wheel, appearance, boil, change, colour, cook, creamy, fresh, fruit, healthy, heat, juicy

DUNTON AND WRESTLINGWORTH SCHOOLS FEDERATION D.T Rationale and Curriculum Coverage

Year 1	 **Mechanisms and Movement** – This project teaches children about wheels, axles and chassis and how they work together to make a vehicle move.	 **Structures** – This project teaches children about the purpose of shelters and their materials. They name and describe shelters and design and make shelter prototypes. Children then design and build a play den as a group and evaluate their completed product. **Textiles** – how to attach material to structure	 **Cookery** - This project teaches children about sources of food and the preparatory skills of peeling, tearing, slicing, chopping, mashing and grating. They use this knowledge and techniques to design and make a supermarket sandwich according to specific design criteria.
	• Identify the origin of some common foods • Select appropriate tools to prepare ingredients • Explore how foods change when heated/cooled • Work safely and hygienically in construction and cooking activities • Explain why a designer (school kitchen) is important	• Generate and develop their ideas through exploration and drawing • Explore how a structure can be made stronger, stiffer and more stable • Design purposeful, functional, appealing products for users based on design criteria • Select and use tools and equipment to perform practical tasks safely and confidently • Explain how closely their finished products meet their design criteria and say what they could do better in the future	• Explore and evaluate a range of existing products • Compare products by a significant designer • Select tools and use safely • practice joining techniques - running stitch • Explore sewing simple decorations • Generate, develop, their product (bag tag) • Evaluate their finished product • Explore a range of mechanisms (levers, sliders) in products (eg pop up cards and books) • Follow instructions to make models with moving parts (sliders levers then link the 2) • Design product with moving parts • Choose tools and use safely • Evaluate their finished products and say what they could do better in the future
	VOCABULARY Compare, difference, similarity, change, improve, strength, weakness, axle, chassis, vehicle, wheel, criteria, design, diagram, idea, attach, evaluate, strong, tool, weak, material, purpose, axle, chassis, connect, move, roll, wheel, product, taxi, transport, vehicle, safety, tool, model, part, test	**VOCABULARY** Compare, different, similar, change, criteria, difficulty, evaluate, Evaluation, improve, strength, weakness, function, permanent, protection, purpose, shelter, structure, temporary, design, design criteria, drawing, frame, function, idea, label, material, plan, purpose, shape, size, brick, construction, fabric, rope, stick, tarpaulin, wooden cane, appearance, construction, entry point, finish, functionality, joining, model, product, roof, safety, structure, tools, wall	**VOCABULARY** Evaluate, evaluation, improve, success, design, design criteria, Diagram, label, chop, grate, grater, knife, mash, masher, peel, Peeler, slice, tear, flavour,fruit, healthy, ingredient, salad, vegetable, animal, dairy product, fish, flower, fruit, leaf, meat, nut, plant, root, seed, source, stem, hygiene, rule, safety

DUNTON AND WRESTLINGWORTH SCHOOLS FEDERATION D.T Rationale and Curriculum Coverage

Year 2



Cookery - Remarkable recipes taught alongside healthy lifestyles and follow on from safe use of implements for Preparation of foods.
(making a tortilla pizza)

- Identify the origin of some common foods
- Select appropriate tools to prepare ingredients
- Explore how foods change when heated/cooled
- Work safely and hygienically in construction and cooking activities
- Explain why a designer (school kitchen) is important

VOCABULARY
Change, dislike, evaluate, evaluation, improve, like, success, design, design criteria, drawing, equipment, ingredient, instruction, label, method, picture, recipe, test, fork, grate, grater, grip, knife, mash, masher, measure, measuring spoon, mix, peel, peeler, property, purpose, slice, spoon, spread, tongs, tool, ingredient, measure, preparation, animal, diet, fish, flower, fruit, leaf, mixed, nut, plant, pulse, root, seed, shellfish, source, stem, vegan, vegetarian

Structures - Beach hut making using wood to make a box frame, joining techniques with card and glue and finishing techniques. Taught alongside coastlines in Geography and Materials and their Properties in Science.

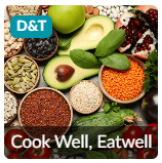
- Generate and develop their ideas through exploration and drawing
- Explore how a structure can be made stronger, stiffer and more stable
- Design purposeful, functional, appealing products for users based on design criteria
- Select and use tools and equipment to perform practical tasks safely and confidently
- Explain how closely their finished products meet their design criteria and say what they could do better in the future

VOCABULARY
Change, improve, strength, success, weakness, describe, diagram, label, cut, finish, model, support, tool, material, property, use, equipment, safety, construct, frame, join, joint, stable, stiff, strengthen, structure,

Textiles – design and make a bag tag, cut, stitch and join materials using glue and running stitch. Include appliques, adding buttons and printed/sewn embellishments. Explore designer Cath Kidston.
Mechanisms and Movement – Cards with moving parts, sliders, linkages

- Explore and evaluate a range of existing products
- Compare products by a significant designer
- Select tools and use safely
- practice joining techniques - running stitch
- Explore sewing simple decorations
- Generate, develop, their product (bag tag)
- Evaluate their finished product
- Explore a range of mechanisms (levers, sliders) in products (eg pop up cards and books)
- Follow instructions to make models with moving parts (sliders levers then link the 2)
- Design product with moving parts
- Choose tools and use safely
- Evaluate their finished products and say what they could do better in the future

VOCABULARY
Compare, different, landmarks, motif, same, spots, stripes, feature, similar, cut, fabric, fasten, glue, join, needle, running stitch, sew, stitch, textile, thread, tie, appliqué, button, decorative, printing, embellishment, sequin, design criteria, evaluation, finish, product, improvement, successful, attractive, cushion, hardwearing, peg bag, improve, pillowcase, product, slippers, tablecloth, tea cosy, tea towel, toiletry bag, greetings card, product, explore, labelled diagram, plan, sketch, equipment, sewing pattern, stapler, tool, test, material, textile, card, metal, plastic, property, stiff bar, component, fixed pivot, force, lever, linkage, machine, mechanism, motion, movement, moving pivot, pull, push, slider, slider mechanism,

			brand, Cath Kidston, distinctive, fashion, homeware designer, inspire, vintage
Year 3	 **Mechanisms and movement** – This project teaches children about cam mechanisms. They experiment with different shaped cams before designing, making and evaluating a child's automaton toy. (you will need: shoe boxes, dowel, cardboard cams and finishing resources eg fabric coloured papers etc)	 **Cookery** - This project teaches children about food groups and the Eatwell guide. They learn about methods of cooking and explore these by cooking potatoes and other vegetables. The children choose and make a hot meal according to specific design criteria. (eg a vegetarian stew or soup)	 **Structures** –This project teaches children about the purpose, structure and design features of greenhouses, and compares the work of two significant greenhouse designers. They learn techniques to strengthen structures and use tools safely. They use their learning to design and construct a mini greenhouse.
	• Explore and use mechanisms (cams and axles) in models or products. • Design toy with cams and axles • Plan, choose and use appropriate materials and tools safely • Suggest improvements to their products and describe how to implement them	• Identify the main food groups (carbohydrates, protein, dairy, fruits and vegetables, fats and sugars). • Describe how key events in design and technology have shaped the world. • Explain the importance and characteristics of a healthy, balanced diet. • Prepare and cook a simple savoury dish. • Use appliances safely with adult supervision.	• Explain how an existing product benefits the user • Compare architects and identify significant characteristics of the same style of structure • Explain the similarities and difference between the work of two designers. (The Great Conservatory of Chatsworth House and the biomes of the Eden Project) • Create framework using diagonal struts to strengthen (use knex to explore) • Use tools safely for cutting and joining materials and components (glue gun, card corners) • Plan which materials will be needed for a task and explain why • Suggest improvements to their products and describe how to implement them
	VOCABULARY Demonstrate, discussion, evaluate, explain, feedback, finish, improve, improvement, quality, reflect, strength, structure, design, design criteria, diagram, component, cut, join, material, test, automaton toy, axle, cam, component, down, elliptical cam, follower, heart cam, hexagonal cam, lever, linkage, machine, mechanical, mechanism, motion, movement, off-centre circular , cam, pear cam, rotational, slider, snail cam, square cam, wheel	**VOCABULARY** Evaluate, evaluation, improve, success, bake, design, design criteria, Diagram, health and safety, plan, barbecue, boil, chop, cook, deseed, dice, fry, grate, grill, hob, ingredient, method, microwave, mix, oven, peel, prepare, roast, skin, slice, slow cooker, steam, balanced, calcium, carbohydrate, dairy, diet, Eatwell guide, fibre, food group, fruit, healthy, nutrient, nutrition, oil, protein, vegetable, vitamin, Food Standards Agency	**VOCABULARY** **Change, design criteria, effective, evaluation, findings, improvement, observation, suitability,** biome, compare, conservatory, designer, difference, purpose, similarity, structure, style, cloche, cold frame, greenhouse, design, design criteria, diagram, dimension, plan, bench hook, butt joint, explore, G clamp, gluing, hacksaw, hot glue gun, improve, investigate, joining, reinforcing, strengthening, test, triangular corner, glass, hardwearing, material, plastic, property, purpose, strength,

<table>
<tr><td></td><td></td><td></td><td>transparent, waterproof, safety rules, supervision, diagonal strut, frame structure, stability, strength, three-dimensional, triangular shape</td></tr>
<tr><td rowspan="2">Year 4</td><td> 

Cookery/Structures – Cook well, eat well. Design and make a packaged healthy snack. This includes preservation of food, chronology of packaging and use of nets to create own packaging for their snack. (make a healthy snack – wrap with combinations of cream cheese, honey, humous, carrot, cucumber or apple)</td><td> 

Textiles – Study of William Morris. Explore functionality and decorative aspects of fabric products in the home. Print own fabric and finish product which includes a sewn hem, embroidery and embellishments.</td><td> 

Mechanisms and movement – Tomb building. Children create an ancient tomb using their prior knowledge of machines and mechanisms that would have been used by ancient civilisations (pulleys, levers and wheels)
Electricity – design and make a nightlight incorporate circuits and switches into product. This is part of the science curriculum.</td></tr>
<tr><td>• Explore significant developments in keeping food fresh
• Explore origins of everyday food products
• Use nets to communicate design ideas
• Design a healthy snack using a range of cookery skills safely
• Evaluate their finished product</td><td>(Suggest this is taught in 3 blocks – explore, print fabric then using sewing techniques when fabric is dry and fixed)
• Explore the properties of natural and manmade fabrics
• Investigate the design features of familiar fabric products
• Explore work by a significant designer (William Morris)
• Explore designs and themes used by significant designer (William Morris)
• Create detailed decorative patterns on fabric using printing techniques
• Hand sew a hem or seam using a running stitch
• Use a range of stitches to add detail and texture to fabric design
• Use fabric and create a product following design brief
• Evaluate their product</td><td>• Explore a range of simple mechanisms that use pulleys, levers, axles, cams and gears (eg toys such as mouse trap, knex, kerplunk, buckeroo)
• Explore construction toys that include moving parts (eg knex)
• To deisgn/make a prototype that moves objects
• To evaluate prototype

(Use planning up to develop 1 only as do not have the capacity in school to use programmable technology)
• Compare common household equipment and appliances that are and are not powered by electricity
• Construct operational simple series circuits using a range of components and switches for control
• Investigate and identify the design features of a familiar electrical product (torch)
• Know how to work safely with electrical circuits</td></tr>
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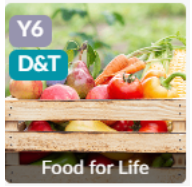
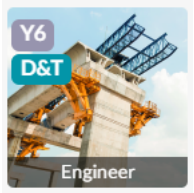
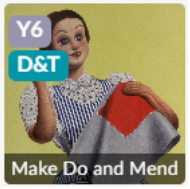
DUNTON AND WRESTLINGWORTH SCHOOLS FEDERATION D.T Rationale and Curriculum Coverage

	VOCABULARY Evaluation, fulfil design criteria, improve, bag, bottle, box, can, carton, cling film, compostable, food packaging, jar, recyclable, reuse, Tetra Pak, Tupperware, chop, chopping board, cool, crush, cut, grate, knife, mix, peel, slice, spread, tear, wash, build, net, cardboard, cling film, glass, paper, plastic, tin, tin foil, fresh, healthy, Snack, best before, canning, freezing, drying, pasteurisation, pickling, refrigeration, salting, Tetra Pak, Tupperware, use by, cube, cuboid, net, packaging, prototype, loom,	**VOCABULARY** Appearance, colour, compare, component, different, embellishment, function, material, pattern, property, purpose, quality, similar, size, fraying, hem, pinking shears, running stitch, sew, block printing, diamond, pattern structure, trellis, evaluation, improvement, purpose, review, success, home furnishing, home product, annotate, design criteria, plan, sketch, comfortable, delicate, durable, fabric, flexibility, flexible, lightweight, man-made, Natural, soft, strength, stretchy, strong, synthetic, textile, texture, tough, versatile, waterproof, Arts and Crafts movement, Morris & Co, textile designer, William Morris	**VOCABULARY** conductive, non-conductive, purpose, annotated sketch, design criteria, exploded diagram, design feature, nightlight, sensor, programmable device, evaluation, feedback, improvement, modification, cell, complete circuit, component, electricity, incomplete circuit, lamp, LED, light-emitting diode, push-to-break switch, push-to-make switch, rocker switch, series circuit, wire, electrical product, manual product, usability, compound machine, device, simple machine, proto-type, characteristic, material, property, rigid, smooth, strength, axle, compound machine, effort, force, fulcrum, inclined plane, lever, load, pulley, screw, simple machine, wedge, wheel
Year 5	 **Moving mechanisms** Mechanisms and movement – This project is linked to 'Dynamic Dynasties' This project teaches children about pneumatic systems. They experiment with pneumatics before designing, making and evaluating a pneumatic machine that performs a useful function. (make a Pneumatic Machine - Build a DIY Air Pressure Powered STEM Project for Kids https://www.youtube.com/watch?v=y3jDcj6wkFM)	 **Eat the seasons** **Cookery** - This project is linked to 'sow, grow and farm' This project teaches children about the meaning and benefits of seasonal eating, including food preparation and cooking techniques. (make sweet and/or savoury pasties look at local meal a Bedfordshire clanger which contains both sweet and savoury element)	 Architecture **Structures** – This project is linked to 'Ground-breaking Greeks'. This project teaches children about how architectural style and technology has developed over time and then use this knowledge to design a building with specific features. (in teams build the Parthenon or the colosseum looking at strength of pillars compare to buildings such as the Fitzwilliam in Cambridge, St. Pauls in London and the British museum which all use column structures)
	• Explore how pneumatic systems use compressed air to exert a force • Design and make a pneumatic prototype • Test and evaluate products against a detailed design specification and make adaptations as they develop the product • Select and combine materials with precision • Survey users in a range of focus groups and compare results.	• Describe what seasonality means and explain some of the reasons why it is beneficial. • Evaluate meals and consider if they contribute towards a balanced diet. • Use an increasing range of preparation and cooking techniques to cook a sweet or savoury dish. • Evaluate meals and consider if they contribute towards a balanced diet	• Compare and contrast architecture through different time periods • Explore how the ancient Greeks developed the Classical form of architecture that has been copied for thousands of years. • Know that support, stiffness and stability can be created by using triangular shapes to create strong frameworks, columns to support roofs and overlapping brickwork patterns. • Build a framework using a range of materials to support mechanisms. • Select and combine materials with precision. • evaluate their design and construction
	VOCABULARY Difference, similarity, adjust design, analysis, deployment, evaluate,	**VOCABULARY**	**VOCABULARY**

	Evaluation, feedback, focus group, improvement, iterative process, problem-solve, product, prototype, success, test, heavy lifting equipment, jack, jack hammer, machinery, paint sprayer, pneumatic machine, pneumatic system, equipment, investigate, problem-solve, technique, test, version, actuator, air, air pressure, compress, compressor, force, gas, hinge, lever, movement, piston, plunger, pneumatics, pneumatic system, power, reservoir, syringe, valve, brace, lifting arm, load, stable, strong, structure, strut, sturdy, triangle	Blend, boil, brown, chop, cooked, dice, food hygiene, food, preparation, grate, health and safety, mash, peel, puree, raw, sauté, Simmer, steam, carbohydrate, fat, fibre, fresh, fruit, healthy, kilocalorie, kilojoule, mineral, nutrient, nutritional value, protein, salt, saturated fat, seasonal food, soup, sugar, vegetable, vitamin, produce, seasonal fruit, seasonality, seasonal vegetable	Discuss, evaluation, improve, ancient Egyptian, architecture, Baroque, building, caryatid, Classical, Corinthian column, Doric column, entablature, frieze, Gothic, Industrial, Ionic column, Modernist, pediment, Postmodern, prehistoric, Renaissance, style, sustainable, temple, computer-aided design, design, product, appearance, functional, stability, stiffness, column, framework, lintel, post, stability, stiffness, structure, support
Year 6	 Cookery - This project teaches children about processed food and healthy food choices. They make bread and pasta sauces and learn about the benefits of whole foods. They plan and make meals as part of a healthy daily menu, and evaluate their completed products.	 Structures – This project links to' Frozen Kingdoms'. This project teaches children about remarkable engineers and significant bridges, learning to identify features, such as beams, arches and trusses. They complete a bridge-building engineering challenge to create a bridge prototype.	 Textiles – This project is linked to 'Britain at war'. This project teaches children a range of simple sewing stitches, including ways of recycling and repurposing old clothes and materials
	• Explore how food changes as it is processed • Compare and contrast different bread products • Demonstrate modifications made to a product as a result of ongoing evaluation by themselves and to others. • Demonstrate modifications made to a product as a result of ongoing evaluation by themselves and to others. • Follow a recipe that requires a variety of techniques and source the necessary ingredients independently	• Analyse how Bridge structures have changed over time. • Explore some significant engineers that have improved, safety, people's lives and trade through their constructions. • Compare 2 or more bridges • Explore how strength can be added to a framework by using multiple layers or changing its shape. • Select the most appropriate materials and frameworks for different structures, explaining what makes them strong. • Choose the best materials for a task, showing an understanding of their working characteristics. • Demonstrate modifications made to a product as a result of ongoing evaluations	• Analyse how a product has significantly changed people's lives. • Deconstruct garments to see how they were made, the materials used and their properties. • Practice stitches including running stitch, blanket stitch and whip stitch. • Darn a sock • Pin and tack fabrics in preparation for sewing and more complex pattern work. • Use different methods of fastening for function and decoration, including press studs, Velcro and buttons
	VOCABULARY Advantage, compare, comparison, disadvantage, ingredient, nutritional value, taste, texture, use by date, evaluate, evaluation,	**VOCABULARY** arch bridge, beam bridge, compare, material, span, support, suspension bridge, truss bridge, type, analysis, evaluation, feedback, improve, problem, results, annotated diagram, design, design	**VOCABULARY** Compare, evaluate, pin, repair, , stitch, tack, button, embroidery, Fastening, press stud, ribbon, sew, tie, toggle, Velcro, zip, adapt, change, repurpose, blouse, clothing, dress, fabric, fashion, garment,

	Feedback, modification, reflect, convenience food, minimally, processed, packaging, processed, ultra-processed, unprocessed, bake, blend, boil, brush, chop, cool, crush, cut, dough, fry, halve, health and safety, heat, hygiene, knead, mash, mix, peel, pour, prove. Recipe, reheat, simmer, slow cook, spoon, spread, sprinkle, stir, store, yeast, balanced, carbohydrate, daily menu, dairy, diet, Eatwell guide, fruit, healthy, oil, organic, protein, vegetable, animal feed additive, farm, fertiliser, labour intensive, organic, pesticide, whole food, organic	criteria, exploded diagram, modelling, prototype, test, concertina, investigation, stability, strength, strengthening, engineer, Isambard Kingdom Brunel, Sir Benjamin Baker, Sir John Fowler, Thomas Telford, bridge, force, structure, triangle	handmade, hat, jacket, jeans, recycle, repair, shirt, skirt, sock, trousers, investigate, layers, shape, strength, strengthening, blanket stitch, button, label, needle, observation, press stud, ribbon, running stitch, seam, thread, tie, toggle, Velcro, whip stitch, decorative, embroidery, fabric property, fastening, function, zip, recycled,