Subject Curriculum Overview

DT

Southwater Infant Academy

Planning and Progression

‘Growing, Learning and Succeeding Together’

Curriculum Statement

Intent

At The Southwater Infant Academy design and technology is inspiring, rigorous and practical. It encourages children to think creatively, solve problems and work collaboratively. We believe that children learn best when they are immersed in their learning, when they can make meaningful links between different areas of understanding in a variety of contexts. At The Southwater Infant Academy we incorporate a creative, cross curricular approach to the teaching of design and technology, linking where possible to our 'Themed Units'. In design and technology, children are required to draw upon skills previously taught in mathematics, art, science, PSHE and computing to acquire a broad range of subject knowledge.

Design and technology gives children the opportunity to develop skills, knowledge and understanding of designing and making functional products. At The Southwater Infant Academy we feel it is vital to nurture creativity and innovation through design, and through the exploration and evaluation of past and present design and technology. This enables children to develop a critical understanding of its impact on daily life and the wider world. High quality design and technology education makes an essential contribution to the creativity, culture, wealth and wellbeing of the nation.

Implementation

Our design and technology curriculum teaches children the knowledge, understanding and skills needed to engage in the interactive process of designing and making through a variety of creative and practical activities. At The Southwater Infant Academy children's skills and knowledge are developed across four key areas: structure, mechanisms, cooking and nutrition and textiles. Each of these act as the focus for a topic. When designing and making we have four strands that run through each theme:

Designing

- 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.

Making

- Select from and use a range of tools and equipment to perform practical tasks, (or example, cutting, shaping, joining and finishing)
- Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics.

Evaluating

- Explore and evaluate a range of existing products
- Evaluate their ideas and products against design criteria

Technical knowledge

- Build structures, exploring how they can be made stronger, stiffer and more stable
- Explore and use mechanisms, (for example levers, sliders, wheels and axles), in their products.

In the EYFS our children are provided with opportunities to explore and use a variety of media and materials through a combination of child initiated activities and adult directed activities. We encourage children to use different media and materials to express their own ideas and develop their ideas in original ways, thinking of form, function and purpose. We encourage children to make plans and construct with a purpose in mind using a range of resources. In the EYFS children are introduced to tools and techniques, and are provided with opportunities to develop their skills in using these appropriately, effectively and safely. At The Southwater Infant Academy our children are taught to become innovative and creative learners, selecting appropriate resources for a product and adapting their work where necessary.

As the children progress through Key Stage One, we provide them with a variety of creative and practical activities that develop the knowledge, understanding and skills needed to engage in an interactive process of designing and making. Key skills and knowledge for design and technology have been mapped across the school to ensure progression throughout each year. We ensure there is a context for the children's work linking to our 'Themed Units'. Our children learn about real life structures and the purpose of products, then are able to design and make products with a purpose in mind and for an intended user. Cooking and nutrition is implemented across the school with children developing an understanding of where food comes from, the importance of a varied and healthy diet as well as how to safely prepare food.

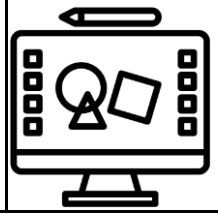
We believe that design and technology is a crucial part of children's education and are dedicated to teaching and delivering a high quality design and technology curriculum and providing well planned and resources projects and experiences.

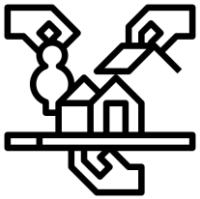
Impact

At The Southwater Infant Academy our design and technology curriculum equips the children to explore, take risks, evaluate, reflect and become resourceful, innovative and capable citizens. We want our children to develop their imagination, their critical thinking and their understanding of the world around them through their love of design and technology. We aim for our children to become engaged in the world around them, to question and think innovatively in order for them to develop their own products with a purpose in mind. Our children are able to grow and develop as individuals whilst learning vital skills and being provided with opportunities to explore for themselves.

Ongoing Design and Technology Disciplines

Together with the range of knowledge and content taught in the Units of Study listed below, pupils will develop their Design and Technology disciplines over time. These are the ongoing skills that are taught and retaught. These disciplines cannot be assigned to any single Unit of study as they will all be covered in all of the Units.

Essential Characteristics			
By the end of Key Stage One a successful designer will have… • A willingness to have a go and try out their ideas to make products. • A positive attitude to learning and increasing independence when working. • The ability to use time well and work well with others. • The ability to show initiative and ask questions to develop a product that meets given criteria. • An increasing ability to use materials carefully and without waste, and to work safely. • A growing knowledge of which tools, equipment and materials to use to make their products. • The ability to apply mathematical learning to help them design and make. • A growing awareness of risks and how to manage these to work safely and hygienically. • An enthusiasm for the subject and developing knowledge of a range of materials, products and systems.			
EYFS	**Area**	**Year 1**	**Year 2**
Shows an interest in technological toys with knobs or pulleys, or real objects such as cameras or mobile phones. (UTW T) Recognise that a range of technology is used in places such as homes and schools. They select and use technology for particular purposes. (UTW T) Uses various construction materials. (EAD) Beginning to construct, stacking blocks vertically and horizontally, making enclosures and creating spaces. (EAD)	**Design** **(Including the use of IT and Cooking)** 	Create simple designs for a product. Use pictures and words to describe what he/she wants to do.	Design purposeful, functional, appealing products for himself / herself and other users based on design criteria. Generate, develop, model and communicate his/her ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology.

Joins construction pieces together to build and balance. (EAD) Realises tools can be used for a purpose. (EAD) Constructs with a purpose in mind, using a variety of resources. (EAD) Uses simple tools and techniques competently and appropriately. (EAD) Selects appropriate resources and adapts work where necessary. (EAD) Selects tools and techniques needed to shape, assemble and join materials they are using. (EAD) Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. (EAD) Use what they have learnt about media and materials in original ways, thinking about uses and purposes. They represent their own ideas, thoughts and feelings through design and technology. (EAD) Use a range of small tools, including scissors, paint brushes and cutlery (PD) Begin to show accuracy and care when drawing. (PD)	**Make (including learning cooking skills)** 	Select from and use a range of tools and equipment to perform practical tasks e.g. cutting, shaping, joining and finishing. Use a range of simple tools to cut, join and combine materials and components safely. Use wheels and axles in a product.	Choose appropriate tools, equipment, techniques and materials from a wide range. Safely mark out, cut and shape materials and components using a range of tools. Explore and use mechanisms e.g. levers, sliders, wheels and axles in his/her products.
	Evaluate 	Ask simple questions about existing products and those that he/she has made. Be able to say what they like/dislike. Be able to say how to improve their product.	Evaluate and assess existing products and those that he/she has made using a design criteria. Be able to say what has gone well or not well. Be able to say how they would adapt or improve their product if they were to make it again.
	Technical Knowledge 	Build structures, exploring how they can be made stronger, stiffer and more stable.	Investigate different techniques for stiffening a variety of materials and explore different methods of enabling structures to remain stable.

Long Term Plan

Driver	Developing kindness, and supportive relationships	Respecting our environment	Being part of the global community	Being resourceful and creative	Respecting diversity and equality	Driving to aspire and achieve
	Aut 1	Aut 2	Spr 1	Spr 2	Sum 1	Sum 2
Year R	***Winstons World***		***Dinosaurs Using a range of media and materials***	***Superheroes***	***Under the Sea***	
	Colour mixing paints.(EAD) Make picture frames out of cardboard. (Cutting skills, physical develpment) family portraits with sequences, shapes and different coloured stick ons.		Junk modelling – design (EAD) and make a dinosaur home.		Cooking – Baking sea animal shaped biscuits and then decorate with blue icing.	
	Bog Baby / Wild and Wonderful	***London's Calling***	***Didgeridoos and Kangaroos***	***This is Me***	***Once upon a tale***	***Southwaters Past***
Year 1	Textiles - Children design and make an picnic blanket for Bog Baby/Paddington, evaluating their finished piece against given success criteria.	Cooking - Children to design a new sandwich for Paddington	Mechanisms - Design and make a home for an animal, with an opening and closing hinged door on a pulley Follow instructions for making fairtrade rocky road.	Cooking - Children to design a 'Biscuit Bear' Children to think about how to make their biscuit visually appealing to the eater. Children create their biscuit bear using their design to support them, and evaluate their finished biscuit.	Structures - Children to investigate a selection of different shopping bags and look at how they are put together and how strong they are Children to design a shopping bag, thinking about how to join the materials together effectively. The shopping bag should be strong enough to carry a tin of beans across the classroom	Cooking - Children to use local produce, including items grown at the academy where possible, to make a healthy fruit and vegetable salad
	To Infinity and Beyond		***World Explorers***		***Heroes – Kings / Queens***	
2	Mechanisms - Learn how to build a strong, stable	Cooking - Children to design space biscuits,	Textiles - Children design and make a piece of textile	Cooking - Children to design, write a recipe for	Structures - Children to investigate a selection	Cooking - Children to use local produce,

	structure to make a chassis Investigate different ways to fix axles to a chassis Design and make a space buggy using wheels and axles, and a strong chassis structure	thinking about how to make their biscuit look like one of the planets Children to consider different options for decorating their biscuit	artwork, using other countries and cultures to inspire them Children use dying and / or sewing techniques as some possible methods to create their artwork Children evaluate their artwork, reflecting on whether it matched their original design	and create an Explorer Smoothie Children to select from a range of juice / smoothie flavours to combine	of bug houses using internet sources. Children look at how they are put together, how strong they are, and what materials are used inside Children to design a bug house, thinking about how to join the materials together effectively and what materials to use inside for the bugs	including items grown at the academy where possible, to make a healthy meal for a hero

Progression of skills, knowledge and vocabulary

EYFS - Autumn

Skills and Objectives	Whole Class Session	Focus Task/Continuous Provision	Key Vocabulary
(PD) **ELG – Fine motor skills** Hold a pencil effectively in preparation for fluent writing – using the tripod grip in almost all cases. Use a range of small tools, including scissors, paint brushes and cutlery. Begin to show accuracy and care when drawing. **(EAD)** **ELG: Creating with Materials** 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.	**Input 1: Colour mixing.** Read the story 'Maisy's colours' as a whole class. **https://www.youtube.com/watch?v=Aq-vmnid69I** Then in small groups introduce the children to the three primary colours and explain to them that all colours come from these children colours. Model what happens when you mix two colours together eg red & blue – purple, yellow & blue – green, yellow & red – orange. Model how to hold the paint brush correctly and then encourage the children to have a go at colouring mixing themselves.	Colour mixing Painting easel inside and out.	Primary colours Red Blue Yellow Paint brush
	Input 2: Picture frames. In small groups children to decorate their own card photo frame. Cut out some recycled cardboard A4 photo frames (cereal boxes might be best). Have some photos on the table of different types of photo frames, look at all the different designs and how they have been decorated. Show the children a WAGOL. Have a selection of paints, gems, sequins, materials that they could use to decorate their photo frames.	Cutting and sticking table.	Cut & stick Paint
	Input 3/4: Family portraits Read 'The Great big book of families' by Mary Hoffman. In children draw a picture of themselves or a family member. Have some WAGOL on the table to show what they need to remember. Model remembering necks, hands, feet, hair etc. Children to use paints to colour their portraits after they have drawn them.	Whole class discussion. Family pictures. Family puzzles. Books in book corner about different families across the world.	Family Community Paint draw

EYFS - Spring

Skills and Objectives	Whole Class Session	Focus Task/Continuous Provision	Key Vocabulary
(PD) **ELG – Fine motor skills** Hold a pencil effectively in preparation for fluent writing – using the tripod grip in almost all cases. Use a range of small tools, including scissors, paint brushes and cutlery. Begin to show accuracy and care when drawing. **(EAD)** **ELG: Creating with Materials** 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.	**Input 1: Homes** On the carpet look at some pictures of homes in the UK and around the world. What do they all have? Doors, windows, roofs? What other features can you see in these homes? What do homes look like in Japen. Discuss with the class. Ask the children, do you think a dinosaur would be able to live in these houses? What do they need. A big door etc, room for big bodies. Use this lesson as a explorative lesson. Have lots of junk modelling out and ask the children to explore how they might make a dinosaur home.	Lego – construction Small world dinosaur play. Dolls house	Homes Door Window roof
	Input 2: Design a home Remind the children of the previous input about homes. Explain that today in small groups they are going to be designing a home. What do you think your home needs? Door, window, roof. How are they going personalise their homes. Provide a template for the children. Children to draw their home and then adult to scribe the details, for those who need it.	Writing table, template of homes to colour and design.	Design Door Window Roof
	Input 3/4: Make homes. Children to work in small groups with an adult to use junk modelling resources to make their homes. Children will be using skills of cutting and sticking to complete this task. Provide a WAGOL for the children to they know what they are aiming for and also some pictures some interesting homes. All children should include a door, window and roof in their homes.	Junk modelling table to explore before making final piece.	Cut Stick Door Window roof

EYFS - Summer

Skills and Objectives	Whole Class Session	Focus Task/Continuous Provision	Key Vocabulary
(PD) **ELG – Fine motor skills**	**Input 1: Biscuits** Watch https://www.youtube.com/watch?v=5m7tp91jXZU. Making biscuits.	Play kitchen, ingredients for biscuits.	Tasting Likes dislikes

Hold a pencil effectively in preparation for fluent writing – using the tripod grip in almost all cases. Use a range of small tools, including scissors, paint brushes and cutlery. Begin to show accuracy and care when drawing. **(EAD)** **ELG: Creating with Materials** 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.	Explain to the children that next week they will be making their own sea animal biscuits. Today they are going to try to some different types of biscuits and see what ones they like and dislike. Try to get a range of different biscuits for the children to try (crackers, cheese biscuits, oat biscuits, chocolate, rich tea).	Outside – flour with cocoa powder to explore.	
	Input 2/3: Cooking – biscuits. Explain that today the children are going to make their own sea animal biscuits. What animals to they want to make? Show the children the cutters that you have and ask the children to choose which one they would like to do. https://www.amazon.co.uk/Themed-Cookie-Biscuit-Fondant-Cutters/dp/B08HS8DTYW/ref=sr_1_5?crid=13M5D45PDPOP7&keywords=sea+animal+cutters&qid=1646732131&sprefix=sea+animal+cutters%2Caps%2C53&sr=8-5 In small groups with an adult, children to make biscuits. Encourage children to read scales, mix the ingredients together and also press the cutters into the dough. **Decorate biscuits** Provide the children with icing to ice their biscuits and extra details they might like. (silver balls for eyes, hundreds and thousands for scales). Encourage to use the spoons and knives correctly to spread the icing and then choose what detail they want to put on carefully using fine motor skills.	Sea animals in water outside. Mud kitchen biscuits cutters. Play kitchen Playdough	Ingredients Mixing Weighing Cutting Rolling Decorating.
	Input 4 – Evaluate Pupil voice for tapestry. Do the biscuits taste nice? Do you like or dislike them?		Like dislike

Year 1 – Autumn

	Sticky Knowledge	Learning Task	Vocabulary	Cultural Capital, Significant Individuals and curriculum enrichment
Lesson 1 To select and test a range of materials to	Children need to explore materials remembering what the use of the blanket is.	**Explore what materials could be used to make Paddington's picnic blanket**	Select Materials Water resistance Strength	Environmental impacts of different materials- reusable / recyclable

perform practical tasks.	What happens when I put water on different materials. What happens when I pull or push materials for strength. Different materials have different properties (science)	Provide children with a selection of different materials and to experiment what ones would be best and why. Test the materials for strength and water resistance. Children to test different materials for picnic blanket **Where is the evidence?** Tapesty and Science books.	Push Pull	
Lesson 2 – To design purposeful, functional, appealing products for themselves and other users based on design criteria	Children need to work from design criteria Products need to be appealing and functional	**Design a Paddington's picnic blanket** Give children a selection of materials that might be appropriate for a picnic blanket. The children to think about what materials would work best and why. Children to then design what they want their picnic blanket to be made of and what they want it to look like. Children can design an blanket for Paddington that fits the design criteria given **Where is the evidence?** Tapestry and Wider Curriculum book	Purpose Functional Appealing Product Materials Design	Discuss Charles Macintosh – his invention of the mac. Environmental impacts of different materials- reusable / recyclable
Lesson 3 – To select from and use a range of tools and equipment to perform practical tasks	Children need to select the appropriate material considering previous testing knowledge. Children need to use tools safely.	**Make Paddington's picnic blanket** Children to make bog baby picnic blanket out of their desired material and test for strength and waterproofing. (Science Link) Children to make picnic blanket for Paddington.	Tools Equipment Materials Cutting Joining Strength	Discuss Charles Macintosh – his invention of the mac. Environmental impacts of different materials- reusable / recyclable

(for example, cutting, shaping, joining and finishing)	Children need to follow their plan.	**Where is the evidence**? Tapestry and product.	Waterproofing.	
Lesson 4 - To understand the basic principles of healthy food	Children will understand where food comes from (the earth or animals) Learn to make healthy choices.	**Healthy foods.** Children to think about what makes food healthy and what is not a healthy food choice. Think about the five different food groups. Have a range of heathy and unhealthy foods for the children to try. **Where is the evidence?** Tapestry and Wider Curriculum Book.	Healthy foods Unhealthy foods Carbohydrates Vegetables Fruit Protein Diary	Children understand that some foods are healthier than others Harvest – Where does food come from?
Lesson 5 – To design a healthy meal	Children need to work from design criteria Products need to be appealing and healthy.	**Design a healthy sandwich for Bog baby.** Recap previous lesson on what are healthy food choices. Children to design and label a healthy sandwich to make. Label what they are going to use type of bread and filling. Children can design a sandwich that would be healthy and taste good **Where is the evidence?** Wider Curriculum Book	Healthy Design Label Taste	Learn about TV chiefs. Jamie Oliver – What he did for school meals. Growing his oven vegetables in the garden etc.
Lesson 6 – To prepare a healthy meal.	Prepare food safely using knives Choose ingredients that are healthy.	**Make a heathy sandwich** Children to use their design to make a healthy sandwich to take home. Children can use tools, skills and a range of ingredients to create their sandwich, with adult assistant where needed	Healthy Prepare Sandwich Tools Ingredients	Think about the five food groups and what they had for lunch or dinner yesterday? Did they have all five groups yesterday?

		Where is the evidence? Tapestry		
Lesson 7 – To evaluate product against your design.	Did you like your sandwich? What tools did you find tricky to use?	**Evaluate their sandwich** What went well? Did it taste good? Is it healthy? Children can evaluate their sandwich, thinking about whether it was healthy **Where is the evidence?** Wider Curriculum Book.	Evaluate Likes Dislikes Healthy	Think about the five food groups and what they had for lunch or dinner yesterday? Did they have all five groups yesterday?

.

Year 1 – Spring

	Sticky Knowledge	Learning Task	Vocabulary	Cultural Capital, Significant Individuals and curriculum enrichment
Lesson 1 – To explore and use mechanisms.	Children can talk about what hinges do and where to find them. Children understand the purpose of an axle, and why it needs to turn Children can explain what a pulley is and where they might find them.	**Explore hinges, axles and pulleys** Have a selection of different every day objects for children to explore. Explain that there are lots of different mechanisms in the objects are looking at. Can they guess which ones have axles, hinges and pulleys? Give the children time to explore the objects and toys and work out how they work. Bring the class back together to and discuss the uses of each one. **Where is the evidence**? Tapestry photos	Explore Mechanisms Hinges Axle Purpose Pulley	Go for a walk around the school, looking for different mechanisms.

Lesson 2 – To design purposeful, functional and appealing products.	Children can design a pulley system to close a door. Children to talk about the use of the pulley.	**Design a pulley system for a door** Explain that there are some koalas in Australia that need to be moved so we need to make some homes for them with a pulley door. Invite the children to design a home for animal, label what they are going to use and where the door is going to go. **Where is the evidence?** Wider Curriculum books	Design Purposeful Functional Appealing Pulley label	Watch moving day at the zoo. https://www.bbc.co.uk/news/uk-england-birmingham-25319132
Lesson 3 – To select and use a range of equipment to perform practical tasks.	Children can use equipment safely to make their design. They can follow their design.	**Make an animal home.** Children to work in pairs to make their animal home using different materials and skills. All children must make a pulley and hinge into their home. Where is the evidence? **Tapestry photos** .	Equipment Safely Design Pulley Hinge	Look at animal homes on google, how can we make them cosy and purposeful.
Lesson 4 – To evaluate their product against design criteria.	Children can evaluate their finished product, and talk about how they could improve it	**Evaluate their animal homes.** Children to evaluate what they like and disliked and what went well. Where is the evidence? Wider curriculum books	Product Design Evaluate Like Dislike	NA
Lesson 5 – To prepare a dish.	Children to work in groups to make Rocky road to linked to fairtrade fortnight.	**Fairtrade cooking, make rocky road.** Children to follow instructions to make rocky road. Link to literacy instruction writing. **Where is the evidence?**	Prepare Safely Make	https://www.fairtrade.org.uk/

		Literacy books and Tapestry photos		
Lesson 6 – To design an appealing product.	Children can design a biscuit that will look appetising to someone else	**Design a biscuit.** Look at a range of different biscuits. Why do they look appealing? Who do you think would like each one? Children to design a biscuit. **Where is the evidence?** Wider curriculum books	Appealing Product Appetising Design Label	History of the biscuit https://www.english-heritage.org.uk/visit/inspire-me/the-history-of-the-biscuit/
Lesson 7 – To prepare a dish.	Children can mix and combine ingredients, and then shape and cut the dough to create a bear shape Children can select decorations for their biscuit, and complete their biscuit to match their design.	**Make biscuits.** Children to read scales to weight our ingredients and make biscuits. Then decorate so their biscuits. **Where is the evidence?** Tapestry photos	Mix Combine Ingredients Shape Cut Dough Decorate.	Watch video of how biscuit are made https://www.youtube.com/watch?v=mwpqhImPaJc
Lesson 8 – To evaluate their product against their design criteria.	Children can evaluate their biscuit, talking about how they could improve it next time	Children to evaluate what they like and disliked and what went well. **Where is the evidence?** Pupil voice for Wider curriculum books	Product Design Evaluate Like Dislike	NA

Year 1 – Summer

	Sticky Knowledge	Learning Task	Vocabulary	Cultural Capital, Significant Individuals and curriculum enrichment
Lesson 1 – To explore a range of differrent	Children can talk about different materials used and joining techniques e.g. sellotape, glue, staples, sewing.	**Research shopping bags.**	Explore Materials Plastic	Children to think about what bags they take to the shops with them.

products and their materials.		Children to investigate a selection of different shopping bags and look at how they are put together and how strong they are What are they made of? Have some examples of paper, plastic, material to look at. Children to look at how they are made and how the handles are attached. **Where is the evidence**? Tapestry photos	Paper Thread/sting Sellotape Glue Strong Handles.	Talk about how historically bags were always plastic. One use plastic bag. Is this good for the environment. What could we use instead?
Lesson 2 – to design purposeful, functional, appealing products for themselves	Children to design a bag that will hold the weight of a tin of beans and understand that a bag has to be strong.	**Design a shopping bag.** Children to use their knowledge from the previous lesson to design a shopping bag. Children to think about how they are going to make it strong. How will they attach the handles? What is going be the best way technique for strength? What design our they going to put on the outside. **Where is the evidence?** Wider curriculum books	Design Purpose Strong Handles Materials	Continue to think about how we can be resourceful, what other things could we re use.
Lesson 3 – to use a range of tools and equipment to perform practical skills.	Children will use techniques to join two pieces of material together using glue, tape or staples. .	**Make a shopping bag.** Provide the children with a range of materials to make their shipping bags and model joining techniques using sell tape, glue and staples. **Where is the evidence?** Tapestry photos .	Materials Strong Joining techniques	How have we made sure our bags are reusable?
Lesson 4 – to evaluate their product against their design criteria.	Children can talk about how they found making the bags and what the found tricky?	**Evaluate their shopping bags.** Children to test their shopping bags for strength and decide whether they like their designs. Will their bags hold the weight of a baked bean tin?	Evaluate Like Dislikes Strength	NA

		What went well? What could they do better next time. **Where is the evidence?** Wider curriculum books	Weight	
Lesson 5 –. to explore different food groups.	Children can explain which foods are healthy, and why some foods should be eaten in smaller amounts	**Heathy foods** Children to explore healthy and unhealthy foods and how we should eat a healthy balanced diet. Have a range of different food groups that children might not of tasted before before eg banana bread, exotic fruit, etc https://www.youtube.com/watch?v=e1wLP6hByEE **Where is the evidence?** Tapestry photos	Healthy Unhealthy Balanced diet Five food groups 5 a day	Big question - What happens if we don't eat well?
Lesson 6 – To learn where food comes from.	Children can identify where foods come from, and can talk about the process of fruit and vegetables growing Children can describe foods, talking about their likes and dislikes	**Where does our food come from?** Children to recap on previous lesson about eating a healthy balanced diet. Now ask the children to think about where all the different food come from? Vegetables and fruits from farms. What about an avacodo? Are they grown in the UK? Talk about seasonal food and buying British. What do foods do children like and dislike? Children then to label on a map where certain foods come from. This could be done individually or in groups on tables. **Where is the evidence?** Wider curriculum books	Balanced diet British World Avocado	Buying British – what does this mean?
Lesson 7 – To prepare a dish.	Be able to use equipment safely to prepare a dish.	**Make a fruit salad** Children to use local produce, including items grown at the academy where possible, to make a healthy fruit and vegetable salad	Equipment Safely Cut Combine	NA

Year 2 – Autumn

	Sticky Knowledge	Learning Task	Vocabulary	Cultural Capital, Significant Individuals and curriculum enrichment
Lesson 1 – To explore and use mechanisms e.g. levers, sliders, wheels and axles	Children can talk about what axles do and where to find them, recalling information learned in Year 1 Children can explain what the chassis is, and why it needs to be strong Children can explain how to fix axles to a chassis, and understand that the axles need to be able to turn	**Explore chassis and axles.** Show children a range of different object and toys with mechanisms such as chassis and axles. Remind the children of what we made in year 1 with chassis and axles. Ask the children to think about how they might build a strong, stable structure to make a chassis. Investigate different ways to fix axles to a chassis **Where is the evidence?** Tapestry	Mechanisms Levels Sliders Wheels Axles Chassis Strong Structure	History of the chassis F1 cars https://www.cnbc.com/video/2014/05/21/the-history-of-the-chassis-.html
Lesson 2 – To design a purposeful, functional, appealing product.	Children can talk why they have design their space buggy how it is. Children to talk about strength and structure of their buggy.	**Design a space buggy using wheels, axles and a strong chassis.** Explain to the children that they are going to design a space buggy. What materials would they like to use? Where are they going to put the wheels? How many? Where is the axle? How are they going to make the chassis? Children can design a buggy with a chassis, axles, and wheels to meet given success criteria **Where is the evidence?** Wider curriculum books	Design Label Mechanisms Levels Sliders Wheels Axles Chassis Strong Structure	Google images of space buggies. Video one of the first space buggies. https://www.youtube.com/watch?v=o789-lR0HM4

Lesson 3 - To construct a space buggy following a design.	Children need to select the appropriate material considering previous testing knowledge. Designers need to use tools safely. Designers need to follow their plan.	**Make space buggy.** Provide the children with plenty of materials and equipment to make their space buggies. Children to make buggies in pairs. Buggies need to have wheels and axles, and a strong chassis structure and follow their design. Children can select and use appropriate materials and tools, and use these safely **Where is the evidence?** Tapesty and product	Mechanisms Levels Sliders Wheels Axles Chassis Strong Structure	Google images of space buggies. Video one of the first space buggies. https://www.youtube.com/watch?v=o789-lR0HM4
Lesson 4 - To evaluate their product against their **desingn**.	Children to evaluate final product and talk about what went well and what could be improved.	**Evaluate final product** Children to evaluate their final product, what do they like/dislike? What went well? Children can evaluate their finished product, and talk about how they could improve it **Where is the evidence?** Wider curriculum books	Evaluate Likes/Dislikes What worked well.	First man on the moon. https://www.youtube.com/watch?v=6fn2lXKzddg
Lesson 5 - To design an appealing product for themselves.	Children to design biscuit linked to the topic of planets and space.	**Design space biscuits.** Children to design space biscuits, thinking about how to make their biscuit look like one of the planets. Look at lots of different pictures of biscuits, think about what makes the icing work, and look like planets. Children to consider different options for decorating their biscuit. Let the children explore icing **Where is the evidence?** Wider curriculum books	Design Space Biscuit Icing Planets	Sir William Hershel, first person to find the planets - Uranus

Lesson 6 - To prepare a dish.	Children need to work from design criteria Prepare food safely and choose appropriate ingredients. Products need to be appealing and look like planets.	Children can use tools, skills and a range of ingredients to create their biscuits, with adult assistant where needed **Where is the evidence?** Tapesty and product	Design Space Biscuit Icing Planets	Watch video of how biscuit are made https://www.youtube.com/watch?v=mwpqhImPaJc
Lesson 7 - To evaluate their product against their design.	Children to evaluate final product and talk about what went well and what could be improved.	**Evaluate final product** Children to evaluate what they like and disliked and what went well. Children to evaluate their final product, what do they like/dislike? What went well? Children can evaluate their finished product, and talk about how they could improve it **Where is the evidence?** Wider curriculum books	Evaluate Likes Dislikes	

Year 2 – Spring

	Sticky Knowledge	Learning Task	Vocabulary	Cultural Capital, Significant Individuals and curriculum enrichment
Lesson 1 – To explore different textiles, patterns and designs.	Children can use patterns and textures from other countries and cultures to inspire their learning	**Textiles** Introduce children to a variety of fabrics from around the world. Define the word fabrics. What do we use fabrics for? Explore a range of fabrics and encourage the children to describe them. Sit in a circle and pass a piece of fabric around the circle, when the music stops child to describe the fabric. What does it look like? Feel like? What would you use it for and why? What is the pattern? What is the texture of the fabric. Share	Patterns Textures Cultures Fabrics Design Shape	Look at atlas's to find Africa and Sweden, Norway and Finland.

		vocabulary and discuss any new vocabulary with the children. Explain that we are going to create a bag for a world explorer to carry a specific item on their travels, such as a tin of beans/a travel book etc. Explain that we are going to take inspiration from the patterns and textures we see in fabrics from around the world for our own designs. Look at a selection of examples, discuss what we notice about these products. Such as their shape/design/the way they are joined/the handles/what makes them strong enough to carry items and how items do not fall out etc. Ensure there is a selection of African Batik prints, explain briefly this technique of batiking, dying fabric with a visible pattern. Show Scandinavian embroidered textiles as an example. **Where is the evidence?** Tapestry photos		
Lesson 2 – To design a purposeful product.	Children can select and cut appropriate materials for their design, and decide on techniques to use to create their finished piece.	**Design explorer bags** Children to explore available resources and existing products as an inspiration for their designs. Then draw and label their own design, identifying the process they will use to decorate their product and the joining method they will use. Remind the children of the importance of keeping their designs simple, to ensure it is achievable in the time we have. **Where is the evidence?** Wider curriculum books	Design Label Create Product Decorate Batik	African batik making https://www.youtube.com/watch?v=l3e221v9CEk
Lesson 3/4 - To use a range tools and	Children can select and cut appropriate materials for their design, and decide	**Make explorer bag.** Recap previous lesson and the design criteria. Explain that today we are going to cut the fabric	Tools Equipment Sewing	https://www.craftsy.com/post/bag-sewing-tips/

equipment to perform practical skills.	on techniques to use to create their finished piece With some assistance, children can use sewing and / or dying to create a finished piece	for our designs and begin to add the texture/detail to our designs. Model how to batik fabric, by drawing a pattern/design using squeezy glue and either block painting or dying. https://www.youtube.com/watch?v=zjbW9GC14cQ Alternatively, children can use other media forms, such as embroidery to decorate their bag. Model how to do simple running stitch for embroidery. https://www.youtube.com/watch?v=TTAbCTKL9l8 Discuss how it is important to mark out our designs onto our fabric. Children to decorate the front of their bags using their design following the design criteria. Joining their bag together Model how to join the pieces of their bag together, by sewing using running stitch, show children how we can hide the seams by sewing inside out and turning out their finished bag. **Where is the evidence?** Tapestry photos	Dying Design Texture Batik Block painting	
Lesson 5 - To evaluate their product against their design.	Children to evaluate final product and talk about what went well and what could be improved.	**Evaluate their explorer bags** Children to evaluate what they like and disliked and what went well. **Where is the evidence?** Wider curriculum books	Evaluate Product improvements	

Lesson 6 – To learn what a healthy and balance diet is.	Children can design a smoothie that is healthy and tasty Children understand that some foods are healthier than others, and can talk about why we should eat some foods in moderation Children can use equipment to make their smoothie	**Healthy eating** Introduce children to the Eatwell plate. Discuss a healthy and balanced diet. What does healthy mean? What does a balanced diet mean? https://www.bbc.co.uk/bitesize/topics/zv4cwmn/resources/1 https://www.youtube.com/watch?v=mMHVEFWNLMc Can children identify the different places food comes from? Such as, we buy food from the shops, we can grow food, we can make certain foods, some food grows in the ground, some on trees, some foods need to go through various processes before we can eat them, such as flour, sugar, etc. Explain that we are going to be using food to design and make something healthy for a World Explorer. Reveal a selection of fruits/vegetables, including juices. These can be from around the world or packaged in a variety of ways such as tins etc. What can they see? What do they think we could make using these things? What do they see/smell/feel? Where do they think the food has come from? Discuss the importance of having 5 portions of fruit and vegetables each day to stay healthy. Explain that as a world explorer is often on the go we are going to create a healthy smoothie for them to ensure they are getting a variety of fruits and vegetables in their diet. Children to sort fruits and vegetables into where they come from, such as grown on trees, underground, above ground, etc. Ask children if they know what a smoothie is? What does it contain? Discuss what they think an	Healthy Tasty Balanced diet Five a day Fruit and vegetables.	Watch a clip of Jamie Oliver's school dinners campaign. https://www.youtube.com/watch?v=yNgo6P_HTcE Disuss why it is important to eat healthy at school.

		Explorer Smoothie should contain and why? Most smoothies are primarily made up of fruits and vegetables. Why should we eat fruits and vegetables? https://www.youtube.com/watch?v=kteZneJm1EI **Where is the evidence?** Wider curriculm books		
Lesson 7 - To design a purposeful product.	Children can design a smoothie that is healthy and tasty Children understand that some foods are healthier than others, and can talk about why we should eat some foods in moderation	**Design a smoothie** Recap what they learnt about healthy eating and smoothies. Recap the task and the design criteria that they created last week as a class. Explain that today the children are going to design their own Explorer Smoothie and write their instructions on how to make it. Remind children of what instructions require. Look at some examples of smoothie recipes and identify their features, name of smoothie, ingredients and their quantities, instructions, equipment etc. Discuss the different measures identified in the recipes. Such as capacity, mass etc. Children to design their Explorer smoothie following the design criteria and write clear instructions to follow. Remind children that it must be healthy, tasty and be visually appealing. **Where is the evidence?** Wider curriculum books	Smoothie Heathy Ingredients Quantities Capacity Appealing	https://www.liveeatlearn.com/how-to-make-a-smoothie/
Lesson 8 – To prepare a healthy dish.	Children can use equipment to make their smoothie	**Make smoothies** Recap objective and design criteria, explain that today they will be making their smoothies, following their designs and instructions. Discuss health and safety of washing hands and chopping carefully and using appliances safely. Discuss ways	Safely Slicing Peeling Chopping Cutting	The history of smoothies https://juicestopsiouxfalls.com/blog/f/the-history-of-smoothies

		to prepare food safely, slicing, peeling, chopping, etc. Once children have made their smoothies, explain that we are going to taste and evaluate them. Explain that evaluating is where we test whether our product works well and meets the design criteria and to see if our design could be corrected or improved to make it better. Did you like the look of your smoothie? Did you like the taste of your smoothie? Would you change the ingredients in your smoothie? What would you change? Why? **Where is the evidence?** Tapestry photos	Evaluating Improving	

Year 2 – Summer

	Sticky Knowledge	Learning Task	Vocabulary	Cultural Capital, Significant Individuals and curriculum enrichment
Lesson 1 – to explore different products and how they are made.	Children can talk about different materials and joining techniques e.g. glue, string, nails	**Lesson 1: Research bug houses** Children to investigate a selection of bug houses using internet sources. Children look at how they are put together, how strong they are, and what materials are used inside for the bugs. **Where is the evidence?** Tapestry photos (make notes on whiteboard to share as a class)	Joining techniques Wood Plastic Nails Glue	https://www.youtube.com/watch?v=i7z9_oneirU From about 5 minutes to 7 minutes. How is this house good for the environment?
Lesson 2 – to design a purposeful and	How can the children make their bug houses eco friendly.	**Lesson 2: Design a bug house.** Children to design a bug house, thinking about how to join the materials together effectively and what materials to use inside for the bug	Design Purpose Entrance Cosy	How to make a bug house hotel.

functional product		Give the children ideas of what materials they might use, toilet rolls, cardboard, wood, and material.	Size Joining materials	https://www.woodlandtrust.org.uk/blog/2019/09/how-to-build-a-bug-hotel/#:~:text=To%20make%20a%20log%20pile,to%20burrow%20into%20decaying%20wood.
Lesson 3 – to use a range of tools and equipment to perform practical skills.	Children to make big houses follow designs from previous lessons.	**Lesson 3: Make bug houses** Provide children with lots of resources and materials to make bug houses. Children to work in pairs. Children to collect resources from the woods to help make their big houses	Joining techniques Wood Plastic Nails Glue	https://foyr.com/learn/top-5-famous-interior-designers-in-the-world/ Interior designers.
Lesson 4 – to evaluate their product against their design..	Children can test their product, using this to evaluate how successful their design was	**Lesson 4: Evaluate bug houses.** Children to evaluate their bug house to see if it was successful, and think about how they could make it stronger / better next time Cross curricular link: Science micro habitats	Evaluate Successful Stronger Purpose	NA
Lesson 5 – to learn what a healthy diet is.	Children can explain which foods are healthy, and why some foods should be eaten in smaller amounts	**Lesson 5: Heathy foods** Children to explore healthy and unhealthy foods and how we should eat a healthy balanced diet. Provide some different foods to try from each food group and then children to decide whether they are healthy or unhealthy.	Healthy Unhealthy Fruit Vegetable Carbohydrates Protein Diary Balanced diet	https://www.youtube.com/watch?v=fPDAlxLK1rs
Lesson 6 – to prepare a healthy dish.	Children to combine ingredients to make a meal.	**Lesson 6: Make a healthy meal for heroes.** Children to use local produce, including items grown at the academy where possible, to make a healthy fruit and vegetable salad	Healthy Unhealthy Fruit Vegetable Carbohydrates Protein	https://www.google.com/search?q=salad+making+chefs&rlz=1C1GCEA_enGB969GB969&oq=salad+making+chefs&aqs=chrome..69i57j33i160l3j33i22i29i3

			Diary Balanced diet	0.7793j0j4&sourceid=chrome&ie=UTF-8
Lesson 7 - To evaluate their product against their design.	Children to say whether they like or dislike what they have made.	**Lesson 7: Evaluate meals.** Children to taste their meals. Did they follow their design? Does it taste good? Would their hero enjoy it? What went well, what could be changed for next time?	Like Dislike Evaluate	NA