ST JOHN THE BAPTIST CE PRIMARY SCHOOL

DESIGN TECHNOLOGY CURRICULUM

EYFS – YEAR 6

Overview of Design & Technology content

	Autumn 1	Autumn 2 Explicit D&T units	Spring 1	Spring 2	Summer 1	Summer 2
FS1		Structures	Structures			Cooking and nutrition
FS2		Moving mechanisms	Textiles / Structures			Cooking and nutrition
Year 1	Structures	Moving mechanisms				Cooking and nutrition
Year 2		Textiles				Cooking and nutrition
Year 3	Cooking and nutrition	Moving mechanisms	Structures			Cooking and nutrition
Year 4		Electrical systems	Moving mechanisms			Cooking and nutrition
Year 5		Textiles	Structures			Cooking and nutrition
Year 6	Textiles	Structures / Electrical systems				Cooking and nutrition

Moving mechanisms 4 Textiles 4 Structures 7 Electrical systems 2 Cooking and nutrition 9

Key knowledge & skills

The Aims of the National Curriculum for Design and Technology

The national curriculum for design and technology aims to ensure that all pupils:

- develop the creative, technical and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world
- build and apply a repertoire of knowledge, understanding and skills in order to design and make high-quality prototypes and products for a wide range of users
- critique, evaluate and test their ideas and products and the work of others.
- understand and apply the principles of nutrition and learn how to cook.

We are Design Technologists!

EYFS statement – also see core concepts of DT document

Continuous provision

In EYFS at St John's, Children are exposed to the strands of D&T within continuous provision in order to spark children's interests and provide them with a range of experiences in preparation for learning in the national curriculum. A range of resources are provided within each classroom, such as train tracks, Duplo, wooden blocks, raw materials and Lego within the construction area. Within the role play area, children are exposed to tools and equipment used for cooking, including whisks, pans and safety equipment such as aprons. Equipment such as measuring jugs are also incorporated into other areas of play. Within the creative area, children have opportunities to develop their fine motor skills using more precise tools and equipment, such as scissors, pencils and glue sticks. Outdoor learning is valued at St John's and the children have opportunity to extend their learning into the outdoor play areas. Children can then use various tools and equipment to engage in activities such as den building or creating a large models with giant soft construction shapes. Children also have access to books and toys that have different moving parts, such as ones that you must push or pull, which supports their development in the moving mechanisms aspect of design and technology. Links to other areas of the curriculum are also made where possible. In their maths learning, the children use toys called 'Bee-Bots', where programming skills are gained in order to direct the toy. In English, one of the children's magic of story focuses on a little boy that turns a box into a race car. Boxes are then brought into class and discussed what could be made from them. Pictures of the children's ideas are printed and stuck in the D&T area to support with their make.

Teacher led learning

Throughout the year, we provide planned and teacher-led activities that link to learning across the strands of design and technology. In structures, children will make leaf puppets, Remembrance Day poppies and boats that float. This will develop their fine motor skills in using tools and equipment such as cutting, shaping and joining, exploring how to make their products strong and stable. Within textiles, children will have the opportunity to practise sewing with a Binca, developing their threading skills and knowledge of how materials can be sewn together. Within cooking and nutrition, children will link their learning in English to design and technology by baking a dinosaur cake, developing their skills with a range of kitchen tools and techniques.

Design and Technology cycle

Within explicitely taught units, children are exposed to various elements of the design and technology cycle in order to develop their understanding of the way things are made in the wider world. Planning and design sheets are also available for children to use within continuous provision and the children know to find these in the building area. Whilst the children are making their projects, they are encouraged to develop their growth mindset and find solutions if something is not working the way they had planned. After the children have made their product, they are able to display it for others to see which provides opportunities for peer comments.

D&T cycle at Penistone St John's Primary School

Something for somebody for some purpose

To design and make a (what) .. for (who) .. for (what purpose) ..

Significant designers

FS1

Jamie Oliver – chef
Jamie's passion for healthy food has led him to launch a global campaign to tackle the child obesity epidemic through better food education in schools. Jamie is an English chef, restaurateur and cookbook author.

FS2

Hans Greiner – designer/inventor
Like the Christmas tree, Christmas ornaments originated in Germany. Hans Greiner began to make glass Christmas ornaments called baubles during the 1800s. These were the first manufactured Christmas ornaments, and they were a huge success.

Year 1

Augustus Pugin - architect
Augustus Pugin was an English architect, designer and artist who is remembered for his role in the Gothic Revival style of architecture. He is known for his work in Westminster, London, and its iconic clock tower, later renamed the Elizabeth Tower, which houses the bell, Big Ben. Pugin designed many churches in England, Ireland and Australia.

Year 2

Abbey Fisher – chef/manufacturer
Abby Fisher, One of the First African-American Cookbook Authors. Upon arriving in San Francisco, she used her talents to set up a preserves business along with her husband. And while the 1880 census notes his profession as "pickle and preserves manufacturer," the business was under her name, "Mrs. Abby Fisher & Co."

Year 3

John Boyd Dunlop - inventor
John Boyd Dunlop, the Scottish inventor, invented the first pneumatic tyre for his son's tricycle. He found by inflating a rubber tube, they rolled better and gave a smoother ride. He popularised the pneumatic inflatable tyre and is remembered for founding the company, Dunlop Tyres.

Year 4

Nick Holonyack – engineer/inventor
In 1962, Nick Holonyack, an American consulting engineer for General Electric, invented the first visible light LED. It was a red LED and he had used gallium arsenide phosphide as a substrate for the diode. Holonyack has earned the honour of being called the "Father of the light-emitting diode" for his contributions. He also holds 41 patents and his other inventions include the laser diode and the first light dimmer.

Year 5

Kenzō Takada - designer
Growing up in Tokyo, it was taboo for a man to work in the fashion industry; Takada wasn't even allowed to attend design school. But that did not stop him from moving to Paris and starting his own brand. From there, cultural norms were not the only thing Takada disrupted. He created ready-to-wear collections 45 years before it became widely adopted within the industry. He was also the first designer to have his ground-breaking, over-the-top floral patterns splashed across the European-dominated couture space at the time.

Year 6

Ada Lovelace – computer programmer
She was born in 1815 in London and is known as a pioneer in computer programming. She was in charge of creating applications for the Analytical Engine, which is considered the world's first general computer. The high-level programming language named Ada was named after her.

Research & Investigate	Generate	Planning & Design	Make	Evaluate
Who will the product will be designed for and will it meet their needs? What similar products exist? When were they developed and by which designers? How will the product be received-what does the market research say? What context will the product relate to? E.g. home, school, gardens, playgrounds, local community, industry and the wider environment.	What will be the design criteria for a successful product? How will we ensure the criteria is met? How will we ensure the product will be functional? How will we ensure it will be appealing? What particular individuals or groups will this product be designed for?	Create a technical drawing, with measurements, from different perspectives (views). Annotate designs. Use various types of designs such as: drawing, templates, annotated sketches, cross-sectional and exploded diagrams, pattern pieces, prototypes, mock ups or information technology. Which tools/equipment are needed to create this product?	Evaluate each stage of the making process. Seek views of others. Adapt plans and make final product. Accurately use tools and equipment selected. Health and Safety: Children are taught to use the tools safely. They can explain why it is necessary to work safely and demonstrate this in their makes. Children practise skills.	Seek the views of others to improve the product. How would they change/alter the product? How does my product compare to existing products? (if any) How does my product meet the design criteria? How has key events/individuals helped shape the world in this area of study? What technical knowledge have we developed from this unit of work?

Assessment in DT

Teacher assessment will take place during the core DT units in Autumn 2 in order to identify children that are not making progress and to inform the next teacher on children that they may need to support. Teacher assessment will also take place during the cooking and nutrition units. Formative assessment will take place throughout all teaching in all units in order to adapt practice.
Preassessments will take place before the core units and retrieval practise will be throughout.
Formative assessment may be: questioning, observation, listening, children's use of key vocabulary, retrieval questions, low-stakes quizzes, the use of Kagan structures and pre assessments.

Design Technology Curriculum Progression Intent Document

Implementation	Impact
Pedagogical Approach: At PSJS, Design Technology has a clear learning sequence. At the end of each year groups' topic, the children produce an item for a specific identified purpose. Where possible, links have been made to other areas of the wider curriculum and core subjects. Retrieval practise is performed within each lesson to embed learning. The children follow a design brief linked to the National Curriculum objectives. They must complete research, practise and develop various skills that are needed for their specific outcome. They will also create a technical design, make their product and adapt where needed. At the end of their topic, they will evaluate their product against design criteria.	Evidence to support teachers' judgements about children's learning in Design and Technology: •Discussions with pupils. •D&T work in books •Displays of children's work •Teacher assessment at the end of explicit units and cooking and nutrition units •Evidence of evaluation and peer assessment •Evidence of feedback given to children •Evidence of scaffolding to meet the needs of all (planning, books, EHCP and SFP documents) •Learning Walks •Subject lead monitoring documents

EYFS milestones

Curriculum Goals			First Milestone	Second Milestone	Third Milestone	Final Milestone	Linked ELGs
Create and perform	To share or perform a creation of theirs to others.	Art and Materials	Explore different materials freely, in order 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 construction materials and explore different textures. Understand that they can draw shapes/ marks to represent objects/people. Understanding different objects can be used to draw – pencil, pens, chalk. Exploring paint using different objects e.g. rollers, sticks, sponges, shapes. Free choice of junk box modelling to create own representations of objects/people Representing familiar objects (family, themselves, animals etc.) through independent drawing, painting, playdough, play.	Explore, use and refine a variety of artistic effects to express their ideas and feelings. Draw a representation of themselves understanding they need a head, arms, legs etc. Understanding that paint brushes are used to paint and begin to show some control. Understand that they can paint shapes/ marks to represent objects/people. Explore how red, blue and yellow paint can be mixed to make different colours. Exploring materials and beginning to understanding different materials can be used in different ways. Talk about what the materials look and feel like Using objects/ tools to print with to create a pattern or image with support.	Using particular colours to paint pictures – e.g. Green for a tree, brown for certain animals etc. Joining materials using, tape, glue and split pins with support. Learn and understand how to mix paints to make certain colours. Choosing and using different materials for different effects Using different cuttings of materials / papers to make a simple image. Use objects and famous artists to inspire to create own art.	Have a go at drawing an object from observation Printing independently to create a pattern or image Evaluate and adapt their buildings with support, refining ideas and developing their ability to represent them. Create collaboratively sharing ideas, resources and skills.	EAD: CM -Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. -Share their creations, explaining the process they have used

EYFS Cherry Garden Scheme PSJP – SEN support

<u>Design and Technology</u> Pupils will be able to use tools for a purpose with some modelling so that they can increase their independence in creating and making choices. Pupils will be able to use singe adjectives and descriptive words to talk about creative activities so they can articulate their choices and communicate their ideas.	Key strategies and types of provision/resources: • Woodwork area – range of tools, materials and safety equipment • Messy play • Independent access to a range of tools in the classroom (cutting, sticking, messy play, cutlery etc) – clearly labelled and well organised • Fine motor activities to improve physical manipulation skills • Staff modelling of tool use with the lowest level of prompt necessary • Modelling of key language by all staff • Colourful semantics • Gardening activities • Role play area with everyday tools • Identi-play • Commenting Community Provision: • Local area visits describing buildings, vehicles and natural objects. Use cameras to record • Treasure hunts
<u>Design and Technology</u> Pupils will be able to plan a project using a simple structure, choose appropriate tools to carry out their project and say what they would do differently in simple terms.	Key strategies and types of provision/resources: • Modelling of key language • Plan, do, review structure at language level appropriate to the child • Visual supports for planning and evaluating activities at the key word level appropriate to the child • Staff modelling of tool use, with no physical prompting • Woodwork area • Construction area with higher level resources – mechano, junk modelling, cogs and gears etc • DT packs covering a wide range of projects (sewing, woodwork, printing, textiles, clay modelling etc) focusing on one area for several weeks to build confidence • Backward chaining of sequences of actions • Adult modelling • Commenting • Visual schedules

FS1 Autumn 2	Unit: Pine cone Christmas decoration D&T – Structures
EYFS objectives	Key explicit knowledge and vocabulary
First milestone: Explore different materials freely, in order 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. Understand that they can draw shapes/ marks to represent objects/people. **Second milestone** Exploring materials and beginning to understanding different materials can be used in different ways. Talk about what the materials look and feel like	**Context of study** This unit is the supports the 'structures' strand within the D&T curriculum. Children will learn the elements of the D&T process mostly through discussion and some with drawing. The children will learn how to use various tools safely and begin to explore materials in order to decide their purpose in their product. Children will also discuss how to make their designs more stable and stand up. This unit is a precursor for learning in other units within FS1 and FS2 where children will develop their cutting and shaping skills and knowledge of materials.   I know statements I know different media can be combined for a purpose I know how to use equipment safely I can statements I can develop my cutting, sticking and joining skills. I can make my Christmas decoration stand up (stable) I can make a Christmas decoration in order (chronology)  **DESIGN BRIEF** To make a (what) Christmas decoration for (who) yourself or someone you know to (what purpose) celebrate Christmas **Key vocabulary** sellotape, glue stick, plasticine, ruler, join, cut, stand, first, before, after, next, base.  **What the steps in the D&T cycle will look like:** Research & Investigate Look at various Christmas representations – Santa, snow man, tree, reindeer etc. Talk about the shapes of each. Show the children various Christmas decorations in these representations. Can they say how it has been put together? Can they talk about what materials have been used? What do the materials look and feel like? Generate Show the children a pine cone. Discuss how you could make the pine cone into a Christmas decoration. Can the children tell you how they would make it? Explain that not all pine cones will stand up – especially if they are up-side down. Demonstrate this. Ask the children if there was a way we could make it stand up and discuss that we can provide a base for their designs. Which materials do you think would be good for a base? Show glue, plasticine or air dry clay, card etc. Explain how these would work.

	Planning & Design Show children examples of pine cone decorations (pictures from this document or others you may have found). Discuss step by step process for making their pine cone. Breakdown each step and use chronological language to discuss process. Could the more able children draw a picture of their design? Let the children decide on their method of making the pine cone stand up. Can the children say who their design is for? Is it a gift or for themselves? Make Provide and display pictures and examples of pine cone decorations for the children to use as a guide. Provide a range of materials to decorate with. Allow the children to select their own materials. With support, the children should attempt to make their product stable and stand on a base. Evaluate Questions to discuss: does your decoration look like a Santa/reindeer etc? Have you used the right colours and decorations? Does your decoration stand up? **Resources** Pine cones, paint, glitter, pom-poms, googly eyes, star shapes, glue, sellotape, air dry clay or plasticine, twigs, pipe cleaners, card No risk assessment needed **Opportunities for differentiation** Support: scaffold towards materials that are most appropriate, break steps of making down into shorter tasks, provide a WAGOLL for the children to see. Challenge: challenge to make the finishing on the product as neat as possible, to add more intricate decorations, to design by drawing, deeper evaluation questions e.g. why/how does/doesn't it stand up? Opportunities to support SEND **Scaffolds**: modelling of practical activities, breaking tasks down into individual components, starting expositions at the point of the pupils' current understanding, combining verbal explanations with relevant graphics, pre-learning vocabulary. Minimum learning for SEND: using equipment safely, able to make their product stand up with support Minimum vocab for SEND: first, next, join, stand **Please place WAGOLL photos in D&T folder**

FS1 Spring 2	Unit: Enterprise – salt dough hearts D&T – structures
EYFS objectives	Key explicit knowledge and vocabulary
First milestone Develop their own ideas and then decide which materials to use to express them. Explore different textures. Understand that they can draw shapes/ marks to represent objects/people. **Second milestone** Understanding that paint brushes are used to paint and begin to show some control. Exploring materials and beginning to understanding different materials can be used in different ways. Talk about what the materials look and feel like Using objects/ tools to print with to create a	**Context of study** This unit follows on from the Christmas decoration unit learned in Autumn term where the children developed their cutting and joining skills, and developed knowledge on making their structures stable. In this unit, children will develop their knowledge on structures with a focus on cutting and finishing. This unit is a precursor to learning in year 1, where the children will extend their joining and finishing skills to create a structure of Big Ben.  I know statements I know what the heart shape looks like I can statements I can describe different textures I can draw a design for my product I can use a shape cutter tool I can smooth the edges of salt-dough **DESIGN BRIEF** To make a (what) salt-dough heart for (who) people that want to buy them for (what purpose) Valentine's Day **Key vocabulary** join, cut, first, next, smooth, edges **What the steps in the D&T cycle will look like:** Research & Investigate Discuss Valentine's Day and symbols to represent – hearts. Can the children identify this shape? Show the children hearts made from different materials e.g., cotton hearts, paper hearts, bead hearts. Can they talk about what the materials look and feel like? Show the children a salt-dough heart. Talk about the different colours used for the heart and which colours they think are most appropriate. Generate Explain the make. How will the children cut the shape out? How will they make the edges neat? What could they do if they come across a problem or the cutter doesn't work the first time? What materials could they use to decorate their hearts? Planning & Design

pattern or image with support.	Show children examples of salt-dough heart. Discuss the process of make. Use language of chronology. Can the children explain the steps in order? Provide a template with heart shape already printed (more able children could be challenged to draw their own heart shape). Children to decorate their heart as a plan to how they want to decorate their salt-dough heart. <u>Make</u> Model and support using cutter – can some children do this independently? Model shaping and finishing the heart so that the edges are smooth. Provide choices for decoration e.g., paint, sequins, glitter etc. Ensure children have their drawing/plan to guide them. <u>Evaluate</u> Does my heart look like my drawing/plan? Is it the right shape? Are the decorations the right colours for valentine's day? If we were to make another, what would we do differently? **Resources** Salt-dough, heart cutter, paints, sequins, glitter, felt pens, other decorations to select from. <u>No risk assessment needed</u> **Opportunities for differentiation** Support: provide heart template, support with cutting, direct towards materials/colours that are most appropriate, break steps of making down into shorter tasks, provide a WAGOLL for the children to see Challenge: challenge to make the finishing on the product as neat as possible, more intricate designs, think carefully about patterns and colours – purpose and user. <u>Opportunities to support SEND</u> **Scaffolds**: modelling of practical activities, breaking tasks down into individual components, starting expositions at the point of the pupils' current understanding, combining verbal explanations with relevant graphics, pre-learning vocabulary. <u>Minimum learning for SEND</u>: what a heart shape looks like, drawing a basic design, use cutter tool with support <u>Minimum vocab for SEND:</u> cut, first, next, smooth **Please place WAGOLL photos in D&T folder**

FS1 Summer 2	Unit: fruit kebabs D&T – cooking and nutrition **Also see cooking and nutrition progression**
EYFS objectives	Key explicit knowledge and vocabulary
N2 Final Milestone **PSED Care** Children can achieve a goal they have chosen, or one which is suggested to them. **Physical** Children will be eating independently and learning how to use a knife and fork **N1 Final Milestone** **Physical** Use one handed tool independently such as scissors.	**Context of study** This unit supports the 'cooking and nutrition' element of the national curriculum. Children will work towards developing their knowledge of hygiene and safety and their skills in cutting and using small pieces of equipment. This unit is a precursor to a 'cooking and nutrition' unit in FS2, where the children will make granola bars.  I know statements I know how to make food safely and hygienically (use of equipment and clean surfaces and hands) I know what some risks are and can manage these I know food vocabulary linked to taste, smell, texture and feel. I know some about the need for a variety of foods in a diet (beginning to think about) I can statements I can practise some appropriate safety measures independently I can follow instructions given one at a time by an adult. I can use skills such as pulling, cutting, crushing and peeling. I can work safely and hygienically. **DESIGN BRIEF** To make a (what) fruit kebab for (who) themselves for (what purpose) a snack **Key vocabulary** apron, cut, crush, peel, pull, fork, knife, spoon, bowl, fruit and vegetable names **Significant designer** Jamie Oliver – chef Jamie's passion for healthy food has led him to launch a global campaign to tackle the child obesity epidemic through better food education in schools. Jamie is a an English chef, restaurateur and cookbook author. **What the steps in the D&T cycle will look like:** Research & Investigate Research different fruits – can children describe the taste, smell, texture and feel? Do they understand that these are healthy and the need for a variety of foods in their diet? Explain that fruit is a healthy snack.

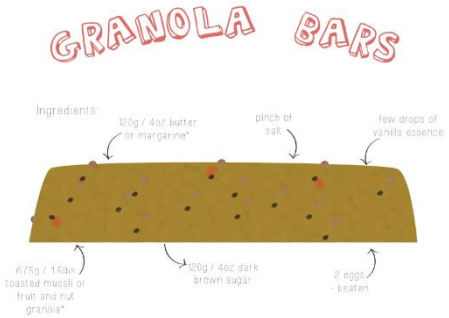
	Generate How can we make a snack from different fruits? Discuss different ways such as smoothies, fruit with yoghurt and fruit kebabs. Give the children examples of fruits that we can use for a fruit kebab – what do we need to do with these fruits? Encourage language such as peel, crush, pull, cut. What sort of fruits would you like to eat on your fruit kebab? Discuss ways of keeping safe when managing food. Planning & Design Discuss with the children the process of making. Emphasise the importance of chronology and talk through the steps needed in order to make their fruit kebab. Children to then draw pictures of their ingredients (more able children to have a go at writing the name of the ingredients). Make The children should be able to follow instructions one at a time by an adult. They should develop skills such as skills such as pulling, cutting, crushing and peeling. They should practise some appropriate health and safety measures independently. Children are given choice in the fruits they would like to use. Children to push their fruit onto a fruit kebab stick. Evaluate Can the children explain what went well and what they could do better next time? Would they change anything about their fruit kebab? Did they like it? Why/why not? Can they explain how they worked hygienically and safely? **Resources** Fruit kebab sticks, various fruits See cooking and nutrition risk assessment **Opportunities for differentiation** Support: support with practical tasks where needed, choices of fruit with visuals Challenge: writing their ingredients list as well as drawing, independently using tools and equipment Opportunities to support SEND **Scaffolds**: modelling of practical activities, breaking tasks down into individual components, starting expositions at the point of the pupils' current understanding, combining verbal explanations with relevant graphics, pre-learning vocabulary. Minimum learning for SEND: knowing hygiene and safety rules when cooking, can cut foods with support, can push foods onto stick with support. Minimum vocab for SEND: cut, peel, pull, knife, fruit and vegetable names **Please place WAGOLL photos in D&T folder**

FS2 Autumn 2	Unit: log slice Christmas baubles D&T – moving mechanisms
EYFS objectives	Key explicit knowledge and vocabulary
Third milestone Joining materials using, tape, glue and other resources with support. Choosing and using different materials for different effects **Final milestone** Evaluate and adapt their buildings with support, refining ideas and developing their ability to represent them. **Linked ELG** Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. Share their creations, explaining the process they have used **End points** Create and Perform. To share or perform a creation of theirs to others. Children will be	**Context of study** Previous to this unit, children will have developed their learning within the 'structures' strand of D&T, learning how to cut, join and finish their products, whilst also learning about stability. In this unit, children will practise their knowledge and skills from 'structures' and develop their learning in 'moving mechanisms' by using various techniques to create a moving part for a bauble. This unit is a precursor for learning in year 1, where the children will create a moving part for a Christmas card.  I know statements I know which materials are best to join I know how to make a part move using a malleable or flexible material I know language of designing and making (draw, join, longer, shorter, heavier etc.)  I can statements I can join materials using glue I can attach 2 different materials without using glue I can make a moving part using malleable and flexible materials I can thread through a hole I can use scissors safely  I can choose materials for different effects **DESIGN BRIEF** To make a (what) reindeer bauble for (who) a friend or family member for (what purpose) a Christmas decoration **Key vocabulary** Draw, sellotape, glue stick, ruler, join, cut, forwards, backwards, sideways, up, down, attach, thread **Significant designer -** Hans Greiner – designer/inventor Like the Christmas tree, Christmas ornaments originated in Germany. Hans Greiner began to make glass Christmas ornaments called baubles during the 1800s. These were the first manufactured Christmas ornaments, and they were a huge success. **What the steps in the D&T cycle will look like:** Research & Investigate Learn about history of baubles – significant designer. How do the baubles hang from the tree? What shapes can baubles be? What materials can baubles be made from? Provide a range of baubles for the children to look at and examine. Generate

able to create collaboratively using tools safely, experimenting and creating observational drawings, experiment with colour, design and evaluate, adapt and develop to create a variety of art and design products. Children will be able to work collaboratively to invent, adapt and perform music and drama including using singing, musical instruments and a narrative.	Show the children a log slice. Discuss how you could make the log slice into a Christmas decoration. Can the children tell you how they would make it? Choices: reindeer, Santa, elf, snowman. Explain that one of the parts needs to be able to move using either a flap attached with glue to reveal a picture or new part, or with pipe cleaners to represent two different parts of the body e.g. antlers or arms. Looking at the designs, which part could we make move? E.g., arms of snowman, antlers on reindeer, hat of Santa. Planning & Design Children should understand the concept of design through discussing what makes need in order to be successful, using pictures or stories to help explain their thinking. Children must begin to understand the importance of sequencing during the make stage of the project. They will think about the steps needed to create their products and the order those steps need to happen. As a class, order the steps of making – teacher to write down order and display with pictures to support. Make Provide and display pictures and examples of log slice decorations for the children to use as a guide. Provide a range of materials to decorate with. Allow the children to select their own materials. With support, the children should attempt to make theirs move using a piece of paper as a flap or pipe cleaners. for a part of their decoration. As the children make, discuss and highlight the chronological order written in the design process. Evaluate children will begin to evaluate their products using trial and error. Children will be able to say what has worked well and something that can be better next time. After the children have made their product, they are able to display it for others to see which provides opportunities for peer comments. Children should also be able to explain the process they have taken to complete their product. **Resources** Log slices, string for threading (adult support), paints, pipe cleaners, thread, twigs, felt pens, glitter, sequins No risk assessment needed **Opportunities for differentiation** Support: direct towards materials that are most appropriate, break steps of making down into shorter tasks, provide a WAGOLL for the children to see. Challenge: more complex designs, challenge to make the finishing on the product as neat as possible, could they use the split pin independently? Opportunities to support SEND **Scaffolds**: modelling of practical activities, breaking tasks down into individual components, starting expositions at the point of the pupils' current understanding, combining verbal explanations with relevant graphics, pre-learning vocabulary. Minimum learning for SEND: making a moving part using a split-pin, use language of chronology, choose resources for effect Minimum vocab for SEND: push-pin, forwards, backwards, sideways, up, down, attach, **Please place WAGOLL photos in D&T folder**

FS2 Spring 1	Unit: Salt-dough hearts D&T – structures/textiles
EYFS objectives	Key explicit knowledge and vocabulary
Third milestone Joining materials using, tape, glue and split pins with support. Choosing and using different materials for different effects **Final milestone** Evaluate and adapt their buildings with support, refining ideas and developing their ability to represent them. Create collaboratively sharing ideas, resources and skills. **Linked ELG** Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. Share their creations, explaining the process they have used	**Context of study** Previous to this unit, children will have developed their knowledge of 'structures' and use their cutting, shaping, joining and finishing skills in order to make a Christmas decoration and salt-dough hearts. In this unit, the children will further embed and practise these skills in order to create a salt-dough heart with a hole for hanging. The children will practise their hand-eye coordination skills by making the hole, and begin their 'textiles' learning by threading through a hole. This unit is a precursor to learning in year 2, where the children will learn how to thread using a needle and sew basic stitches.  I know statements I know how to make a heart shape using a cutter I can statements I can choose and use materials for different effects I can record experiences by drawing, writing or voice recording I can use a shape cutter independently I can push a hole through the salt-dough for my thread I can thread through a hole  **DESIGN BRIEF** To make a (what) salt-dough heart for (who) people that want to buy them for (what purpose) Valentine's Day **Key vocabulary** Attach, thread, cut, first, next, smooth, edges **What the steps in the D&T cycle will look like:** Research & Investigate Discuss Valentine's Day and symbols to represent – hearts. Show the children hearts made from different materials e.g., cotton hearts, paper hearts, bead hearts. Can they talk about the effect each material has on the outcome of the product? Show the children a salt-dough heart. Talk about the different colours and materials used for the heart and which colours and materials they think are most appropriate/have a better effect. Questions: do you think it is better with glitter or sequins? Which colour do you think would be best for Valentine's Day? Generate Explain the make. How will the children cut the shape out? How will they make the edges neat? What could they do if they come across a problem

End points Create and Perform. To share or perform a creation of theirs to others. Children will be able to create collaboratively using tools safely, experimenting and creating observational drawings, experiment with colour, design and evaluate, adapt and develop to create a variety of art and design products. Children will be able to work collaboratively to invent, adapt and perform music and drama including using singing, musical instruments and a narrative.	or the cutter doesn't work the first time? What materials could they use to decorate their hearts? How will we make the hole for the thread? What material is best for the thread (use a stiffer material so that it is easier for the children to do this independently). Planning & Design Show children examples of salt-dough heart. Discuss the process of make. Use language of chronology. Can the children explain the steps in order? Children to decorate a drawn paper heart as a plan to how they want to decorate their salt-dough heart. As a class, make a list of the resources you will need to complete the task. Save the list and display ready for the make. Make Ask the children to select their materials from the list of resources made. Can they select their equipment independently? Model using cutter and allow children to do this independently. Model shaping and finishing the heart so that the edges are smooth. Show the children how to create a hole ready for threading. Provide choices for decoration e.g., paint, sequins, glitter etc. Ensure children have their drawing/plan to guide them. Evaluate Children will begin to evaluate their products using trial and error. Children will be able to say what has worked well and something that can be better next time. After the children have made their product, they are able to display it for others to see which provides opportunities for peer comments. Children should also be able to explain the process they have taken to complete their product. **Resources** Salt-dough, heart cutter, glue, glitter, other appropriate decorations, paint, felt pens, hole cutter, thread (strong/stiff) No risk assessment needed **Opportunities for differentiation** Support: direct towards materials that are most appropriate, break steps of making down into shorter tasks, provide a WAGOLL for the children to see, support with equipment, provide ideas for decoration, model the making process. Challenge: challenge to make the finishing on the product as neat as possible, all cutting and threading done independently, more complex designs. Opportunities to support SEND **Scaffolds**: modelling of practical activities, breaking tasks down into individual components, starting expositions at the point of the pupils' current understanding, combining verbal explanations with relevant graphics, pre-learning vocabulary. Minimum learning for SEND: use a cutter independently, with support, pushing a hole through salt-dough and threading. Minimum vocab for SEND: thread, cut, first, next **Please place WAGOLL photos in D&T folder**

FS2 Summer 2	Unit: granola bars D&T – cooking and nutrition **Also see cooking and nutrition progression**
EYFS objectives	Key explicit knowledge and vocabulary
End point ELG Give focused attention to what the teacher says, responding appropriately even when engaged in activity, and show an ability to follow instructions involving several ideas or actions. Use a range of small tools, including scissors and cutlery. **End point ELG – care (PSED)** Manage their own basic hygiene and personal needs, including dressing, going to the toilet and understanding the importance of healthy food choices.	**Context of study** Previous to this unit, children will have developed their cooking and nutrition skills by making a fruit kebab in FS1, children will have worked towards developing their knowledge of hygiene and safety and their skills in cutting and using small pieces of equipment. In this unit, children will learn about the variety of foods needed in a diet, how to measure using non-statutory measures and further develop their skills in working hygienically and safely. This unit is a precursor to learning in year 1, where children will make a fruit salad and yoghurt summer snack.  I know statements I know appropriate use of senses e.g., when tasting different foods. I know where many common foods come from, such as eggs, bacon and milk, and begin to explore those grown/produced locally I know the need for a variety of foods in a diet. I know how to make an activity safe and hygienic I can statements I can carry out instructions with support I can measure and weigh food items, non-statutory measures e.g., spoons, cups I can work safely and hygienically. I can knead and shape a range of food and ingredients. **DESIGN BRIEF** To make a (what) granola bar for (who) themselves for (what purpose) a snack **Key vocabulary** Apron, cut, mix, fork, knife, bowl, taste, senses **What the steps in the D&T cycle will look like:** Research & Investigate learn where many common foods come from, such as eggs, bacon and milk, and begin to explore those grown locally. Expose children to tools and equipment used for cooking, including baking trays, mixing spoons and safety equipment such as aprons and discuss uses and safety precautions. Show children a range of different cereal bars – which ones are their favourites? Can they tell you which ones are healthier than others? Can they describe what they taste like?

	Generate Explain how to make granola bars (recipe and instructions saved in D&T folder). How will we keep safe when making? How will we make sure we are hygienic? What ingredients might we need? Give children examples of ingredients they could put in their granola bars, also outline ingredients that would not work well. Planning & Design Discuss the order of the making process. Emphasise the importance of chronology. Can the children verbally explain what they are going to do? Can they explain what ingredients they need? Children to draw/write 3 steps in the making process as their plan. Make The children should be able to follow instructions with support. They should develop skills in measuring using non-statutory measurements such as spoons and cups. They should practise some appropriate health and safety measures independently. Children are given choice in the added ingredients they would like to use e.g. types of fruits. Children should have a go at pressing and kneading the mixture into the tray. Evaluate Can the children explain what went well and what they could do better next time? Would they change anything about their granola bars? Did they like it? Why/why not? Can they explain how they worked hygienically and safely? **Resources** Margarine, salt, vanilla essence, toasted muesli, dried fruit, brown sugar, eggs, measuring jug, bowl, baking dish, spatula, knife No risk assessment needed **Opportunities for differentiation** Support: group creation – peer support, adult support with practical tasks, drawing instead of writing. Challenge: developing practical skills independently with greater control. Opportunities to support SEND **Scaffolds**: modelling of practical activities, breaking tasks down into individual components, starting expositions at the point of the pupils' current understanding, combining verbal explanations with relevant graphics, pre-learning vocabulary. Minimum learning for SEND: describing senses, knowledge of healthy and unhealthy foods, following instructions, working safely and hygienically. Minimum vocab for SEND: cut, mix, knife, bowl, apron **Please place WAGOLL photos in D&T folder**

Year 1 Autumn 1	Unit: Geography – London D&T – structures End of unit outcome: to make a model of Big Ben
NC objectives	Key explicit knowledge and vocabulary
Design -design purposeful, functional, appealing products for themselves and other users based on design criteria -generate, develop, model and communicate their ideas through **talking and drawing**. **Make** -select from and use a range of tools and equipment to perform practical tasks [for example, **cutting**, shaping, **joining** and **finishing**] -select from and use a wide range of materials and components, including construction materials according to their characteristics **Evaluate** -evaluate their ideas and products against design criteria	**Context of study** This unit is the beginning of the objectives needed to be covered in the Primary National Curriculum. Before this, students will have used junk modelling materials to engage in free-structured play and have developed some interest in using materials for different purposes. Students may have experimented in using different types of materials for their creations and some learning may have been teacher led. This unit is a precursor to learning in year 3 where the children will use art straws to make an Iron Age roundhouse. Learning in this unit will focus on creating basic shapes (rectangles and squares) to create their model. When the children are in year 3, they will look at more complex shapes and how to join them differently. In year 5, the children learn how to cut and join pieces of wood to make an Egyptian trinket box. In year 6, children will create a structure from MDF that is strong enough to withhold added components, by making a wooden countdown calendar for Christmas. <u>I know statements</u> I know that Augustus Pugin designed Big Ben I know that the base of Big Ben is square I know that Big Ben is a frame structure, since it has an almost hollow inside apart from bells and mechanisms. I know that Big Ben is made out of stone <u>I can statements</u> I can use scissors and other tools safely and accurately I can select appropriate materials to join two pieces of material together I can select appropriate materials according to their functional properties **<u>DESIGN BRIEF</u>** To make a (what) Big Ben model for (who) tourists that visit London as (what purpose) a souvenir **Key vocabulary** Stable, stiff, raised, flexible, weak, strong, base, join, architect **Significant designer** Augustus Pugin - architect Augustus Pugin was an English architect, designer and artist who is remembered for his role in the Gothic Revival style of architecture. He is known for his work in Westminster, London, and its iconic clock tower, later renamed the Elizabeth Tower, which houses the bell, Big Ben. Pugin designed many churches in England, Ireland and Australia. **What the steps in the D&T cycle will look like:** <u>Research & Investigate</u> Discuss Big Ben and its structure, shapes and the materials used. How do you think it is able to stand so tall? Introduce and teach about Augustus Pugin. Look at small model Big Ben souvenirs. Ask the children about the characteristics of the materials used to create them. Briefly look into tourism in London and how Big Ben souvenirs are popular in lots of shops. Context of wider environment.

Technical knowledge -build structures, exploring how they can be made **stronger**, **stiffer** and more stable	Generate What will be the design criteria for our structure of Big Ben? Discuss the shape of the tower and how you can make it stand up tall without falling over. Discuss the need for a strong, stable base. How will we ensure the criteria is met? Discuss how the model should be able to stand up without falling over. How will we ensure it will be appealing? Once the structure has been made, children should be able to add decorations to make the product stand out. See photo with union jack on above. What particular individuals or groups will this product be designed for? Tourists – all. Planning & Design Create a technical drawing. Annotate designs with materials that they plan on using. Which tools/equipment are needed to create this product? Children give some reasons for their choices. Make Accurately use tools and equipment selected. Evaluate product during make - children may come across issues with their design and will need to adapt in order to meet the design criteria. Focus on ways to join the materials together and the best way to create a clean finish. Health and Safety: Children are taught to use the tools safely. They can explain why it is necessary to work safely and demonstrate this in their makes. Ensure children can explain what they are making and why. Evaluate How would the change/alter the product? How does my product compare to existing products? Does my product meet the design criteria? What technical knowledge have we developed from this unit of work? Discuss national curriculum objective on how a structure can be stronger, stiffer and more stable. Children should begin to understand the importance of the evaluate stage of a project by looking at existing products and those from history which relate to their project. Children should verbalise what the products are for, who they are for, how they work, the materials used to make them and what they like and dislike about them. Discuss change and continuity when looking at product changes over time and the significance of designers in history. **Resources** -card (different thicknesses) -glue -tape -scissors -clock face printout -paints - show children and discuss examples of resources that would not work e.g., felt, bluetack (would not look nice for the finish). No risk assessment needed **Opportunities for differentiation** Support: writing on design sheet and evaluation done by adult, discuss and direct towards materials that are most appropriate, break steps of making down into shorter tasks, provide a WAGOLL for the children to see, provide materials that are already similar in shape but still need some level of joining together, provide a template. **This unit could also be done as a collaborative project.** Challenge: writing on design and evaluation sheet, more in depth design and evaluation sheet e.g. add step-by-step instructions, challenge to make the finishing on the product as neat as possible e.g. no view of materials used to join – could fold paper over like on a 3d net, add in ways to make the structure more stable e.g. support pillars within the structure, selecting different thicknesses of card. Opportunities to support SEND **Scaffolds**: modelling of practical activities, breaking tasks down into individual components, starting expositions at the point of the pupils' current understanding, combining verbal explanations with relevant graphics, pre-learning vocabulary. Minimum learning for SEND: the base of Big Ben is square, can join two pieces of material together, can use tools safely Minimum vocab for SEND: base, strong, join Also please refer to EHCP if child needs any support with practical tasks. **Please place WAGOLL photos in D&T folder**

Year 1 Autumn 2	Unit: D&T – moving mechanisms End of unit outcome: to make a moving Christmas card
NC objectives	Key explicit knowledge and vocabulary
Design -design purposeful, **functional**, **appealing** products for themselves and other users based on design criteria -generate, develop, model and communicate their ideas through talking, drawing and **mock-ups.** Make -select from and use a range of tools and equipment to perform practical tasks [for example, **cutting**, **shaping**, **joining** and finishing] -select from and use a wide range of materials and components, including construction materials Evaluate -explore and evaluate a range of existing products -evaluate their ideas and products against design criteria Technical knowledge	**Context of study** This unit is the beginning of the objectives needed to be covered in the Primary National Curriculum. Before this, students will have been exposed to storybooks that have moving parts and toys that move when an action is exerted on them. In this unit, children will learn to create a moving picture using a slider, lever and pivot mechanism. This unit is a precursor to learning in year 3, where the children will then move on to learning about different ways to make moving parts, such as pneumatic systems. In year 4, the children will then learn to use wheels and axels in their history unit where they will make a Roman catapult.   I know statements I know that I need to have a mechanism to create movement I know that I need to slide, push or pull the mechanism to make it move I know that a pivot allows a lever to move up and down I can statements I can create a moving part to place onto a Christmas card I can make a slider mechanism I can make a lever and pivot mechanism **DESIGN BRIEF** To make a (what) Christmas card for (who) a friend or family member to (what purpose) celebrate Christmas **Key vocabulary** Join, movement, mechanism, pivot, lever, slider, wheel **What the steps in the D&T cycle will look like** Research and Investigate What similar products exist? Research moving books with pop up parts – look at the mechanisms used to create them. Research moving cards and have some to show the children. Learn the different ways to make the parts move and make **mock-ups** of each mechanism. Who will the product will be designed for and will it meet their needs? Context of home. Generate What will be the design criteria for a successful product? How will we ensure the criteria is met? How will we ensure the product will be functional? How will we ensure it will be appealing? What particular individuals or groups will this product be designed for? Discuss different shapes that could be created from card. Discuss appropriate mechanisms e.g. arms of Santa, star of tree. Provide examples of shapes/images that would be difficult to create a moving part for. How will we get our design onto a Christmas card? Planning and design

-explore and use mechanisms [for example, **levers**, **sliders**, wheels and axles], in their products.	Create a technical drawing of their design including annotations of materials used. Ensure the children label which mechanism they are going to use and can explain how to create it. Which tools/equipment are needed to create this product? How are they going to decorate their product so that it is appealing? Children give some reasons for their choices. Make Evaluate each stage of the making process. Seek views of others. Accurately use tools and equipment selected. Health and Safety: Children are taught to use the tools safely. They can explain why it is necessary to work safely and demonstrate this in their makes. Focus on ways to create sliders and levers. Children will measure, mark out, cut and shape their materials. Ensure children can explain what they are making and why. Ensure children are considering what they need to do next (chronology). Children should measure, mark out, cut and shape, with support. Evaluate How would they change/alter the product? How does my product compare to existing products? How does my product meet the design criteria? **Discuss technical knowledge of levers and sliders**. Children should begin to understand the importance of the evaluate stage of a project by looking at existing products and those from history which relate to their project. Children should verbalise what the products are for, who they are for, how they work, the materials used to make them and what they like and dislike about them. **Resources** -story books with moving parts -cards with moving parts -card -scissors -template sheets for mock ups -paper fasteners -hole punches -pre-cut card circles -art materials for decoration - **Risk assessments needed:** no risk assessment needed Opportunities for differentiation Support: writing on design sheet and evaluation sentence stems or prompts, discuss and direct towards techniques that are appropriate, break steps of making down into shorter tasks, provide a WAGOLL for the children to see, provide pre-made parts, simpler lever/slider design, pre-cut shapes Challenge: more in depth design and evaluation sheet e.g. add step-by-step instructions. Challenge to enhance their designs to incorporate more complex slider e.g. 2 parts that move (arms) Opportunities to support SEND **Scaffolds**: modelling of practical activities, breaking tasks down into individual components, starting expositions at the point of the pupils' current understanding, combining verbal explanations with relevant graphics, pre-learning vocabulary. Minimum learning for SEND: know that we need to slide, push or pull to make a mechanism move, can provide an example of a moving part they have made Minimum vocab for SEND: movement, pivot, lever, slider Please also refer to EHCP if child needs any support with practical tasks. **Please place WAGOLL photos in D&T folder**

Year 1 Summer 2	Unit: RSHE – keeping healthy D&T – cooking and nutrition End of unit outcome: to make a summer snack – fruit salad and yoghurt **Also see cooking progression document**
NC objectives	Key explicit knowledge and vocabulary
Cooking and nutrition -use the basic principles of a healthy and varied diet to prepare dishes -understand where food comes from. Design -design purposeful, functional, appealing products for themselves and other users based on design criteria -generate, develop, model and communicate their ideas through talking. **Writing a recipe & instructions.** Make -select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing] -select from and use a wide range of materials and components, including ingredients, according to their characteristics	**Context of study** Previous to this unit, the children will have had various experiences with food and nutrition in EYFS, such as using their kitchen role play area, baking a cake and making salt-dough hearts. In this unit, children will learn about food sources, the 5 a day rule, and understand basic hygiene rules when cooking. They will also learn a range of skills such as mixing, peeling and cutting. **Please see cooking progression document for detailed learning and skills for this unit.** This unit is a precursor for more in-depth knowledge and understanding of cooking and nutrition and the development of a range of skills. **See cooking and nutrition progression document.** I know statements I know that all food comes from plants or animals I know that everyone should eat five portions of fruit and vegetables a day I know how to prepare simple dishes safely I understand hygiene rules when cooking I can statements I can sort foods into different groups I can use techniques such as cutting, peeling and grating. I can make a healthy summer snack for myself **See cooking and nutrition progression document.**  **DESIGN BRIEF** To make a (what) fruit salad with yoghurt for (who) themselves for (what purpose) a summer's day snack **Key vocabulary** Plants, animals, fruit, vegetables, safely, cut, peel, grate, tear, ingredients **What the steps in the D&T cycle will look like** Research and Investigate Investigate and learn where food comes from. Children should learn that food comes from plants or animals. Who will the product will be designed for and will it meet their needs? What similar products exist? Allow the children to look at different types of fruit salads that include different fruits. Sort foods into groups and identify group of fruit and vegetables. Evaluate existing products. Learn that everyone should eat at least 5 portions of fruit and vegetables a day. Context of home and industry. Generate

Evaluate -explore and evaluate a range of existing products -evaluate their ideas and products against design criteria	What will be the design criteria for a successful product? How will we ensure the criteria is met? How will we ensure it will be appealing? What sort of fruits could we use? Ensure all fruits above are used in this in order to cover the skills required during this unit. Planning and Design Recipe ingredients with small diagram. Include: you will need list (which tools/equipment are needed to create this product?). Children give some reasons for their choices. Make Evaluate each stage of the making process. Seek views of others. Accurately use tools and equipment selected with some support. Health and Safety: Children are taught to use the tools safely. They can explain why it is necessary to work safely and demonstrate this in their makes. Teach children hygiene rules when cooking. Evaluate How would they change/alter the product? How does my product compare to existing products? How does my product meet the design criteria? Children should verbalise what the products are for, who they are for, how they work, the materials used to make them and what they like and dislike about them. **Resources** -satsumas -bananas -grapes -canned peach slices -pear -strawberries -apples -raspberries -yoghurt -knives -chopping boards -handwash -spoons **Risk assessments needed**: see cooking and nutrition risk assessment **Opportunities for differentiation** Support: writing on recipe sheet expectations and evaluation sentence stems or prompts – scribing. Break steps of making down into shorter tasks, provide a WAGOLL for the children to see, provide pre-cut pieces if too large. . Challenge: more in depth recipe and evaluation sheet, cut parts down into smaller chunks, add in other ingredients that will complement the foods, think about the presentation of the food. Opportunities to support SEND **Scaffolds**: modelling of practical activities, breaking tasks down into individual components, starting expositions at the point of the pupils' current understanding, combining verbal explanations with relevant graphics, pre-learning vocabulary. Minimum learning and vocab for SEND: food comes from plants or animals, basic safety and hygiene rules, cutting and peeling Minimum vocab for SEND: plants, animals, cut, peel Please also refer to EHCP if child needs any support with practical tasks. **Please place WAGOLL photos in D&T folder**

Year 2 Autumn 2	Unit: D&T - textiles End of unit outcome: to make a Christmas bauble
NC objectives	Key explicit knowledge and vocabulary
<u>Design</u> -design purposeful, functional, appealing products for themselves and other users based on design criteria -generate, develop, model and communicate their ideas through talking, **drawing**, **templates** and **mock-ups.** <u>Make</u> select from and use a range of tools and equipment to perform practical tasks [for example, **cutting**, **shaping**, **joining** and **finishing**] -select from and use a wide range of **materials** and **components**, including textiles according to their **characteristics** <u>Evaluate</u> -explore and evaluate a range of existing products	**Context of study** This unit is the beginning of the children's textiles learning journey under the Primary National Curriculum. Before this, children will have practised basic sewing with child-friendly needles and fabric. This unit is a precursor to the year 5 unit consisting of making drawstring bags, and the year 6 unit of making Rio Carnival masks. During this unit, the children will learn how to thread a needle, and how to complete the running stitch and the over stitch. When the children reach year 5, they will learn the back stitch, whip stitch, straight stitch and how to sew on applique. In year 6, the children will then learn how to do the zig-zag stitch and different methods of sewing on sequins for aesthetic reasons. <u>I know statements</u> I know that baubles can be made from different materials I know that some fabrics will be harder to hand sew and that for more difficult fabrics we would use a sewing machine I know that there are different stitches that give different finishes I know what a mock up is and how to create one ready for my final product <u>I can statements</u> I can thread a needle safely I can cut safely with scissors I can sew using the running stitch and the over stitch I can make a knot with the thread to finish the stitch neatly   **<u>DESIGN BRIEF</u>** To make a (what) Christmas bauble for (who) themselves and their Christmas tree to (what purpose) celebrate Christmas. **Key vocabulary** Sew, needle, thread, fabric, bauble, stitch, appealing, creativity, design **What the steps in the D&T cycle will look like** <u>Research and Investigate</u> Introduce and discuss different types of baubles. Look at shape, pattern and materials they are made from. Look at history and purpose of baubles. What products already exist? Who will the product will be designed for and will it meet their needs? Discuss how baubles need to be aesthetically pleasing as they are a decoration and there to look nice. Context of home. Look further into baubles made from fabric. What tools and equipment do you think will be used to make these decorations? <u>Generate</u> Discuss skills needed to perform this activity: cutting and sewing. Ensure that the children understand the need for being safe when using dangerous equipment. What will be the design criteria for a successful product? Discuss features needed to be a bauble e.g., aesthetically pleasing, has a hoop to hang from the tree, is decorated with a Christmas theme. How will we ensure the criteria is met? How will we ensure the product will be functional? Discuss use of hoop to hang but also talk about how the seams need to be secure in order to keep the stuffing in and stop the bauble from falling

-evaluate their ideas and products against **design criteria**	apart. How will we ensure it will be appealing? What type of decoration is needed to ensure it is an appealing product e.g., glitter, patterned fabric, sequins or buttons. **Children to practise new skills for their product: cutting, threading a needle, over stitch and running stitch.** Planning and Design The children will create a technical drawing of their design. Include annotations onto their designs that specify their decorative items and the materials they need to use. Which tools/equipment are needed to create this product? The children will also create a **template and mock-up** of their design using card. They should choose a shape for their bauble and use this template when they make their final product. Children give some reasons for their tools and materials choices. Make As the children complete their make, they will evaluate each stage of the process by seeking views of others. The children should be able to accurately use tools and equipment selected. Health and Safety: Children are taught to use the tools safely. They can explain why it is necessary to work safely and demonstrate this in their makes. Children will measure, mark out, cut and shape their materials. Children will also be able to explain the aesthetic qualities within their choices of materials. Ensure children can explain what they are making and why it fits the purpose. Ensure children can measure, mark out, cut and shape materials and components, with support. Evaluate Seek the views of others to improve the product. How would they change/alter the product? How does my product compare to existing products? How does my product meet the design criteria? If it doesn't, why? What adjustments had to be made? What technical knowledge have we developed from this unit of work? Children should begin to understand the importance of the evaluate stage of a project by looking at existing products and those from history which relate to their project. Children should verbalise what the products are for, who they are for, how they work, the materials used to make them and what they like and dislike about them. Children should talk about what they would do differently if they were to do it again, and why. **Resources** -scissors -scraps of fabric -card -needles -thread -buttons -stuffing material -buttons -Xmas themed fabric - materials for mock ups -also show the children other materials that would be difficult to hand sew through e.g. leather **Risk assessments needed:** See sewing and needlework risk assessment **Opportunities for differentiation** Support: writing on design sheet and evaluation sentence stems or prompts, discuss and direct towards sewing techniques that are appropriate, break steps of making down into shorter tasks, provide a WAGOLL for the children to see, provide pre-made pattern pieces or templates. Challenge: more in depth design and evaluation sheet e.g. add step-by-step instructions, add buttons or other applique to designs, neatening edges up once complete, make sure stuffing is not seen and gaps are sewn up tight for a nice finish, adding buttons Opportunities to support SEND **Scaffolds**: modelling of practical activities, breaking tasks down into individual components, starting expositions at the point of the pupils' current understanding, combining verbal explanations with relevant graphics, pre-learning vocabulary. Minimum learning for SEND: running stitch and over stitch, threading a needle safely, using scissors safely Minimum vocab for SEND: sew, needle, thread, bauble Please also refer to EHCP if child needs any support with practical tasks. **Please place WAGOLL photos in D&T folder**

Year 2 Summer 2	Unit: RSHE – keeping healthy D&T – cooking and nutrition End of unit outcome: to make an egg/tuna mayonnaise, cucumber and herb sandwiches **Also see cooking progression document**
NC objectives	Key explicit knowledge and vocabulary
<u>Cooking and nutrition</u> -use the basic principles of a healthy and varied diet to prepare dishes -understand where food comes from. <u>Design</u> -design purposeful, functional, appealing products for themselves and other users based on design criteria -generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology <u>Make</u> -select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing]	**Context of study** Previous to this unit, the children will have had various experiences with food and nutrition in EYFS, such as using their kitchen role play area, baking a cake and making salt-dough hearts. In year 1, children will have learned about food sources, the 5 a day rule, and understand basic hygiene rules when cooking. They will also have learned a range of skills such as mixing, peeling and cutting. In this unit, children will learn that food has to be farmed, grown elsewhere or caught, they will be introduced to the Eatwell plate, and prepare a simple dish without a heat source. Children will learn skills such as measuring, snipping and spreading. **Please see cooking progression document for detailed learning and skills for this unit.** This unit is a precursor for more in-depth knowledge and understanding of cooking and nutrition and the development of a range of skills. **See cooking and nutrition progression document.** <u>I know statements</u> I know that that food has to be farmed, grown elsewhere (e.g., home) or caught I know that everyone should eat at least five portions of fruit or vegetables every day and they can consume more than this. I understand safety procedures for cooking with equipment. I understand hygiene rules for cooking <u>I can statements</u> I can name and sort foods into the five groups in 'The Eatwell Plate'. I can prepare simple dishes without a heat source. I can use techniques such as snipping, spreading and peeling **<u>DESIGN BRIEF</u>** To make a (what) sandwich for (who) themselves for (what purpose) a picnic lunch **Key vocabulary** Farmed, Eatwell plate, prepare, equipment, healthy, measure, half, quarter, snip, spread, chef, manufacturer  **Significant designer:** Abbey Fisher – chef/manufacturer Abby Fisher, One of the First African-American Cookbook Authors. Upon arriving in San Francisco, she used her talents to set up a preserves business along with her husband. And while the 1880 census notes his profession as "pickle and preserves manufacturer," the business was under her name, "Mrs. Abby Fisher & Co." **What the steps in the D&T cycle will look like** <u>Research and Investigate</u>

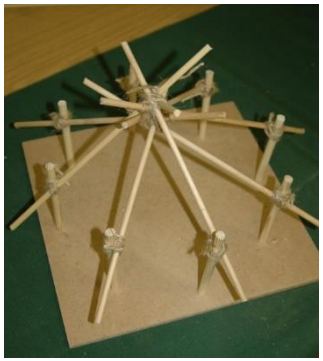
-select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics <u>Evaluate</u> -explore and evaluate a range of existing products -evaluate their ideas and products against design criteria	Who will the product will be designed for and will it meet their needs? What similar products exist? Look at local shop bought sandwiches and how healthy they are e.g. do they include any vegetables. Taste test some sandwiches. Context local community. Research where food is grown and relate this back to our local area. Where can we get eggs/tuna/bread from (other than Tesco). Discuss Eatwell plate and the need for 5 portions of fruit and vegetables a day (if not more). Introduce significant designer: Jamie Oliver. <u>Generate</u> What will be the design criteria for a successful product? How will we ensure the criteria is met? How will we ensure it will be appealing? How will we ensure we are working safely with equipment? <u>Planning and Design</u> Recipe ingredients with annotated diagram. Teacher judgement on amount of writing. Include: you will need list (which tools/equipment are needed to create this product?), and a small labelled diagram of their product. Children give some reasons for their choices. <u>Make</u> Evaluate each stage of the making process. Accurately use tools and equipment selected. Health and Safety: Children are taught to use the tools safely. They can explain why it is necessary to work safely and demonstrate this in their makes. <u>Evaluate</u> How would they change/alter the product? How does my product compare to existing products? How does my product meet the design criteria? How has key events/individuals helped shape the world in this area of study? Children should verbalise what the products are for, who they are for, how they work, the materials used to make them and what they like and dislike about them. Discuss change and continuity when looking at product changes over time and the significance of designers in history. **Resources** -bread (white and brown) -mayonnaise -tuna -pre-boiled eggs -cucumber -herbs -butter -knives -forks -chopping boards -handwash **Risk assessments needed:** see cooking and nutrition risk assessment **Opportunities for differentiation** <u>Support</u>: writing on recipe sheet expectations and evaluation sentence stems or prompts – scribing. Break steps of making down into shorter tasks, provide a WAGOLL for the children to see, provide pre-cut pieces of food if too large, provide alternative equipment if needed. <u>Challenge</u>: more in depth recipe and evaluation sheet, cut parts down into smaller chunks, add in other ingredients that will compliment the foods, think about the presentation of the food. <u>Opportunities to support SEND</u> **Scaffolds**: modelling of practical activities, breaking tasks down into individual components, starting expositions at the point of the pupils' current understanding, combining verbal explanations with relevant graphics, pre-learning vocabulary. Minimum learning for SEND: food is farmed, grown, or caught, five portions of fruit & veg a day, basic safety measures when cooking Minimum vocab for SEND: healthy, measure, spread, Eatwell plate Please also refer to EHCP if child needs any support with practical tasks. **Please place WAGOLL photos in D&T folder**

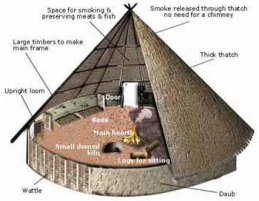
Year 3 Autumn 1	Unit: Geography – UK D&T – cooking and nutrition End of unit outcome: to make an apple crumble **Also see cooking progression document**
NC objectives	Key explicit knowledge and vocabulary
<u>Design</u> -use research and develop design criteria to inform the design of innovative, **appealing** products that are fit for purpose, aimed at particular individuals or groups -generate, develop, model and communicate their ideas through **discussion** <u>Make</u> -select from and use a wider range **of tools and equipment** to perform practical tasks [for example, **cutting**, shaping, joining and finishing], accurately -select from and use a wider range of materials and components, including **ingredients**, according to their functional properties and aesthetic qualities <u>Evaluate</u> -investigate and analyse a range of **existing products** -evaluate their ideas and products against their own design criteria and consider the views of others to improve their work	**Context of study** Previous to this unit, the children will have had various experiences with food and nutrition in EYFS, such as using their kitchen role play area, baking a cake and making salt-dough hearts. In year 1, children will have learned about food sources, the 5 a day rule, and understand basic hygiene rules when cooking. They will also have learned a range of skills such as mixing, peeling and cutting. In year 2, children will have learned that food has to be farmed, grown elsewhere or caught, they have been introduced to the Eatwell plate, and prepared a simple dish without a heat source. Children have also learned skills such as measuring, snipping and spreading. In this unit, the children will learn how to join and combine a range of ingredients, and be developing their understanding of how to use a range of techniques such as peeling, chopping, slicing, grating and mixing. **Please see cooking progression document for detailed learning and skills for this unit.** This unit is a precursor for more in-depth knowledge and understanding of cooking and nutrition and the development of a range of skills. **See cooking and nutrition progression document.**  <u>I know statements</u> I know that an apple crumble is an example of a great British dish I know that crumbles are a true British dessert, which can be made any time of the year using seasonal fruit. I know how to work safely when using cooking equipment <u>I can statements</u> I can use a range of techniques such as peeling, cutting, measuring and mixing I can combine a range of ingredients to make an apple crumble **<u>DESIGN BRIEF</u>** To make an (what) apple crumble for (who) the children and parents for (what purpose) UK celebration day **Key vocabulary** Join, combine, chop, slice, stir, thoroughly, rub **What the steps in the D&T cycle will look like** <u>Research and Investigate</u> Research for this unit should be undertaken during the geography topic. Children should have learned about British dishes and where they come from. What similar products exist? Taste tests some different types of crumble. Context of local and wider environment. Discussions on a healthy and varied diet. <u>Generate</u> What will be the design criteria for a successful product? How will we ensure the criteria is met? How will we ensure it will be appealing? How do we ensure it is balanced and healthy? Explain that we will be making the crumble for our celebration of the UK day. <u>Planning and Design</u>

Cooking and Nutrition -understand and apply the principles of a **healthy and varied diet** -prepare and cook a variety of **predominantly savoury** dishes using a range of cooking techniques -understand **seasonality**, and know where and how a variety of ingredients are grown, reared, caught and processed.	Recipe & instructions with small drawing. Links to writing – the children will plan their food and write out as a recipe. Teacher judgement on amount of writing. Include: you will need list (which tools/equipment are needed to create this product?), step by step instructions (numbered if makes it easier), a small drawing of their product. Make Evaluate each stage of the making process. Accurately use tools and equipment selected. Health and Safety: Children are taught to use the tools safely. They can explain why it is necessary to work safely and demonstrate this in their makes. This activity will need an oven to cook the food in, however, children will not be using it themselves. Children should be able to select suitable tools/equipment, explain choices; begin to use them accurately https://www.bbcgoodfood.com/recipes/best-apple-crumble Evaluate How would they change/alter the product? How does my product compare to existing products? How does my product meet the design criteria? **Consider the views of others.** **Resources** – crumble that serves 4 -3 bramley apples - 2 tbsp golden caster sugar - 175g plain flour - 110g golden caster sugar - 110g cold butter -knives -baking dish -mixing bowl -spoon -swivel peeler **Risk assessments needed:** see cooking and nutrition risk assessment **Opportunities for differentiation** Support: writing on recipe sheet expectations and evaluation sentence stems or prompts – scribing. Break steps of making down into shorter tasks, provide a WAGOLL for the children to see, provide pre-cut pieces of food if too large, provide alternative equipment if needed. Challenge: more in depth recipe and evaluation sheet, cut parts down into smaller chunks, add in other ingredients that will compliment the foods, think about the presentation of the food. Opportunities to support SEND **Scaffolds**: modelling of practical activities, breaking tasks down into individual components, starting expositions at the point of the pupils' current understanding, combining verbal explanations with relevant graphics, pre-learning vocabulary. Minimum learning for SEND: apple crumble is a great British dish, working safely with cooking equipment, cutting, measuring, mixing Minimum vocab for SEND: Join, chop, slice, stir, thoroughly, rub Please also refer to EHCP if child needs any support with practical tasks. **Please place WAGOLL photos in D&T folder**

Year 3 Autumn 2	Unit: D&T – moving mechanisms End of unit outcome: to make a Christmas toy or gift using pneumatics
NC objectives	Key explicit knowledge and vocabulary
<u>Design</u> -use research and develop design criteria to inform the design of innovative, **functional**, **appealing** products that are **fit for purpose**, aimed at particular individuals or groups -generate, develop, model and communicate their ideas through discussion, **annotated sketches** and **prototypes**. <u>Make</u> -select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, **joining** and **finishing**], accurately -select from and use a wider range of materials and components, including construction materials, according to their functional properties and aesthetic qualities <u>Evaluate</u> -investigate and analyse a range of existing products	Context of study Before this unit, students will have been exposed to storybooks that have moving parts and toys that move when an action is exerted on them. In year 1, children will have learned to create a moving picture using a slider, lever and pivot mechanism. In this unit, the children will move on to learning about different ways to make moving parts, such as pneumatic systems. This unit is a precursor to learning in year 4, where the children will then learn to use wheels and axels in their history unit where they will make a Roman catapult. <u>I know that statements</u> I know how objects use air pressure to make them work I know how to create pneumatic mechanisms I know how to make parts move using pneumatic systems I know about John Boyd Dunlop and the effect he had on the pneumatic industry <u>I can statements</u> I can create a **mock-up/prototype** of moving parts using pneumatic systems I can create a moving part using pneumatic systems I can make a Christmas toy that includes a pneumatic system  **<u>DESIGN BRIEF</u>** To make a (what) moving toy for (who) a friend or family member as (what purpose) a gift **Key vocabulary** Inflate, pneumatic systems, compressed, pressure, effective, mechanism, inventor, purpose, evaluate **Significant designer:** John Boyd Dunlop - inventor John Boyd Dunlop invented the first pneumatic tyre for his son's tricycle. He found by inflating a rubber tube, they rolled better and gave a smoother ride. He popularised the pneumatic inflatable tyre and is remembered for founding the company, Dunlop Tyres. **What the steps in the D&T cycle will look like** <u>Research and Investigate</u> Research different products that use air to make them work. What products exist? Investigate different types of mechanisms and show the children actual products e.g., arm band, bike pump. When were they developed and by which designers? Discuss significant designer John Boyd Dunlop and his contribution to the development in this area of engineering. Who will the product will be designed for and will it meet their needs? Context of home and wider industry. <u>Generate</u> What will be the design criteria for a successful product? How will we ensure the criteria is met? How will we ensure the product will be functional? How will we ensure it will be appealing? What particular individuals or groups will this product be designed for? Experiment with different methods of creating pneumatics and create prototypes/mock-ups of their mechanisms. **Gather information of the needs and wants of the individuals the products are intended for. Design must meet a range of requirements/criteria.**

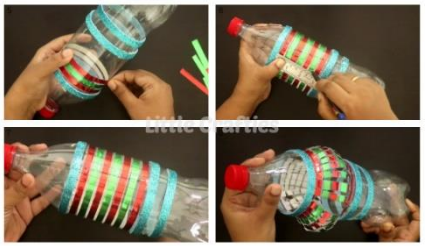
-evaluate their ideas and products against their own design criteria and consider the views of others to improve their work -**understand how key events and individuals in design and technology have helped shape the world** <u>Technical knowledge</u> -understand and use mechanical systems in their products -apply their understanding of how to strengthen, stiffen and reinforce more complex Structures	<u>Planning and Design</u> Create a technical drawing of design including annotations – must include order, equipment and tools. Which tools/equipment are needed to create this product? Ensure that the children explain how their pneumatic system will work. How will we make the product appealing? What decorations will be needed? **Include order of making.** <u>Make</u> Children to make their pneumatic Christmas gift. Evaluate each stage of the making process. Seek views of others. Discuss and adapt plans as the children come across challenges. Accurately use tools and equipment selected. Health and Safety. Children are taught to use the tools safely. They can explain why it is necessary to work safely and demonstrate this in their makes. Ensure children can work through plan in order. <u>Evaluate</u> Seek the views of others to improve the product. How would they change/alter the product? How does their product compare to existing products? How does my product meet the design criteria? How has key events/individuals helped shape the world in this area of study? What technical knowledge have we developed from this unit of work? **Consider the views of others.** Children should be able to discuss a range of existing products – from the past and present – remarking on who made them and why, where they were designed and made and what materials were used and why. Begin to consider whether materials used can be recycled or reused. Children should use design criteria to evaluate finished product **Resources** -balloons -elastic bands -syringes -tubing -coloured card -card boxes -junk modelling materials -paints **Risk assessments needed:** no risk assessment needed **Opportunities for differentiation** <u>Support</u>: writing on design sheet and evaluation sentence stems or prompts, discuss and direct towards joining or pneumatic techniques that are appropriate, break steps of making down into shorter tasks, provide a WAGOLL for the children to see, provide pre-made templates, provide junk modelling materials that are most appropriate so that the focus can be on pneumatics. <u>Challenge</u>: more in depth design and evaluation sheet e.g. add step-by-step instructions, add more moving parts to designs, neatening edges up once complete <u>Opportunities to support SEND</u> **Scaffolds**: modelling of practical activities, breaking tasks down into individual components, starting expositions at the point of the pupils' current understanding, combining verbal explanations with relevant graphics, pre-learning vocabulary. Minimum learning for SEND: how objects use air pressure to make them work, know about John Boyd Dunlop, mock-up/prototype of moving parts, create a moving part using pneumatic systems Minimum vocab for SEND: pneumatic, mechanism, inflate Please also refer to EHCP if child needs any support with practical tasks. **Please place WAGOLL photos in D&T folder**

Year 3 Spring 1/2	Unit: History – Stone age and Iron age D&T – structures End of unit outcome: to make an iron age round house
NC objectives	Key explicit knowledge and vocabulary
Design -use research and develop design criteria to inform the design of innovative, **functional**, appealing products that are fit for purpose, **aimed at particular individuals or groups** -generate, develop, model and communicate their ideas through discussion, annotated sketches, **cross-sectional diagrams** <u>Make</u> -select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, **shaping**, **joining** and finishing], accurately -select from and use a wider range of materials and components, including **construction materials** according to their functional properties and aesthetic qualities	**Context of study** Previous to this study, children will have used junk modelling materials in EYFS during free-structured and adult led play. They will have made their own structures using building materials such as Lego and they will have learned basic ways of joining materials together. In year 1, children will have learned how to join basic shapes, on a square base, such as squares and rectangles, together to create a model of Big Ben. In this unit, the children will have been given some choice over materials and will have been able to identify that materials must be strong for a structure to stand. In this unit, children will look at alternative ways to join materials such as using string to tie pieces together, and learn how to make a framework for a different base, such as a circle. The children will also learn how to create a cone shaped roof for the structure. This unit is a precursor to the unit in year 5, where the children will learn how to cut and join pieces of wood to make an Egyptian trinket box and also to a unit taught in year 6 where the children will create a structure from MDF that is strong enough to withhold added components. They will develop their understanding of how to make their structures sturdy and strong, and add their knowledge of electrical components to the design. <u>I know statements</u> I know that a roundhouse it a structure with a circular base/plan I know that a roundhouse would have been made from upright timbers I know that the roof was constructed of large timbers and then thatched I know that the frame was joined together with sticks called wattle and sealed with daub <u>I can statements</u> I can select from a range of materials according to their functional properties I can join together 2 pieces of material using appropriate materials I can find ways to **reinforce** my structure so that it stands without falling   **<u>DESIGN BRIEF</u>** To make a (what) model Iron Age roundhouse for (who) an iron age family (what purpose) to keep them sheltered. **Key vocabulary** Stable, joining, reinforce, 3d shape names, net, 3d, structure, framework, strengthen **What the steps in the D&T cycle will look like** <u>Research and Investigate</u> Children should have learned about Iron age round houses during their history learning. During this unit, the children should look at the houses from a Design and Technologist perspective and discuss how the structure is held together and stood tall. Who will the product will be designed for and will it meet their needs? The product will be designed for an Iron age family that need shelter. No current similar products exist. How does the roundhouse need to meet their needs? Think about basic elements of shelter. Context of study: history and wider environment. <u>Generate</u>

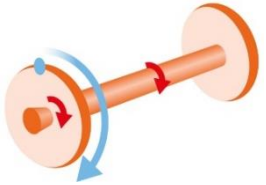
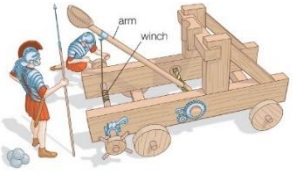
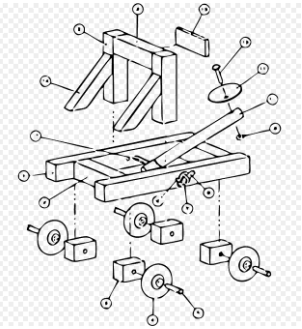
Evaluate -evaluate their ideas and products against their own **design criteria** and consider the **views of others** to improve their work Technical knowledge -apply their understanding of how to **strengthen**, stiffen and **reinforce** more **complex structures**	Develop design criteria with children. How will we ensure the criteria is met? Learn and practise joining skills using a range of materials. **Discuss the need for accurate measurements when cutting the product.** Planning and Design Create a **cross sectional diagram** of their model. Focus on how they can strengthen and **reinforce** the structure. **Children to work in groups of 3 for this project.** Annotate designs. Which tools/equipment are needed to create this product? How can we use these safely?  Make Evaluate each stage of the making process. Seek views of other groups. Adapt plans and make final product. Children will most likely come to find some part of this make difficult, encourage growth mindset and team work. Accurately use tools and equipment selected. Health and Safety: Children are taught to use the tools safely. They can explain why it is necessary to work safely and demonstrate this in their makes. Evaluate Seek the views of other groups to improve the product. How would they change/alter the product? How does my product compare to original Iron age roundhouses? How does my product meet the design criteria? What technical knowledge have we developed from this unit of work? Children should be able to discuss a range of existing products – from the past and present – remarking on who made them and why, where they were designed and made and what materials were used and why. Begin to consider whether materials used can be recycled or reused. **Resources** -lollypop sticks -art straws -string -wooden dowels -clay -plasticine -playdoh -tape -provide materials that would not work/are too weak for structures to provoke discussion e.g., pipe cleaners **Risk assessments needed:** no risk assessment needed. **Opportunities for differentiation** Support: writing on design sheet and evaluation sentence stems or prompts, discuss and direct towards materials that are appropriate, break steps of making down into shorter tasks, provide a WAGOLL for the children to see, provide pre-made bases. **This task will be completed in groups.** Peer support. Challenge: more in depth design and evaluation sheet e.g. add step-by-step instructions, add extra reinforcements, neaten up edges for a cleaner finish, discuss ways of stiffening the materials. Opportunities to support SEND **Scaffolds**: modelling of practical activities, breaking tasks down into individual components, starting expositions at the point of the pupils' current understanding, combining verbal explanations with relevant graphics, pre-learning vocabulary. Minimum learning for SEND: a roundhouse it a structure with a circular base/plan, the frame was joined together with sticks called wattle and sealed with daub, select from a range of materials with support according to their functional properties. Minimum vocab for SEND: stable, join, structure Also please refer to EHCP if child needs any support with practical tasks. **Please place WAGOLL photos in D&T folder**

Year 3 Summer 2	Unit: RSHE – keeping healthy D&T – cooking and nutrition End of unit outcome: to make a hedgehog bread and cucumber yoghurt dip **Also see cooking progression document**
NC objectives	Key explicit knowledge and vocabulary
<u>Cooking and Nutrition</u> -understand and apply the principles of a healthy and varied diet -prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques -understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed. <u>Design</u> -use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups -generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern	**Context of study** Previous to this unit, the children will have had various experiences with food and nutrition in EYFS, such as using their kitchen role play area, baking a cake and making salt-dough hearts. In year 1, children will have learned about food sources, the 5 a day rule, and understand basic hygiene rules when cooking. They will also have learned a range of skills such as mixing, peeling and cutting. In year 2, children will have learned that food has to be farmed, grown elsewhere or caught, they have been introduced to the Eatwell plate, and prepared a simple dish without a heat source. Children have also learned skills such as measuring, snipping and spreading. In year 3, the children will have learned how to join and combine a range of ingredients, and be developing their understanding of how to use a range of techniques such as peeling, chopping, slicing, grating and mixing. In this unit, the children will learn that food can be grown, reared or caught, begin to understand how to prepare and cook a variety of predominantly savoury dishes safely and hygienically, including using a heat source, and begin to understand that to be active and healthy, food and drink are needed to provide energy for the body. Children will also develop their skills in measuring, sifting, kneading and shaping. **Please see cooking progression document for detailed learning and skills for this unit.** This unit is a precursor for more in-depth knowledge and understanding of cooking and nutrition and the development of a range of skills. **See cooking and nutrition progression document.** <u>I know statements</u> I know that food is grown, reared and caught. I understand that a healthy diet is made up from a variety and balance of different food and drink, as depicted in 'The Eat well plate'. I understand that to be active and healthy, food and drink are needed to provide energy for the body. <u>I can statements</u> I can prepare and cook a predominantly savoury dish safely and hygienically including the use of a heat source. I can use a range of techniques such as sifting, kneading and shaping I can measure using digital scales with support to obtain accuracy. I can shape/mould - to create visually appealing products **<u>DESIGN BRIEF</u>** To make (what) hedgehog bread and cucumber dip for (who) themselves for (what purpose) a balanced snack **Key vocabulary** Grown, caught, reared, savoury, balance, active, healthy, energy, kneading, moulding, baking **What the steps in the D&T cycle will look like** <u>Research and Investigate</u> Who will the product will be designed for and will it meet their needs? What similar products exist? Taste test bread rolls and cucumber and yoghurt dip – grade out of 10. Context of home and wider environment. Learn that food is grown (such as tomatoes, wheat and potatoes), reared (such as pigs, chickens and cattle) and caught (such as fish). Learn that a healthy diet is made up from a variety 

pieces and computer-aided design Make -select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately -select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic Qualities Evaluate -investigate and analyse a range of existing products evaluate their ideas and products against their own design criteria and consider the views of others to improve their work -understand how key events and individuals in design and technology have helped shape the world	and balance of different food and drink, as depicted in 'The Eat well plate'. Learn that I understand that to be active and healthy, food and drink are needed to provide energy for the body. Generate What will be the design criteria for a successful product? How will we ensure the criteria is met? What skills do we need to make this product? How will we ensure it will be appealing? **Gather information of the needs and wants of the individuals the products are intended for.** Planning and Design Recipe with small labelled diagram. Include: you will need list (which tools/equipment are needed to create this product?), numbered steps to take (basic) Make Evaluate each stage of the making process. Accurately use tools and equipment selected. Health and Safety: Children are taught to use the tools safely. They can explain why it is necessary to work safely and demonstrate this in their makes. This activity will need an oven to cook the food in. Evaluate Seek the views of others to improve the product. What did the parents think of the product? How would they change/alter the product? How does my product compare to existing products? How does my product meet the design criteria? **Consider the views of others.** **Please place WAGOLL photos in D&T folder** **Resources** – 6 rolls - https://www.bbcgoodfood.com/recipes/hedgehog-rolls -500g brown bread mix -25g butter -plain flower -12 raisins -mixing bowl -sift -digital scales -rolling pin -table knife -shape cutters Cucumber and yoghurt dip - https://www.onceuponachef.com/recipes/tzatziki.html -cucumber -spoons -Greek yoghurt -garlic -salt & pepper -mint **Risk assessments needed:** see cooking and nutrition risk assessment **Opportunities for differentiation** Support: writing on recipe sheet expectations and evaluation sentence stems or prompts – scribing. Break steps of making down into shorter tasks, provide a WAGOLL for the children to see, provide pre-cut pieces of food if too large, provide alternative equipment if needed. Challenge: more in depth recipe and evaluation sheet, cut parts down into smaller chunks, add in other ingredients that will compliment the foods, think about the presentation of the food. Opportunities to support SEND **Scaffolds**: modelling of practical activities, breaking tasks down into individual components, starting expositions at the point of the pupils' current understanding, combining verbal explanations with relevant graphics, pre-learning vocabulary. Please also refer to EHCP if child needs any support with practical tasks. Minimum learning for SEND: know that food is grown, reared and caught, basic knowledge of the Eatwell plate, food and drink provide energy for the body, range of techniques such as sifting, kneading and shaping, use digital scales with support. Minimum vocab for SEND: Grown, caught, reared, healthy, energy, kneading, moulding, baking

Year 4 Autumn 2	Unit: D&T – electrical systems End of unit outcome: to make a light up Christmas lantern
NC objectives	Key explicit knowledge and vocabulary
Design -use research and develop design criteria to inform the design of **innovative**, **functional**, **appealing** products that are fit for purpose, aimed at particular individuals or groups -generate, develop, model and communicate their ideas through discussion, **annotated sketches** and **computer-aided design** Make -select from and use a wider range of tools and equipment to perform practical tasks [for example, **cutting**, shaping, **joining** and **finishing**], accurately -select from and use a wider range of materials and components according to their **functional properties** and aesthetic qualities Evaluate	**Context of study** Previous and in conjunction to this unit, the children will have learned about electrical circuits in their science topics and will be able to identify the different parts of an electrical circuit, using key vocabulary. In this unit, the children will learn about the aesthetic appeal to products that light up, the different types of lighting there are, and how to make a complete circuit using a battery, a bulb, wires. The children will also learn about the need for resistors within an electrical circuit that has bulbs.     I know that statements I know that circuits with bulbs need a resistor and why I know what an LED is and why people use them I know that electricity flows in one direction I know how to work safely around electrical components I can statements I can construct a working circuit with one or more bulbs I can work safely around electrical components I can use tools safely I can create a light up Christmas lantern using my knowledge of electrical components I can design my lantern using CAD **DESIGN BRIEF** To make a (what) Christmas lantern for (who) themselves or family for (what purpose) a Christmas decoration **Key vocabulary** Illuminated, electrical circuit, components, resistor, incandescent, electrical terminal, insulated, CAD, engineer, inventor, design brief **Significant designer:** Nick Holonyack – engineer/inventor In 1962, Nick Holonyack, a consulting engineer for General Electric, invented the first visible light LED. It was a red LED and he had used gallium arsenide phosphide as a substrate for the diode. Holonyack has earned the honour of being called the "Father of the light-emitting diode" for his contributions. He also holds 41 patents and his other inventions include the laser diode and the first light dimmer. **What the steps in the D&T cycle will look like** Research and Investigate Research various uses of light e.g. signs, traffic lights, cars, decoration. Research different types of light displays e.g. bulbs, neon, lights hanging over signs. Research circuits and what is needed to complete a circuit – discuss components – **closed circuits focus**. Discuss different types of bulbs and introduce **Nick Holonyack**. Explain that we are going to create a Christmas lantern. Who will the product will be designed for and will it meet their needs? What similar products exist? Context of home. **Gather information of the needs and wants of the individuals the products are intended for.** Generate What is the purpose of this product? What will be the design criteria for a successful product? How will we ensure the criteria is met? How will we ensure the product will be functional? How will we ensure it will be appealing? What particular individuals or groups will this product be designed for? Generate own design criteria. Apply circuit learning to create a **mock up of electrical components** that will be placed in the

-investigate and analyse a range of **existing products** -evaluate their ideas and products against their own **design criteria** and consider the views of others to improve their work **-understand how key events and individuals in design and technology have helped shape the world** <u>Technical knowledge</u> -understand and use electrical systems in their products [for example**, series circuits incorporating switches, bulbs**, buzzers and motors]	product. Before design, the children **should experiment with using Tinkercad** in order to get used to the software. Use research for design ideas (computer based). Design must meet a range of requirements and be fit for purpose. **Create own design criteria with support.** <u>Planning and Design</u> Create a technical drawing of circuit that will be placed in the product. **Create a CAD** version of lantern design (**see Tinkercad help sheet**) Combine designs onto planning sheet and annotate (screenshot their designs and print). Which tools/equipment are needed for this product? Ensure children can make and explain design decisions considering availability of resources. **Include steps in chronological order on plan.** <u>Make</u> Evaluate each stage of the making process. Seek views of others. Adapt plans throughout. Accurately use tools and equipment selected. Health and Safety: Children are taught to use the tools safely. They can explain why it is necessary to work safely and demonstrate this in their makes. Ensure children can work through their plan in order. <u>Evaluate</u> Seek the views of others to improve the product. How would the change/alter the product? How does my product compare to existing products? How does my product meet the design criteria? **How has key events/individuals helped shape the world in this area of study?** What technical knowledge have we developed from this unit of work? Children should be able to discuss a range of existing products – from the past and present – remarking on who made them and why, where they were designed and made and what materials were used and why. **Consider the views of others.** **Resources** -1.5V power cells -battery packs/holders -insulated wires with crocodile clips -reels of insulated 2mm multicore wire - a variety of switches - MES screw-fit bulbs - bulb holders - 220 ohm resistors (or similar ohms) - 5mm LEDs - Wire strippers - electrical tape -coloured card -tracing paper -scissors -net to make 3D lantern **Risk assessments needed:** see electrical components risk assessment **Opportunities for differentiation** <u>Support</u>: writing on design sheet and evaluation sentence stems or prompts, discuss and direct towards materials that are appropriate, break steps of making down into shorter tasks, provide a WAGOLL for the children to see, provide template of lantern, CAD help sheet, provide pre-made circuit and lamp. **This unit could be completed as a collaborative project.** Peer support. <u>Challenge</u>: more in depth design and evaluation sheet e.g. add step-by-step instructions. Add extra bulbs to circuit, more complex lantern shapes, more complex lantern cut out designs, add extra detail to lanterns when using CAD. <u>Opportunities to support SEND</u> **Scaffolds**: modelling of practical activities, breaking tasks down into individual components, starting expositions at the point of the pupils' current understanding, combining verbal explanations with relevant graphics, pre-learning vocabulary. Minimum learning for SEND: circuits with bulbs need a resistor, how to work safely around electrical components, construct a working circuit, attempt to use CAD with support – reduce design criteria (basic shapes) Minimum vocab for SEND: electrical circuit, resistor, bulb, CAD Also please refer to EHCP if child needs any support with practical tasks. **Please place WAGOLL photos in D&T folder**

Year 4 Spring 1/2	Unit: History – Romans D&T: moving mechanisms and structures End of unit outcome: to make a model catapult
NC objectives	Key explicit knowledge and vocabulary
<u>Design</u> -use research and develop design criteria to inform the design of innovative, **functional**, appealing products that are fit for purpose, aimed at particular individuals or groups -generate, develop, model and communicate their ideas through discussion, **annotated Sketches** and **exploded diagrams**, <u>Make</u> -select from and use a wider range of tools and equipment to perform practical tasks e.g. **joining** accurately -select from and use a wider range of materials and components, including construction materials, according to their functional properties and aesthetic qualities <u>Evaluate</u> -investigate and analyse a range of existing products	**Context of study** Previous to this unit, in year 1, children will have learned about slider and lever mechanisms and made their own moving Christmas card. In year 3, they will have continued their learning of moving mechanisms with a focus on pneumatic systems, making a Christmas toy as a gift. This unit will focus on wheels and axels and the children will use their knowledge learned from structures to support them.  <u>I know statements</u> I know there were 3 different designs of Roman catapult (trebuchet, ballista and catapult) I know the invention of the catapult gave the Romans the ability to defeat more kingdoms. I know the wheel and axle is a type of simple machine used to make tasks easier when manipulating force <u>I can statements</u> I can assemble and join accurately I can assemble and join a wheel and axel that is fit for purpose  **<u>DESIGN BRIEF</u>** To make a (what) model catapult for (who) a Roman Legatus Legionis (for what reason) looking to invade more countries. **Key vocabulary** Motion, rotary, assemble, attach, fling, catapult, mechanism, users, critique  **What the steps in the D&T cycle will look like:** <u>Research and Investigate</u> Research how key events and in design and technology have helped shape the world (the invention of the Roman catapult). Investigate and analyse a range of existing products. Look at the 3 different types of catapults and evaluate effectiveness. Context of wider environment (history).  <u>Generate</u> What will be the design criteria for a successful product? How will we ensure the criteria is met? How will we ensure the product will be functional? How will we ensure it will be appealing? <u>Planning and Design</u> Create an **exploded diagram** of design (see example). Annotate designs. Which tools/equipment are needed to create this product? How to make a wheel and axel: https://www.youtube.com/watch?v=-iL3-eTwWBw

-evaluate their ideas and products against their own **design criteria** and consider the views of others to improve their work -understand how **key events** and individuals in design and technology have helped shape the world <u>Technical knowledge</u> -apply their understanding of how to strengthen, stiffen and reinforce more complex structures -understand and use mechanical systems in their products – **wheels and axels**	How to make a catapult (most children should complete the second catapult, the first can be suggested for children that may have difficulty): https://www.youtube.com/watch?v=WpLFC_SOpXs. Attach wheel and axel to catapult. <u>Make</u> Make the product – see above video links. Evaluate each stage of the making process. Seek views of others. Adapt plans throughout process and make final product. Accurately use tools and equipment selected. Health and Safety: Children are taught to use the tools safely. They can explain why it is necessary to work safely and demonstrate this in their makes. <u>Evaluate</u> Seek the views of others to improve the product. How would they change/alter the product? How does my product compare to existing (historical) products? How does my product meet the design criteria? How has key events helped shape the world in this area of study? What technical knowledge have we developed from this unit of work? Children should be able to discuss a range of existing products – from the past and present – remarking on who made them and why, where they were designed and made and what materials were used and why. Begin to consider whether materials used can be recycled or reused. **Consider the views of others.** **Resources** -lollypop sticks (lots!) - elastic bands (lots!) -bottle top (1 per catapult) -wooden sticks/dowell -plastic straws -cams -card -scissors -glue **Risk assessments needed:** no risk assessment needed. <u>Opportunities for differentiation</u> Support: writing on design sheet and evaluation sentence stems or prompts, discuss and direct towards techniques that are appropriate, break steps of making down into shorter tasks, provide a WAGOLL for the children to see, provide pre-made parts, simpler catapult design (see video) Challenge: more in depth design and evaluation sheet e.g. add step-by-step instructions. Challenge to enhance their designs to incorporate 2 arms, an extra set of wheels. The arm could rotate and face a different way. <u>Opportunities to support SEND</u> **Scaffolds**: modelling of practical activities, breaking tasks down into individual components, starting expositions at the point of the pupils' current understanding, combining verbal explanations with relevant graphics, pre-learning vocabulary. Minimum learning for SEND: the invention of the catapult gave the Romans the ability to defeat more kingdoms, assemble and join with support, assemble and join a wheel and axel Minimum vocab for SEND: motion, assemble, catapult, mechanism Please also refer to EHCP if child needs any support with practical tasks. **Please place WAGOLL photos in D&T folder**

Year 4 Summer 2	Unit: RSHE – keeping healthy D&T – cooking and nutrition End of unit outcome: to make a winter warmer - vegetable soup **Also see cooking progression document**
NC objectives	Key explicit knowledge and vocabulary
<u>Cooking and Nutrition</u> -understand and apply the principles of a healthy and varied diet -prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques -understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed. <u>Design</u> -use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups -generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design <u>Make</u>	**Context of study** Previous to this unit, the children will have had various experiences with food and nutrition in EYFS, such as using their kitchen role play area, baking a cake and making salt-dough hearts. In year 1, children will have learned about food sources, the 5 a day rule, and understand basic hygiene rules when cooking. They will also have learned a range of skills such as mixing, peeling and cutting. In year 2, children will have learned that food has to be farmed, grown elsewhere or caught, they have been introduced to the Eatwell plate, and prepared a simple dish without a heat source. Children have also learned skills such as measuring, snipping and spreading. In year 3, the children will have learned how to join and combine a range of ingredients, and be developing their understanding of how to use a range of techniques such as peeling, chopping, slicing, grating and mixing. In the other year 3 unit, the children learned that food can be grown, reared or caught, begun to understand how to prepare and cook a variety of predominantly savoury dishes safely and hygienically, including using a heat source, and begun to understand that to be active and healthy, food and drink are needed to provide energy for the body. Children will also develop their skills in measuring, sifting, kneading and shaping. In this unit, children will learn that food is grown, reared and caught in the UK, Europe and the wider world, that a healthy diet is made up from a variety and balance of different food and drink, as depicted in 'The Eat well plate', and know that to be active and healthy, food and drink are needed to provide energy for the body. They will learn skills such as pressing, peeling, measuring and snipping. **Please see cooking progression document for detailed learning and skills for this unit.** This unit is a precursor for more in-depth knowledge and understanding of cooking and nutrition and the development of a range of skills. **See cooking and nutrition progression document.** <u>I know statements</u> I know that food is grown, reared or caught in the UK and wider world I know that a healthy diet is made up from a variety and balance of different food and drink, as depicted in 'The Eat well plate'. I know that to be active and healthy, food and drink are needed to provide energy for the body. <u>I can statements</u> I can cook a variety of savoury dishes safely and hygienically including, where appropriate, the use of a heat source. I can use a range of techniques such as pressing, peeling, measuring and snipping **<u>DESIGN BRIEF</u>** To make a (what) vegetable soup for (who) themselves for (what reason) a winter warmer meal **Key vocabulary** Grown, reared, caught, savoury and sweet, heat source, taste, texture, smell, press, digital scales, snip, chop **What the steps in the D&T cycle will look like** <u>Research and Investigate</u> Who will the product will be designed for and will it meet their needs? What similar products exist? Taste test some tinned vegetable soups – grade out of 10. Context of home and wider environment. Learn that food is grown, reared and caught. Learn that a healthy diet is made 

-select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately -select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic Qualities <u>Evaluate</u> -investigate and analyse a range of existing products evaluate their ideas and products against their own design criteria and consider the views of others to improve their work -understand how key events and individuals in design and technology have helped shape the world	up from a variety and balance of different food and drink, as depicted in 'The Eat well plate'. Learn that to be active and healthy, food and drink are needed to provide energy for the body. <u>Generate</u> What will be the design criteria for a successful product? How will we ensure the criteria is met? What skills do we need to make this product? How will we ensure it will be appealing? <u>Planning and Design</u> Annotated diagram with you will need list (which tools/equipment are needed to create this product?), basic step by step instructions (numbered 1-5). Include 2 safety instructions. <u>Make</u> Evaluate each stage of the making process. Accurately use tools and equipment selected. Health and Safety: Children are taught to use the tools safely. They can explain why it is necessary to work safely and demonstrate this in their makes. This activity will need a hob to cook food on – see risk assessment. <u>Evaluate</u> Seek the views of others to improve the product. What do others think of the product? How would they change/alter the product? How does my product compare to existing products? How does my product meet the design criteria? **Consider the views of others.** **Resources** -garlic -garlic press -swivel peeler -carrots -spoons -digital scales -grater -scissors -cabbage -knives -canned potatoes -parsnips -onion -vegetable stock cubes -pans -kettle **See saved vegetable soup recipe – extra ingredients have been added to cover a range of skills** **Risk assessments needed:** see cooking and nutrition risk assessment **Opportunities for differentiation** <u>Support</u>: writing on recipe sheet expectations and evaluation sentence stems or prompts – scribing. Break steps of making down into shorter tasks, provide a WAGOLL for the children to see, provide pre-cut pieces of food if too large, provide alternative equipment if needed. <u>Challenge</u>: more in depth recipe and evaluation sheet, cut parts down into smaller chunks, add in other ingredients that will compliment the foods, think about the presentation of the food. <u>Opportunities to support SEND</u> **Scaffolds**: modelling of practical activities, breaking tasks down into individual components, starting expositions at the point of the pupils' current understanding, combining verbal explanations with relevant graphics, pre-learning vocabulary. Please also refer to EHCP if child needs any support with practical tasks. Minimum learning for SEND: food is grown, reared or caught, basic knowledge of a balance of the Eatwell plate, food and drink provide energy for the body, techniques such as pressing, peeling, measuring and snipping with support. Minimum vocab for SEND: Grown, reared, caught, press, scales, snip, chop

Year 5 Autumn 2	Unit: D&T - textiles End of unit outcome: to make a Christmas themed drawstring bag
NC objectives	Key explicit knowledge and vocabulary
Design -use research and develop design criteria to inform the design of innovative, **functional**, appealing products that are **fit for purpose**, aimed at particular individuals or groups -generate, develop, model and communicate their ideas through discussion, **annotated sketches**, prototypes, **pattern pieces** Make -select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, **joining** and finishing], accurately -select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according	**Context of study** This learning follows on from EYFS where the children will have experimented with safely using a needle for a basic sewing project. In Y2, the children will have then learned how to do the running stitch and the over stitch by making a basic shaped Christmas bauble. In this unit of study, the children will learn the back stitch, whip stitch, straight stitch and how to add on applique to their product. This unit is a precursor to learning in year 6, where the children will learn how to do the zig-zag stitch and different methods of sewing on sequins. The focus of this unit is that the product will be **functional** and **fit for purpose**, which means the functionality of the product must be achieved in some way. In particular, students should focus on the ways the pieces of material are **joined** together. Students will have also not encountered adding on **applique** before so this should be a focus as a new skill. I know statements I know what cotton is and where it is grown I know that products made from textiles are made from synthetic, plant or animal fibres. I know that different textiles have different properties I know the different ways to join materials in textiles I can statements I can sew on applique to my product I can use the back stitch, whip stitch and straight stitch I can create pattern pieces I can **join** two pieces of material together to give a clean finish I can make a bag that is **functional** and **fit for purpose**   **DESIGN BRIEF** To make a (what) Christmas drawstring bag for (who) a friend or family member for (what purpose) gifts to be placed inside. **Key vocabulary** Synthetic, manufacture, garments, pattern pieces, hem, seams, applique, functionality, designer, innovative, scrutinise **Significant designer -** Kenzō Takada - designer Growing up in Tokyo, it was taboo for a man to work in the fashion industry; Takada wasn't even allowed to attend design school. But that did not stop him from moving to Paris and starting his own brand. From there, cultural norms were not the only thing Takada disrupted. He created ready-to-wear collections 45 years before it became widely adopted within the industry. He was also the first designer to have his ground-breaking, over-the-top floral patterns splashed across the European-dominated couture space at the time. **What the steps in the D&T cycle will look like** Research and Investigate Investigate uses of various textile products including bags. Who will the product will be designed for and will it meet their needs? What similar products exist? Have a drawstring bag available for the children to look at. Research various garments and the different methods of joining fabric together. Introduce significant designer: Thomas English Saint and how he helped shape the textiles industry. Discuss impact on today's textiles industry. Research bag designers and aesthetics within bag design. Context the product will relate to: industry. **Carry out research, such as surveys, interviews and questionnaires to identify needs, wants, preferences and values of individuals the product is intended for.**

to their functional properties and aesthetic qualities Evaluate -investigate and analyse a range of existing products -evaluate their ideas and products against their own design criteria and consider the views of others to improve their work -understand how key events and individuals in design and technology have helped shape the world	Generate What will be the design criteria for a successful product? How will we ensure the criteria is met? How will we ensure the product will be functional? How will we ensure it will be appealing? What particular individuals or groups will this product be designed for? Discuss new learning: back stitch, whip stitch, straight stitch and applique. Practise new learning using scrap pieces of material. Develop a simple design specification to guide their thinking. **Children to create their own design criteria.** Planning and design Create an **annotated sketch, with measurements, from different perspectives.** Which tools/equipment are needed to create this product? Which materials will be most effective? Include annotations that explain the stitch that they are going to use for each part of the product and label the different materials. Create **pattern pieces** for their product ready for making. **Take into account constraints such as time, resources and cost.** Formulate step-by-step plans as a guide to making. Ensure children take a user's view into account when designing. Make Evaluate each stage of the making process. Seek views of others. Adapt plans when the children encounter problems and discuss solutions with peers. Accurately use tools and equipment selected. Health and Safety: Children are taught to use the tools safely. They can explain why it is necessary to work safely and demonstrate this in their makes. Ensure the children can explain how product will appeal to an audience. Children should mainly accurately measure, mark out, cut and shape. Evaluate Seek the views of others to improve the product. How would they change/alter the product? How does my product compare to existing products? How does my product meet the design criteria? **How has key events/individuals helped shape the world in this area of study?** What technical knowledge have we developed from this unit of work? Consider how much existing products cost to make, how innovative products are, how sustainable the materials are, and what impact products have beyond their intended purpose. Evaluate their ideas and product from the perspective of both the designer and the consumer. **Resources** -examples of different garments to analyse -felt (various colours) -thread (various colours) -scissors -card for pattern pieces -ribbon (long lengths – Christmas patterned - buttons -magnifying glasses -scrap material -dressmakers pencils -scrap fabric -drawstring bag example **Risk assessments**: see sewing, needlework and fabric risk assessment Opportunities for differentiation Support: writing on design sheet and evaluation sentence stems or prompts, discuss and direct towards sewing techniques that are appropriate, break steps of making down into shorter tasks, provide a WAGOLL for the children to see, provide pre-made pattern pieces or templates, simpler applique designs. Challenge: more in depth design and evaluation sheet e.g. add step-by-step instructions, challenge to make the finishing on the product as neat as possible e.g. visible thread neat– could suggest specific stitches that would leave the neatest finish, add more complicated applique to product. Opportunities to support SEND **Scaffolds**: modelling of practical activities, breaking tasks down into individual components, starting expositions at the point of the pupils' current understanding, combining verbal explanations with relevant graphics, pre-learning vocabulary. Minimum learning and SEND: what cotton is and where it comes from, textiles are made from synthetic, plant or animal fibres, join two pieces of material together, use a pre-made pattern piece, use a preferred stitch independently, sew on basic applique. Minimum vocab for SEND: pattern piece, applique, seams Please also refer to EHCP if child needs any support with practical tasks. **Please place WAGOLL photos in D&T folder**

Year 5 Spring 1/2	Unit: History – Ancient Egypt – alternate years D&T – structures (woodwork) End of unit outcome: to make an Egyptian trinket box
NC objectives	Key explicit knowledge and vocabulary
Design -use research and develop design criteria to inform the design of innovative, **functional**, **appealing** products that **are fit for purpose**, aimed at particular individuals or groups -generate, develop, model and communicate their ideas through **discussion**, annotated sketches, cross-sectional and **exploded diagrams**, prototypes, pattern pieces and computer-aided design Make -select from and use a wider range of tools and equipment to perform practical tasks [for example, **cutting**, **shaping**, **joining** and **finishing**], accurately -select from and use a wider range of materials and components, including **construction materials**, textiles and ingredients, according to their **functional properties** and aesthetic qualities Evaluate	**Context of study** Previous to this study, children will have used junk modelling materials in EYFS during free-structured and adult led play. They will have made their own structures using building materials such as Lego and they will have learned basic ways of joining materials together. In year 1, children will have learned how to join basic shapes, on a square base, such as squares and rectangles, together to create a model of Big Ben. In this unit, the children will have been given some choice over materials and will have been able to identify that materials must be strong for a structure to stand. In year 3, children have looked at alternative ways to join materials such as using string to tie pieces together, and learn how to make a framework for a different base, such as a circle. The children have also learned how to create a cone shaped roof for their structure. In this unit, children will further develop their structure skills and move their learning to woodwork. They will develop their cutting and measuring skills in order to make an Egyptian style trinket box. This unit is a precursor to learning in year 6, where they will create a structure from MDF that is strong enough to withhold added components. They will develop their understanding of how to make their structures sturdy and strong, and add their knowledge of electrical components to the design. Children will use tools and equipment safely and develop skills in cutting, joining, shaping and finishing.  I know statements I know that my structure needs to be made of suitable material (in this case, MDF). I know that my structure needs to be sturdy and strong to withstand the weight of the contents inside my trinket box. I know that my trinket box needs to be square (measured and cut accurately). I know that my trinket box needs to be 'locked'. I can statements I can use a variety of tools and equipment, safely, to complete the DT task. I can use suitable cutting, joining, shaping and finishing techniques in my DT task which is fit for purpose. I can listen carefully to instructions in order to complete my DT task in a safe manner. **DESIGN BRIEF** To make an (what) Egyptian jewellery box for (who) themselves or someone else as a gift to (what purpose) store jewellery or small items inside **Key vocabulary** design brief, customer, purpose, cutting, shaping, joining, finishing techniques, complex structure, butt joint, brackets, supports, dowel, lock, hinge, measuring, accuracy, finesse

-investigate and analyse a range of existing products -evaluate their ideas and products against their own **design criteria** and consider the **views of others** to improve their work <u>Technical knowledge</u> -apply their understanding of how to **strengthen**, **stiffen** and **reinforce** more complex structures	**What the steps in the D&T cycle will look like** <u>Research and Investigation</u> Most of the general knowledge around Egyptian Jewellery boxes will be taught within the history learning. Who will the product will be designed for and will it meet their needs? What similar products exist (or previously existed)? Context of history. Children will then carry out research into the preferences of others in order to feed into design. <u>Generate</u> What will be the design criteria for a successful product? How will we ensure the criteria is met? How will we ensure the product will be functional? How will we ensure it will be appealing? What particular individuals or groups will this product be designed for? Develop a simple design specification to guide their thinking. <u>Planning and Design</u> Create an exploded diagram from different perspectives (views). Annotate designs. Which tools/equipment are needed to create this product? <u>Make</u> The make will be supported by HeppDT. Evaluate each stage of the making process. Seek views of others. Accurately use tools and equipment selected. Health and Safety: Children are taught to use the tools safely. They can explain why it is necessary to work safely and demonstrate this in their makes. <u>Evaluate</u> Seek the views of others to improve the product. How would they change/alter the product? How does my product compare to existing (historical) products? How does my product meet the design criteria? What technical knowledge have we developed from this unit of work? **Resources** Resources provided for by HeppDT **Risk assessments needed:** HeppDT risk assessment. Also see woodwork risk assessment. **Opportunities for differentiation** <u>Support</u>: writing on design sheet and evaluation sentence stems or prompts, discuss and direct towards materials that are appropriate, break steps of making down into shorter tasks, provide a WAGOLL for the children to see. <u>Challenge</u>: more in depth design and evaluation sheet e.g., add step-by-step instructions, add extra detail and consider aesthetics <u>Opportunities to support SEND</u> **Scaffolds**: modelling of practical activities, breaking tasks down into individual components, starting expositions at the point of the pupils' current understanding, combining verbal explanations with relevant graphics, pre-learning vocabulary. Minimum learning for SEND: measuring and cutting a 'square' shape, using tools and equipment safely, selecting suitable materials. Minimum vocab for SEND: design brief, butt joint, dowel lock, hinge, measuring Also please refer to EHCP if child needs any support with practical tasks. **Please place WAGOLL photos in D&T folder**

Year 5 Summer 2	Unit: RSHE – keeping healthy D&T – cooking and nutrition End of unit outcome: to make a healthy pudding - cheese and vegetable muffins **Also see cooking progression document**
NC objectives	Key explicit knowledge and vocabulary
<u>Cooking and Nutrition</u> -understand and apply the principles of a healthy and varied diet -prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques -understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed. <u>Design</u> -use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups -generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern	**Context of study** Previous to this unit, the children will have had various experiences with food and nutrition in EYFS, such as using their kitchen role play area, baking a cake and making salt-dough hearts. In year 1, children will have learned about food sources, the 5 a day rule, and understand basic hygiene rules when cooking. They will also have learned a range of skills such as mixing, peeling and cutting. In year 2, children will have learned that food has to be farmed, grown elsewhere or caught, they have been introduced to the Eatwell plate, and prepared a simple dish without a heat source. Children have also learned skills such as measuring, snipping and spreading. In year 3, the children will have learned how to join and combine a range of ingredients, and be developing their understanding of how to use a range of techniques such as peeling, chopping, slicing, grating and mixing. In the other year 3 unit, the children learned that food can be grown, reared or caught, begun to understand how to prepare and cook a variety of predominantly savoury dishes safely and hygienically, including using a heat source, and begun to understand that to be active and healthy, food and drink are needed to provide energy for the body. Children will also develop their skills in measuring, sifting, kneading and shaping. In year 4, children learned that food is grown, reared and caught in the UK, Europe and the wider world, that a healthy diet is made up from a variety and balance of different food and drink, as depicted in 'The Eat well plate', and know that to be active and healthy, food and drink are needed to provide energy for the body. They have learned skills such as pressing, peeling, measuring and snipping. In this unit, children will learn that seasons may affect the food available, how food is processed into ingredients that can be eaten or used in cooking, that recipes can be adapted to change appearance, taste, texture and aroma, and that different food and drink contain different substances – nutrients, water and fibre – that are needed for health. They will learn skills such as snipping and more accurate measuring and mixing. **Please see cooking progression document for detailed learning and skills for this unit.** This unit is a precursor for more in-depth knowledge and understanding of cooking and nutrition and the development of a range of skills. **See cooking and nutrition progression document.** <u>I know statements</u> I know that seasons may affect the food available. I know food is processed into ingredients that can be eaten or used in cooking. I know that recipes can be adapted to change appearance, taste, texture and aroma (herbs) I know that that different food and drink contain different substances – nutrients, water and fibre – that are needed for health. <u>I can statements</u> I can prepare and cook a variety of predominantly savoury dishes safely and hygienically including the use of I can use a range of techniques such as snipping and accurately measure and mix.  **<u>DESIGN BRIEF</u>** To make a (what) cheese and vegetable muffin for (who) themselves for (what purpose) a healthy pudding **Key vocabulary** Grown, reared, caught, seasonality, processed, healthy and varied diet, hygienically, aroma, nutrients, decisions **What the steps in the D&T cycle will look like**

pieces and computer-aided design Make -select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately -select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic Qualities Evaluate -investigate and analyse a range of existing products evaluate their ideas and products against their own design criteria and consider the views of others to improve their work -understand how key events and individuals in design and technology have helped shape the world	Research and Investigate Who will the product will be designed for and will it meet their needs? What similar products exist? Taste test some cheese and vegetable muffins – grade out of 10. Context of home and wider environment. Learn that seasons may affect the food available. Learn how food is processed into ingredients that can be eaten or used in cooking. Learn that recipes can be adapted to change appearance, taste, texture and aroma (herbs). Learn that that different food and drink contain different substances – nutrients, water and fibre – that are needed for health. **Carry out research, such as surveys, interviews and questionnaires to identify needs, wants, preferences and values of individuals the product is intended for.** Generate What will be the design criteria for a successful product? How will we ensure the criteria is met? What skills do we need to make this product? How will we ensure it will be appealing? Develop a simple design specification to guide their thinking Planning and Design Ingredients & instructions. Include: you will need list (which tools/equipment are needed to create this product?), step by step instructions (basic and numbered) Make Evaluate each stage of the making process. Accurately use tools and equipment selected. Health and Safety: Children are taught to use the tools safely. They can explain why it is necessary to work safely and demonstrate this in their makes. This activity will need a hob to cook food on – see risk assessment. Evaluate Seek the views of others to improve the product. What do others think of the product? How would they change/alter the product? How does my product compare to existing products? How does my product meet the design criteria? **Resources** -basil leaves -scissors -swivel peel -carrots -measuring jugs -grater -grated cheese -knife -swivel peeler -sweetcorn -eggs -milk -red pepper -baby spinach -salt & pepper **Risk assessments needed**: see cooking and nutrition risk assessment **Opportunities for differentiation** Support: writing on recipe sheet expectations and evaluation sentence stems or prompts – scribing. Break steps of making down into shorter tasks, provide a WAGOLL for the children to see, provide pre-cut pieces of food if too large, provide alternative equipment if needed. Challenge: more in depth recipe and evaluation sheet, cut parts down into smaller chunks, add in other ingredients that will compliment the foods, think about the presentation of the food. Opportunities to support SEND **Scaffolds**: modelling of practical activities, breaking tasks down into individual components, starting expositions at the point of the pupils' current understanding, combining verbal explanations with relevant graphics, pre-learning vocabulary. Please also refer to EHCP if child needs any support with practical tasks. Minimum learning for SEND: know that seasons affect food available, know that recipes can be adapted, measuring and mixing accurately Minimum vocab for SEND: seasonality, nutrients, grown, reared, caught **Please place WAGOLL photos in D&T folder**

Year 6 Autumn 1	Unit: Geography – Brazil D&T – textiles End of unit outcome: to make a Rio Carnival mask
NC objectives	Key explicit knowledge and vocabulary
<u>Design</u> -use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups -generate, develop, model and communicate their ideas through discussion, **exploded diagrams and pattern pieces** <u>Make</u> -select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and **finishing**], accurately -select from and use a wider range of materials and components, including textiles according to their functional properties and aesthetic Qualities <u>Evaluate</u>	**Context of study** This unit follows learning in year 2, where the children will have made Christmas baubles using the running stitch and the over stitch. It also follows learning in year 5 where the children will have made drawstring bags and learned how to do the back stitch, whip stitch, straight stitch and how to add basic applique. In this unit, the children will briefly re-cap the different types of stitches and then learn how to do the zig-zag stitch and different methods of adding sequins. The children will then decide on which stitches to use depending on level of difficulty and appropriateness for their design. With the children having experienced different stitches and materials throughout school, the focus in this unit should be the **finishing** of the product. <u>I know statements</u> I know that sequins are used to decorate apparel to enhance appearance and show I know that different stitches have different aesthetic appearances <u>I can statements</u> I can use scissors, needles and other tools safely and accurately I can stitch using the zig-zag stitch I can sew on sequins using different methods for different finishes  **<u>DESIGN BRIEF</u>** To make a (what) Rio Carnival mask for (who) themselves for (what purpose) their Brazil theme day  **Key vocabulary** function, visual appeal, design criteria, zig-zag stitch, finishing, aesthetic, embellish, embroidery **What the steps in the D&T cycle will look like:** <u>Research and Investigate</u> A lot of this research will have been covered during the geography unit when learning about Rio Carnival. The children should know about the different outfits and accessories associated with Rio Carnival and the reasons behind wearing the colourful masks. Look at various existing carnival masks and discuss similarities and differences. Purpose of activity is to host a Brazil theme day including wearing carnival masks. Context of wider environment. Learn 2 new skills: zig-zag stitch and methods of sewing sequins onto fabric. https://www.youtube.com/watch?v=8HBm0LQNURo <u>Generate</u> What will be the design criteria for a successful product? Discuss bright colours, sequins and feathers etc. How will we ensure the criteria is met? How will we ensure the product will be functional? Discuss accurately measuring for the size and holes for the eyes, the use of elastic to hold it in place. How will we ensure it will be appealing? Try to focus on bright colours, the use of sequins and feathers. No other applique is needed for this design. Discuss ways of making the product have a clean **finish**. Practise new skills: sequins and zig-zag stitch. Develop a simple design specification to guide their thinking

-investigate and analyse a range of existing products -evaluate their ideas and products against their own design criteria and consider the views of others to improve their work	Planning and Design Create a technical drawing, with measurements, in an **exploded diagram**. Annotate designs with materials used and stitches. Create **pattern pieces**, measured accurately, ready for use with their material. Which tools/equipment are needed to create this product? Provide a range of colours for the children to select from. **Take into account constraints such as time, resources and cost.** Formulate step-by-step plans as a guide to making. Make Evaluate each stage of the making process. Seek views of others and adapt as they make. Ensure that the children accurately and safely use tools and equipment selected. Evaluate Seek the views of others to improve the product. Discuss how the children would change/alter the product? How does my product compare to existing products? How does my product meet the design criteria? What technical knowledge have we developed from this unit of work? Consider how much existing products cost to make, how innovative products are, how sustainable the materials are, and what impact products have beyond their intended purpose. **Resources** -felt (various bright colours) -scissors -sewing needles -thread (various bright colours) -sequins (various) -feathers (various) -mask template (pattern piece to make) -elastic -small beads (for sequin threading, watch video) **Risk assessments**: see sewing, needlework and fabric risk assessment Opportunities for differentiation Support: writing on design sheet and evaluation sentence stems or prompts, discuss and direct towards sewing techniques that are appropriate, break steps of making down into shorter tasks, provide a WAGOLL for the children to see, provide pre-made pattern pieces or templates. Challenge: more in depth design and evaluation sheet e.g. add step-by-step instructions, challenge to make the finishing on the product as neat as possible e.g. visible thread neat– could suggest specific stitches that would leave the neatest finish. Opportunities to support SEND **Scaffolds**: modelling of practical activities, breaking tasks down into individual components, starting expositions at the point of the pupils' current understanding, combining verbal explanations with relevant graphics, pre-learning vocabulary. Minimum learning for SEND: understanding of aesthetic appearances of different stitches, using needles and other tools safely, sometimes with support, able to sew on a sequin using their preferred method Minimum vocab for SEND: design criteria, embellish, zig-zag stitch Please also refer to EHCP if child needs any support with practical tasks. **Please place WAGOLL photos in D&T folder**

Year 6 Autumn 2	Unit: D&T - structures End of unit outcome: to make a wooden Christmas countdown calendar that includes and electrical circuit
NC objectives	Key explicit knowledge and vocabulary
<u>Design</u> -use research and develop design criteria to inform the design of **innovative**, **functional**, **appealing** products that are **fit for purpose**, **aimed at particular individuals or groups** -generate, develop, model and communicate their ideas through discussion and **detailed annotated sketches** <u>Make</u> -select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately -select from and use a wider range of **materials** and **components**, including construction materials, according to their functional properties and aesthetic qualities <u>Evaluate</u>	**Context of study** Previous to this study, children will have used junk modelling materials in EYFS during free-structured and adult led play. They will have made their own structures using building materials such as Lego and they will have learned basic ways of joining materials together. In year 1, children will have learned how to join basic shapes, on a square base, such as squares and rectangles, together to create a model of Big Ben. In this unit, the children will have been given some choice over materials and will have been able to identify that materials must be strong for a structure to stand. In year 3, children have looked at alternative ways to join materials such as using string to tie pieces together, and learn how to make a framework for a different base, such as a circle. The children have also learned how to create a cone shaped roof for their structure. In year 5, the children learned how to cut and join pieces of wood to make an Egyptian trinket box. In this unit, children will create a structure from MDF that is strong enough to withhold added components. They will develop their understanding of how to make their structures sturdy and strong, and add their knowledge of electrical components to the design. Children will use tools and equipment safely and develop skills in cutting, joining, shaping and finishing. <u>I know statements</u> I know that LED lights can be placed in a closed or series circuit. I know that my structure needs to be made of suitable material (in this case, MDF). I know that my structure needs to be sturdy and strong to withstand the weight of extra components. I know that my calendar has to be created in a logical manner. <u>I can statements</u> I can use a variety of tools and equipment, safely, to complete the DT task. I can use suitable cutting, joining, shaping and finishing techniques in my DT task which is fit for purpose. I can listen carefully to instructions in order to complete my DT task in a safe manner.  **<u>DESIGN BRIEF</u>** To make a (what) wooden structure in the theme of a Christmas calendar for (who) themselves or as a gift for (what purpose) the countdown to Christmas **Key vocabulary** design brief, customer, purpose, cutting, shaping, joining, finishing techniques, LED, battery source, electrical circuit, complex structure, butt joint, measuring, accuracy, finesse **What the steps in the D&T cycle will look like** <u>Research and Investigate</u> Look at various countdown calendars, including electronic ones. What products already exist? When were they developed and by which designers? Discuss aesthetics of designs and which ones are more appealing to a wider audience. Explain that we will be making our own countdown calendars. Who will the product will be designed for and will it meet their needs? **Carry out research, such as surveys,**

-investigate and analyse a **range of existing products** -evaluate their ideas and products against their own **design criteria** and consider the **views of others** to improve their work <u>Technical knowledge</u> -apply their understanding of how to **strengthen**, stiffen and reinforce more **complex structures** -understand and use electrical systems in their products [for example**, series circuits** incorporating switches, **bulbs**, buzzers and motors]	**interviews and questionnaires to identify needs, wants, preferences and values of individuals the product is intended for.** Context of home. <u>Generate</u> Learn about LED strips and how their circuit is a **series circuit**. Develop a simple design specification to guide their thinking. **Must include lighting up using an LED strip. Must be shape above.** What will be the design criteria for a successful product? How will we ensure the criteria is met? How will we ensure the product will be functional? How will we ensure it will be appealing? **Use research of user's individual needs, wants, requirements for design.** <u>Planning and Design</u> Create a **detailed** annotated sketch of their design, Including the use of an LED within a circuit. Draw on market research to inform design. Formulate step-by-step plans as a guide to making. Ensure children label their sketches, include a resources list, and create a step-by-step guide on what to do. **Research cost of items needed and include on planning.** <u>Make</u> The make will be supported by HeppDT. Ensure children understand health and safety and can explain why they must keep themselves and others safe around certain equipment. Ensure children are actively evaluating each stage of the making process. Seek views of others. <u>Evaluate</u> **Produce detailed analysis of product.** Seek the views of others to improve the product. How would they change/alter the product? What technical knowledge have we developed from this unit of work? How does my product compare to existing products? How does my product meet the design criteria? **Take into account constraints such as time, resources and cost. Consider how much existing products cost to make, how innovative products are, how sustainable the materials are, and what impact products have beyond their intended purpose. Evaluate their ideas and product from the perspective of both the designer and the consumer.** **Resources** Resources for this unit are supplied for by Hepp DT **Risk assessments needed:** risk assessment provided by HeppDT. Also see woodwork risk assessment. **Opportunities for differentiation** <u>Support</u>: writing on design sheet and evaluation sentence stems or prompts, discuss and direct towards materials that are appropriate, break steps of making down into shorter tasks, provide a WAGOLL for the children to see. <u>Challenge</u>: more in depth design and evaluation sheet e.g., add step-by-step instructions. Add extra bulbs to circuit, more complex design shapes, add extra detail and consider aesthetics <u>Opportunities to support SEND</u> **Scaffolds**: modelling of practical activities, breaking tasks down into individual components, starting expositions at the point of the pupils' current understanding, combining verbal explanations with relevant graphics, pre-learning vocabulary. Minimum learning for SEND: knowledge of suitable materials, use a variety of tools safely, sometimes with support, carefully follows instructions, can cut, join, shape and finish with support Minimum vocab for SEND: butt joint, measuring, cutting, joining, electrical circuit Also please refer to EHCP if child needs any support with practical tasks. **Please place WAGOLL photos in D&T folder**

Year 6 Summer 2	Unit: RSHE – keeping healthy D&T – cooking and nutrition End of unit outcome: to make a quick and easy tea - basil, nutmeg, courgette and pesto pasta **Also see cooking progression document**
NC objectives	Key explicit knowledge and vocabulary
<u>Cooking and Nutrition</u> -understand and apply the principles of a healthy and varied diet -prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques -understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed. <u>Design</u> -use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups -generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design <u>Make</u>	**Context of study** Previous to this unit, the children will have had various experiences with food and nutrition in EYFS, such as using their kitchen role play area, baking a cake and making salt-dough hearts. In year 1, children will have learned about food sources, the 5 a day rule, and understand basic hygiene rules when cooking. They will also have learned a range of skills such as mixing, peeling and cutting. In year 2, children will have learned that food has to be farmed, grown elsewhere or caught, they have been introduced to the Eatwell plate, and prepared a simple dish without a heat source. Children have also learned skills such as measuring, snipping and spreading. In year 3, the children will have learned how to join and combine a range of ingredients, and be developing their understanding of how to use a range of techniques such as peeling, chopping, slicing, grating and mixing. In the other year 3 unit, the children learned that food can be grown, reared or caught, begun to understand how to prepare and cook a variety of predominantly savoury dishes safely and hygienically, including using a heat source, and begun to understand that to be active and healthy, food and drink are needed to provide energy for the body. Children will also develop their skills in measuring, sifting, kneading and shaping. In year 4, children learned that food is grown, reared and caught in the UK, Europe and the wider world, that a healthy diet is made up from a variety and balance of different food and drink, as depicted in 'The Eat well plate', and know that to be active and healthy, food and drink are needed to provide energy for the body. They have learned skills such as pressing, peeling, measuring and snipping. In year 5, children learned that seasons may affect the food available, how food is processed into ingredients that can be eaten or used in cooking, that recipes can be adapted to change appearance, taste, texture and aroma, and that different food and drink contain different substances – nutrients, water and fibre – that are needed for health. They will learn skills such as snipping and more accurate measuring and mixing. In this unit, children will recap previous learning in year 5, and also learn the importance of correct storage and handling of ingredients, how to create and refine recipes, including healthy seasonal ingredients, methods, cooking times and temperatures, and be able to measure accurately and calculate ratios of ingredients to scale up or down from a recipe. They will also improve their skills in measuring, grating and cutting. **Please see cooking progression document for detailed learning and skills for this unit.** This unit is a precursor for more in-depth knowledge and understanding of cooking and nutrition and the development of a range of skills.  <u>I know statements</u> I know that seasons may affect the food available. I know how food is processed into ingredients that can be eaten or used in cooking. I know the importance of correct storage and handling of ingredients. I know different food and drink contain different substances – nutrients, water and fibre – that are needed for health. <u>I can statements</u> I can create and refine recipes, including healthy seasonal ingredients, methods, cooking times and temperatures. I can measure accurately and calculate ratios of ingredients to scale up or down from a recipe. I can improve my skills in measuring, grating and cutting

-select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately -select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic Qualities <u>Evaluate</u> -investigate and analyse a range of existing products evaluate their ideas and products against their own design criteria and consider the views of others to improve their work -understand how key events and individuals in design and technology have helped shape the world	I can prepare and cook a variety of predominantly savoury dishes safely and hygienically including the use of a heat source. **<u>DESIGN BRIEF</u>** To make a (what) pasta dish for (who) themselves for (what purpose) a quick and easy tea time meal **Key vocabulary** Seasonality, processed, hygienically, substances, nutrients, temperatures, ratios, scale, gauge, risk taking **What the steps in the D&T cycle will look like** <u>Research and Investigate</u> Who will the product will be designed for and will it meet their needs? What similar products exist? Taste test some pasta dishes – grade out of 10. Context of home and wider environment. Learn that seasons may affect the food available. Learn how food is processed into ingredients that can be eaten or used in cooking. Learn the importance of correct storage and handling of ingredients. Learn that that different food and drink contain different substances – nutrients, water and fibre – that are needed for health. **Carry out research, such as surveys, interviews and questionnaires to identify needs, wants, preferences and values of individuals the product is intended for.** <u>Generate</u> What will be the design criteria for a successful product? How will we ensure the criteria is met? What skills do we need to make this product? How will we ensure it will be appealing? Develop a simple design specification to guide their thinking <u>Planning and Design</u> Recipe & instructions. Include: you will need list (which tools/equipment are needed to create this product?), step by step instructions (numbered if makes it easier – basic) <u>Make</u> Evaluate each stage of the making process. Accurately use tools and equipment selected. Health and Safety: Children are taught to use the tools safely. They can explain why it is necessary to work safely and demonstrate this in their makes. This activity will need a hob to cook food on – see risk assessment. <u>Evaluate</u> Seek the views of others to improve the product. What do others think of the product? How would they change/alter the product? How does my product compare to existing products? How does my product meet the design criteria? Evaluate their ideas and product from the perspective of both the designer and the consumer. **Recipe adaptation and refinement by making changes that affect the appearance, taste, texture and aroma of a dish. Children to edit their original recipe to refine/improve.** **Resources** -garlic -basil -parmesan cheese -pine nuts -virgin olive oil -lemon juice -pasta -salt & pepper -bowls -spoons -garlic crusher -scissors -pestle & mortar -chopping board -knives -spoons -digital & analogue scales -nutmeg grinder -nutmeg -courgette **Some ingredients have been added to the recipe (see shared folder) in order to cover more skills** **Risk assessments needed:** see cooking and nutrition risk assessment

	Opportunities for differentiation Support: writing on recipe sheet expectations and evaluation sentence stems or prompts – scribing. Break steps of making down into shorter tasks, provide a WAGOLL for the children to see, provide pre-cut pieces of food if too large, provide alternative equipment if needed. Challenge: more in depth recipe and evaluation sheet, cut parts down into smaller chunks, add in other ingredients that will complement the foods, think about the presentation of the food. Opportunities to support SEND **Scaffolds**: modelling of practical activities, breaking tasks down into individual components, starting expositions at the point of the pupils' current understanding, combining verbal explanations with relevant graphics, pre-learning vocabulary. Please also refer to EHCP if child needs any support with practical tasks. Minimum learning for SEND: knowledge of how food is processed, correct storage and handling of foods, food and drink contain different substances – nutrients, water and fibre, measuring accurately, using a range of techniques for cooking e.g., grating and cutting Minimum vocab for SEND: processed, nutrients, temperatures, ratios