SPARK
EDUCATION TRUST

Whinstone Primary School
DESIGN AND TECHNOLOGY

DESIGN TECHNOLOGY INTENT

"Design is a funny word. Something people think design is how it looks, but of course if you dig deeper, it is really how it works." Steve Jobs

Our Design Technology Curriculum will provide our children with a wide range of experiences, allowing us to nurture and grow their creativity and equip them with relevant skills for life in our rapidly changing technological world.

We want our children to be inspired by a range of professionals including engineers, designers, architects and chefs and have high aspirations for their futures.

We encourage children to use their creativity and imagination, to design and make products using a wide range of tools and equipment that solve real and relevant problems with a variety of contexts.

We believe that design technology helps prepare children in a developing world and encourages them to become curious and creative problem solvers both as individual and as part of a team.

DESIGN TECHNOLOGY IMPLEMENTATION

Design and Technology is implemented through a carefully sequenced curriculum that aligns with the National Curriculum and in many areas goes beyond. Our curriculum builds technical knowledge, practical skills, and creativity from EYFS to Year 6. Pupils follow a clear design–make–evaluate cycle, applying learning from maths, science, and computing in purposeful projects. Vocabulary is explicitly taught, and high-quality resources support accurate modelling and construction. Teachers demonstrate techniques clearly and ensure pupils develop independence, resilience, and safe working habits. Regular opportunities for problem-solving, testing, and improving prototypes help pupils think like real designers. Learning is revisited and built upon so all pupils make strong, sustained progress.

DESIGN TECHNOLOGY IMPACT

The impact of our Design and Technology curriculum is that pupils leave primary school as confident, creative problem-solvers who can design, make, and evaluate products with accuracy and purpose. They apply technical knowledge independently, use subject-specific vocabulary confidently, and demonstrate resilience when improving their work. Regular opportunities to test and refine prototypes enable pupils to think critically and reflect on real-world functionality. Assessment shows strong progress for all groups, including SEND, with pupils building a secure understanding of structures, mechanisms, electrical systems, and food technology. Pupils are well-prepared for KS3 and show genuine enjoyment of practical learning.

DESIGN TECHNOLOGY UNIT LONG TERM PLAN ROADMAP

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
EYFS	**All About Me** Children are exploring their initial use of tools and using materials.		**Planet Earth** Children are progressing in their use of tools with increasing accuracy. Children are starting to develop their design and constructing skills.		**World of Books** Children are now using their designs and creations to evaluate and explain processes they have used.	
Year 1	***Textiles - Make a book with different materials (That's not my…)*** *My niece really likes the 'That's not my...' books, but she wants a unique one, can we help?*  *Anne Kelly*		***Construction – Toy Makers Workshop:*** How can we make a toy from recycled materials that is fun and safe to play with?  Hasbro _____		***Cooking and Nutrition - Plant Power:*** Snack like Jack – What tasty plant snacks help us to grow strong like Jack?  Dr Megan Rossi	
Year 2	***Construction – Rebuilding History:*** How can we build strong and stable houses like those from the time of the Great Fire of London? Taylor Wimpey _____Taylor Wimpey		***Textiles – Buzzing Bookmarks:*** How can you make a bookmark that's both fun and useful?		***Cooking and Nutrition – Super Veggies to the rescue*** How can we make veggies fun and delicious?  Joe Wicks	

		 Louis Bourgeois	
Year 3	***Construction - Strengthening paper/cardboard structures-cake box-ribbing, lamination and corrugation***  *Local bakery has been in touch to say that they are struggling to package their cakes without them getting squashed, can we help them create a sturdier box?* Soigne Bakery – Ingleby Barwick	***Cooking and Nutrition – Chocolate that cares*** *How can we make a chocolate treat that is fair for people and kind to the planet?*  *Heston Bloomethal*	***Textiles – Stone Age Mysteries:*** How can you make the perfect pouch for a Stone Age adventure?  Fjallraven
Year 4	***Textiles – Bag a story*** How can we create a functional and creative book bag?  Osprey Bags	***Construction – Greek Vases***  How did the Greeks make such elaborate vases? Historical context of Greek vase making processes	***Cooking and Nutrition-Root and shoot*** What summer dishes can we make with root vegetables? 

Year 5	***Construction – Fair Tale engineering*** How can we use pulleys and levers to solve a problem? Wilkinson Eyre Architects and Gifford and Partners	***Textiles – Moonlit magic*** How can fabric and stitching create atmosphere? Lenore Tawney	***Food and Nutrition – Central America on a plate*** How can we cook a dish that celebrates its cultural flavours? Daniela Soto-Innes
Year 6	***Construction – Creating Anderson Shelters*** How did people in WWII protect themselves? William Paterson and Oscar Carl Kerrison	***Construction- Electrifying Creations*** How can we combine and design to create a spooky Gothic Themed model? Antoni Gaudi	***Textiles – Trash to Treasure*** How can you transform old materials into something new and amazing? **Summer 2 – Food and Nutrition** How can we mix recipes to invent an exciting new food? Wolfgang Puck

DESIGN TECHNOLOGY Curriculum Overview

Early Learning Goals and National Curriculum Aims:

Early Years Foundation Stage:		
EYFS Linked Areas of Learning: The most relevant statements for Design Technology are taken from the following areas of learning: • **Understanding the World** • **Expressive Arts and Design** • **Communication and Language**	**Early Learning Goal: Physical Development (Fine Motor Skills)** - Use a range of small tools, including scissors, paintbrushes and cutlery. **Early Learning Goal: Expressive Arts and Design (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.	**'Year 1 Ready' Goals:** -To use a range of creative tools (scissors, paintbrushes, stamps, rollers etc) to create with a purpose in mind. -To talk to a peer or adult about their creations explaining the process that led to a finished product. -To have an awareness of how to operate simple cooking tools (knife and fork, wooden spoons, whisks etc) to create a food-based product by following instructions.

Key Stage 1
Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making. They should work in a range of relevant contexts [for example, the home and school, gardens and playgrounds, the local community, industry and the wider environment]. When designing and making, pupils should be taught to: **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, templates, mock-ups and, where appropriate, information and communication technology **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, textiles and ingredients, according to their characteristics **Evaluate** • 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

Key Stage 2

Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making. They should work in a range of relevant contexts [for example, the home, school, leisure, culture, enterprise, industry and the wider environment].

When designing and making, pupils should be taught to:

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

- 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

Technical knowledge

- apply their understanding of how to strengthen, stiffen and reinforce more complex structures
- understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]
- understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]
- apply their understanding of computing to program, monitor and control their products

Design and Technology Rationale for Teaching:

EYFS:

In the Early Years children are introduced to a range of familiar and unfamiliar materials. Children have opportunities to explore and select materials to use and begin to understand how to modify and join them. Through teacher and child led learning, we develop children's fine motor skills, gross motor skills and creative development. EYFS is an introduction to researching, designing, making, evaluating and understanding the technical knowledge for KS1. Therefore, teacher instruction focuses around the basic skills of cutting, sticking, joining and constructing.

Year 1

Autumn: Textiles - Make a book with different materials

(That's not my…)
Children in the Early Years have studied Design and Technology throughout the Early Years Curriculum. Children have discussed a range of designers and jobs within DT. They have also created products using a range of materials. Therefore, it is important that children start in year 1exploring with familiar materials. This topic introduces children to fabric through simple collage. They learn to cut and arrange fabric shapes, independently use joining techniques, and talk about colour, pattern and texture. This topic sets the foundation for use of materials throughout their design and technology journey. The concept of books is also supports children by putting DT into a context they are familiar with.

Spring: Construction – Toy Makers Workshop:

How can we make a toy from recycled materials that is fun and safe to play with?

Children in the Early Years have studied Design and Technology through construction on a daily basis. This topic introduces basic construction using everyday materials; explores stability using joining methods and simple mechanisms such as wheels and axles. This allows for their KS1 DT journey to start within a context they are already familiar with. Children in Year 1 study about how toys have change in living memory, therefore providing historical context and scaffolding to their DT topic. Children will also focus on 'safety' within design an technology. This will be consolidated and returned to within all DT modules.

Summer: Cooking and Nutrition - Plant Power:

Snack like Jack – What tasty plant snacks help us to grow strong like Jack?

Children in the Early Years study food use and making on a weekly basis and therefore studying this topic allows children to build on their food construction skills. This topic introduces simple, healthy food preparation with familiar fruits and vegetables. Children learn the basics of hygiene, safe cutting, and begin to understand where food comes from. It is also important to know that this topic is based on a common (and studied) age-appropriate text that provides scaffolding for the context needed.

Year 2

Autumn: Construction – Rebuilding History:

How can we build strong and stable houses like those from the time of the Great Fire of London?

Children in their history are being introduced to different views of events and will be challenged to rebuild London. Therefore, studying construction in the Autumn term allows children to learn about the Great Fire of London in two subjects side by side, adding for STEAM integration to our curriculum. This topic builds on modelling skills by designing historically inspired structures with improved strength and accuracy, incorporating a simple mechanism (hinge, lever with pivot, slider). Simple mechanism work has been conducted in Year 1.

Spring: Textiles – Buzzing Bookmarks:

How can you make a bookmark that's both fun and useful?

This topic builds on basic joining by introducing simple stitches such as running stitch and cross stitch. Children learn that textiles can be both decorative and functional as they make bookmarks. Children will now progress from joining materials into sewing. It is important to note that as sewing is a new concept to many children, this topic is put into the context of bookmarks to allow children's use of prior knowledge in lessons.

Summer: Cooking and Nutrition – Super Veggies to the rescue

How can we make veggies fun and delicious?

This topic builds on basic preparation by introducing baking and seasoning. Children follow a simple recipe and learn that different cooking methods impact healthiness and taste. Children in this topic are being introduced to simple criteria to evaluate their creations. This helps children to build on the design process skilled gained in KS1.

Year 3:

Autumn: Construction - Strengthening paper/cardboard structures-cake box-ribbing, lamination and corrugation
Children will now build on their understanding of strengthening structures from Year 2. In Year 2 children were challenged with designing a strong structure. This topic extends this learning by providing strict criteria to the outcome, including the product being fit for purpose, strong to transport goods and aesthetically pleasing to go to market. This topic allows children to see the local impact of DT by using a case study of our local bakery, Soigne.

Spring: Cooking and Nutrition - Design a chocolate bar including wrapper

Cadburys are looking for new ideas for chocolate bars, can we give them ideas including packaging ideas?

Children in year 3 will now build upon their knowledge of food production from KS1. This extends knowledge of food preparation to the importance of organisations like fair trade and their impact on the world. It is also important to note that children study about food production and trade in Geography in Spring 2, providing STEAM integration in the curriculum and scaffolding.

Summer: Textiles – Stone Age Mysteries:

How can you make the perfect pouch for a Stone Age adventure?

Children are studying a thematic topic in History in the Autumn term focusing on Pre History (Stone Age to the Iron Age). This allows studying Stone Age Mysteries to lean on their previous contextual understanding of uses for pouches in the Stone Age e.g. hunter gatherers. This topic extends sewing skills to joining fabric securely with seam stitches and adding fastenings. Children design and make a pouch, linking historical context to functional design. It is important to note that children are given an opportunity in quick succession from the summer of KS1 to put their knowledge of sewing in textiles so that appropriate gaps in a new skill can be plugged.

Year 4:

Autumn: Textiles – Bag a story

How can we create a functional and creative book bag?

This topic develops construction skills through making a sturdy fabric tote bag. Children practise backstitch and handle attachment and explore how designers influence choices in functionality and style. Children have previously studied running stiches and joining materials. This topic allows them to consolidate and progress on these skills. As sewing skills are relatively abstract for children, the topic has been framed within something familiar to them (making a book bag).

Year 4 do not study a 'food and nutrition' module due to the focus on healthy lifestyles and food choices in PSHE and Science throughout KS1 and LKS2

Spring: Construction – Greek Vases

How did the Greeks make such elaborate vases?
Children in KS1 and LKS2 have worked significantly on construction and worked in depth on their skills of making strong structure. This topic extends children's learning into a different context and medium to show children how design and construction can be used for a purpose. Children are studying the Ancient Greeks in this half term, allowing for STEAM integration across the curriculum and scaffolding for prior learning. It is also important to note that this construction module follows Summer in Year 3 to provide progress within this strand.

Summer: Cooking and Nutrition – Root and shoot

Children are developing their cooking and nutrition skills in the summer of Year 4. We build on year 3 by showing the versatility of different root vegetables. This builds on their previous understanding of Fair Trade and the Journey that food goes on through their learning in Geography.

Year 5:
Autumn: Construction – Fair Tale engineering

How can we use pulleys and levers to solve a problem?

This topic expands functional design through the construction of a fairy tale-themed theatre backdrop or storybook incorporating mechanical systems like pulleys, levers and linkages along with previously taught mechanisms. Children's knowledge of structure, moving parts and electricity will allow them to apply their skills in a new context.

Spring: Textiles – Moonlit magic

How can fabric and stitching create atmosphere?
This topic explores textiles as a medium for storytelling and atmosphere. Children combine appliqué, layered fabrics and decorative stitching to design and make a wall hanging with expressive impact. Children are now putting their sewing skills to the test in a more complicated theme. This topic builds on the basic stiches they have been taught in previous year groups. It is important to note that children study a range of texts supporting this topic and Earth and Space in Science.

Summer: Food and Nutrition – Central America on a plate

How can we cook a dish that celebrates its cultural flavours?

This topic develops independence by preparing and cooking a multi-step dish (tortillas, salsa, guacamole). Children deepen their understanding of cultural influences on food and learn to adapt recipes. Children's study of food and nutrition throughout LKS2 and KS1 will allow them to build on cooking skills and teach them to design, adapt and change their recipes.

Year 6:
Autumn: Construction – Creating Anderson Shelters

How did people in WWII protect themselves?

This topic allows children to build on their knowledge of strengthening structures in historical context. Children in the Autumn Term study about WWII and the need for air raid shelters. With this historical context and scaffolding in mind, children can now bring all of their knowledge of structure stability to design an air raid shelter that is fit for purpose.

Spring: Construction – Electrifying creatures
How can we combine and design to create a spooky Gothic Themed model?

This topic consolidates previous learning on mechanical and electrical systems by the construction of a strong, reinforced and aesthetically pleasing structure. It is important to note that Year 6 has two construction modules. This is due to the fact that children should be given an opportunity to make progress in strengthening structures and movement within the construction strand.

Summer 1: Textiles – Trash to Treasure

How can you transform old materials into something new and amazing?

This topic encourages sustainability and innovation by upcycling old materials into new textile products. Children apply a range of stitching and embellishment techniques with independence and reflect on design for function, creativity and environmental responsibility. This topic is the culmination of all of the children's

skills within textiles and gets them to apply the range of stitching techniques they have studied. It is also important to note that in Autumn and Spring in Geography, children study about the economic activity of the UK and sustainable nature of the UK and our production methods/techniques. This provides contextual understanding to the topic, STEAM integration within the curriculum and an opportunity to apply their theoretical knowledge of sustainability to their DT learning opportunities.

<u>Summer 2</u> – Food and Nutrition

How can we mix recipes to invent an exciting new food?

This topic encourages creativity and independence by designing and cooking hybrid dishes. Children critically evaluate flavour, texture and presentation, applying advanced preparation and cooking techniques. This topic is the culmination of children's progress within food and nutrition. Children can take all of their contextual knowledge, knowledge of different food stuffs, where food is from and technical knowledge to create, adapt and change recipes.

Design and Technology Progression of Skills:

At Whinstone, we have designed our curriculum around three strands (cooking and nutrition, textiles and constructions). These areas underpin all of our work that is completed in Design and Technology. Substantiative knowledge in these areas is revisited to allow for children to build long term connections between their learning in Design and Technology. Other areas of school such as History and Geography are also used to provide children with a scaffold on which to hang their learning and provide prior contextual understanding for their Design and Technology topics.

At Whinstone, we teach distinct Design and Technology disciplinary concepts. These are:

- Researching
- Designing
- Making
- Evaluating
- Technical Knowledge

These disciplinary concepts are explicitly taught throughout all Design and Technology topics and are progressive from EYFS to Year 6. Our series of lessons throughout the terms reflect the design process. All of our topics link to a designer, company or product that so that children can see the real world application of their DT learning.

Researching							
Strand	**EYFS**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
Construction	I can talk about the lives of the people around me and explore what they do and use in their jobs (e.g., bakers, builders, designers)	I can explore toys and talk about what makes them fun and safe.	I can find out about historical houses and say how they could be improved.	I can explore the structures, ribbing, lamination and corrugation that exist in the market already for packaging.	I can explore and compare the uses and types of Greek Vases.	I can investigate how mechanisms can solve real-life problems and link this to a problem in the world of fairy tale.	I can describe the history of the air raid shelter and explain the reasons why they were necessary. I can describe features of Gothic design using key vocabulary
Textiles	I can explore a range of materials and their uses.	I can explore different materials and their uses in designing a book.	I can explore different fabric products and learn how to thread a needle	I can explore and compare different pouches, discussing their features and sorting them into groups.	I can explore different bags and learn about a textile designer, explaining how their ideas inspire strong, useful and appealing designs.	I can explore and compare the work of different textile artists and talk about how fabric, colour and stitching create mood and atmosphere.	I can explore upcycled textile products and explain how they reduce waste.

Cooking and Nutrition	I can explore different fruits and vegetables and talk about which ones are healthy snacks.	I can explore different foods, what makes them healthy or unhealthy and begin to understand a balanced diet.	I can explore different types of potatoes and explain how they can be cooked in different ways.	I can research effective packaging designs and the ingredients we use to make chocolate.	I can explore the versatility of root vegetables and explore their flavours and ingredients.	I can explore ingredients and flavours from Central American cuisine and explain how they are used together.	I can explain what makes a hybrid food exciting and compare chef creations, describing how flavour, texture and presentation contribute to their success.

Designing							
Strand	**EYFS**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
Construction	I can choose and talk about what I want to make and what tools and materials I might use.	I can draw a simple plan for my toy and choose materials to use.	I can draw a plan for a Tudor model house with a simple moving part.	I can design a piece of packing for a cake that will be good for transport uses and also marketing purposes.	I can design a robust and historically accurate Greek vase. I can design a functional Roman-themed model with a clear purpose and electrical element.	I can create a design criteria and draw a labelled plan to solve a problem using mechanisms.	I can design an air raid shelter using historically accurate language and test the appropriate materials. I can create a labelled design showing Gothic design and electrical features
Textiles	I can begin to discuss the properties of different materials	I can orally say how I would like my book to be and draw a simple sketch	I can create a design plan for a bug-themed bookmark that is both functional and appealing.	I can design a pouch using a paper template and plan features such as size, shape and fastening.	I can design a book bag with chosen size, handles and decorations linked to a favourite story.	I can design my wall hanging and use a template to cut fabric shapes accurately.	I can plan a creative project that reuses materials with purpose.
Cooking and Nutrition	I can select ingredients to make a food product.	I can plan a snack using fruits or vegetables, choosing shapes, textures and colours I like.	I can plan potato wedges by choosing which flavours or seasonings to add.	I can create a design for a chocolate bar wrapper based on a strict criteria.		I can plan how to adapt a traditional recipe for flavour, texture or presentation.	I can design a hybrid dish that combines two techniques, planning ingredients, shape and decoration.

Making							
Strand	**EYFS**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
Construction	I can safely use tools like scissors, glue and construction toys to make something I imagined or planned	I can build my toy using my plan, choosing materials and adding moving parts.	I can build a model of a Tudor house using card and sticks with a simple mechanism.	I can create a cake box product that can be tested against multiple variables for strength and aesthetic appeal	I can make a Greek vase using clay using historically accurate patterns and processes. I can build a Roman-themed model and integrate a simple working electrical circuit and mechanism.	I can construct a fairy tale-themed picture book or theatre backdrop that includes working mechanisms	I can make smaller than scale air raid shelter whilst using knowledge from the testing process. I can assemble a stable structure and add electrical features.
Textiles	I can a variety of materials to make product	I can prepare the materials I need for my book and make an initial model	I can sew two pieces of fabric together and add decorative stitching to create a functional bookmark.	I can sew fabric pieces together, add a fastening and make sure my pouch is strong and functional.	I can sew fabric pieces together neatly and securely to create my book bag.	I can sew on my appliqué shapes and use blanket stitch to finish edges	I can sew my cushion cover with accuracy, following the plan I designed, and ensure all pieces fit together well.
Cooking and Nutrition	With support, I can prepare and make fruit and vegetable snacks	I can prepare a fruit or vegetable snack safely, cutting and arranging pieces to make it appealing.	I can peel and cut vegetables safely; I can follow a recipe step by step to prepare and cook potato wedges safely.	I can join materials together and combine ingredients to make an edible chocolate bar.		I can follow a multi-step recipe to prepare tortillas and dips with control and accuracy	I can follow my recipe independently, making adjustments where needed to improve the outcome.

Evaluating							
Strand	**EYFS**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
Construction	I can talk about what I've made, explain how I did it and say how I might change or improve it.	I can test my toy to see how well it works and how to make it better another time.	I can test if my model is stable and say how to improve it	I can explain why my cake box product would be useful for transport, marketing and cost purposes.	I can test the product against a set criteria. I can test the model's function and circuit reliability and suggest ways to improve.	I can evaluate my product against my criteria and suggest improvements.	I can reflect on the design, testing and amendments process. I can evaluate my dish for taste, appearance and cultural inspiration, suggesting improvements with clear reasons
Textiles	I can talk about what I have created	I can describe what I like about my book and say how I could make it better	I can test and evaluate my bookmark for durability, usability and appearance.	I can test and evaluate my finished pouch, thinking about what worked well and what I could improve.	I can test my bag for strength and use, and explain how well it meets my design goals, suggesting improvements	I can evaluate my wall hanging, explain how it creates atmosphere and suggest improvements.	I can reflect on my upcycled cushion cover, thinking about design, function and sustainability, and suggest ways to improve future projects.
Cooking and Nutrition	I can talk about my snack and what I liked about it	I can taste my snack and say what I like about it and how I could make it even better.	I can taste my potato wedges, say what worked well, and suggest one way to improve them.	I can give reasons why my packaging would be appealing and how I might make my design and product better for personal use and the consumer.		I can evaluate the taste, appearance and authenticity of my dish and suggest improvements.	I can test the electrical circuits and evaluate the model, explaining how it could be improved further.

Technical Knowledge							
Strand	**EYFS**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
Construction	I can explore how to use materials and tools in different ways, noticing how they feel and what they can do when I join, layer or build with them	I can practise cutting and joining materials safely.	I can measure and learn about cross bracing to strengthen and how hinges, levers, pivots and sliders work.	I can use different equipment and methods to join materials together.	I can use slip, water and clay techniques to make my vase. I develop my knowledge of mechanisms - cams.	I can learn how pulleys, levers and linkages work building on my knowledge of cams.	I can use a range of joining, strengthening and building techniques. I can explain how electrical circuits work.
Textiles	I can explore how to use materials and tools in different ways, noticing how they feel and what they can do when I join, layer or build with them	I can describe the materials I can going to use and describe one reason why they might be good materials to use.	I can practise running stitch and cross stitch to strengthen and decorate fabric.	I can practise stitches and fastenings for my pouch.	I can explain the purpose of different stitches and how I used tools safely	I can use running stitch and overstitch to attach appliqué shapes securely and neatly.	I can use a range of stitches and embellishments to add strength and detail.
Cooking and Nutrition	With support, I can learn how to prepare food safely by washing hands, using clean tools and cutting carefully.	I can explain how to prepare food safely by washing hands, using clean tools and cutting carefully.	I can follow a recipe safely, using tools correctly and explaining how to cook potatoes in a healthy way.	I can mix effectively.		I can describe how cultural and seasonal ingredients influence food choices.	I can explain why some flavour combinations work and apply preparation techniques carefully to improve flavour, texture and presentation

DT Assessment Statements:

Year 1

Autumn: Textiles - Make a book with different materials

WTS	EXS	GDS
☐ **Research:** Needs support to explore different fabric textures and identify simple features. ☐ **Design:** Needs guidance to create a labelled plan for a page or material choice. ☐ **Make:** Needs help cutting and joining fabrics accurately. ☐ **Evaluate:** Can state likes/dislikes but struggles to explain improvements. ☐ **Technical Knowledge:** Needs adult support to understand simple textile techniques (e.g., gluing, simple stitching).	☐ **Research:** Identifies textures and features of textile pages. ☐ **Design:** Produces a simple labelled page design. ☐ **Make:** Cuts and joins materials with support. ☐ **Evaluate:** States likes/dislikes about their book page. ☐ **Technical Knowledge:** Knows simple joining methods (glue, tape, basic stitching).	☐ **Research:** Compares textile pages independently. ☐ **Design:** Produces clear designs with appropriate material choices. ☐ **Make:** Works neatly and with rising accuracy. ☐ **Evaluate:** Suggests realistic improvements. ☐ **Technical Knowledge:** Chooses suitable joining methods and explains why.

Spring: Construction – Toy Makers Workshop:

WTS	EXS	GDS
☐ **Research:** Needs prompting to explore how toys move or are made. ☐ **Design:** Needs support drawing a toy idea with labelled parts. ☐ **Make:** struggles to cut, fold and join recycled materials securely without guidance. ☐ **Evaluate:** Needs adult help comparing their toy to the design criteria. ☐ **Technical Knowledge:** Requires support to understand simple mechanisms (wheels, sliders).	☐ **Research:** Describes simple features of toys. ☐ **Design:** Draws a toy plan with basic labels. ☐ **Make:** Uses recycled materials; needs support for secure joins. ☐ **Evaluate:** Identifies one thing that works well. ☐ **Technical Knowledge:** Understands simple mechanisms (wheels, sliders).	• **Research:** Compares toy functions with growing independence. • **Design:** Designs with user needs in mind. • **Make:** Constructs toys with improved stability. • **Evaluate:** Makes thoughtful suggestions for improvement. • **Technical Knowledge:** Applies mechanisms accurately.

Summer: Cooking and Nutrition - Plant Power:

WTS	EXS	GDS

☐ **Research:** Needs guidance identifying healthy plant-based foods. ☐ **Design:** Needs help deciding ingredients for a simple snack. ☐ **Make:** Needs support following simple food-prep steps safely. ☐ **Evaluate:** Can say whether they liked the snack but struggles to reflect on taste/appearance. ☐ **Technical Knowledge:** Needs help understanding the basics of healthy eating.	☐ **Research:** Identifies healthy plant foods. ☐ **Design:** Plans a simple healthy snack. ☐ **Make:** Prepares ingredients safely. ☐ **Evaluate:** Comments on taste and appearance. ☐ **Technical Knowledge:** Understands the idea of eating healthily.	☐ **Research:** Explains why some foods are healthy. ☐ **Design:** Creates balanced snack ideas. ☐ **Make:** Prepares food safely and with independence. ☐ **Evaluate:** Reflects on several aspects (taste, texture, look). ☐ **Technical Knowledge:** Explains benefits of chosen ingredients.

Year 2

Autumn: Construction – Rebuilding History:

WTS	EXS	GDS
☐ **Research:** Needs support to explore features of historical houses. ☐ **Design:** Needs help planning a stable structure with clear parts. ☐ **Make:** Needs guidance joining materials to stay upright and strong. ☐ **Evaluate:** Needs support identifying what makes a structure more stable. ☐ **Technical Knowledge:** Requires help understanding strengthening method	☐ **Research:** Identifies features of historic houses. ☐ **Design:** Draws a plan with labelled parts. ☐ **Make:** Builds a simple structure that stands. ☐ **Evaluate:** Identifies strengths and weaknesses with prompting. ☐ **Technical Knowledge:** Knows some ways to strengthen structures	☐ **Research:** Explains why certain features helped during the Great Fire. ☐ **Design:** Designs with stability clearly in mind. ☐ **Make:** Constructs stable and well-joined models. ☐ **Evaluate:** Suggests improvements linked to stability. ☐ **Technical Knowledge:** Explains strengthening strategies.

Spring: Textiles – Buzzing Bookmarks:

WTS	EXS	GDS
☐ **Research:** Needs support examining textiles and simple decorative features. ☐ **Design:** Needs help designing a bookmark that meets purpose and size.	☐ **Research:** Looks at textile examples noticing features. ☐ **Design:** Produces a simple bookmark design. ☐ **Make:** Cuts and joins fabric with adult support.	☐ **Research:** Compares usefulness of different textile materials. ☐ **Design:** Produces accurate designs with decorative ideas. ☐ **Make:** Uses neat stitching and accurate cutting.

☐ **Make:** Needs assistance cutting, shaping, and joining fabric neatly. ☐ **Evaluate:** Needs prompting to compare the finished bookmark with their design. ☐ **Technical Knowledge:** Requires support understanding simple sewing or joining techniques.	☐ **Evaluate:** Discusses basic strengths of the finished bookmark. ☐ **Technical Knowledge:** Knows simple stitches/joins	☐ **Evaluate:** Links improvements to function. ☐ **Technical Knowledge:** Describes why certain stitches are stronger

Summer: Cooking and Nutrition – Super Veggies to the rescue

WTS	EXS	GDS
☐ **Research:** Needs support investigating different vegetables and flavours. ☐ **Design:** Requires help planning a balanced vegetable snack. ☐ **Make:** Needs guidance using tools safely when preparing ingredients. ☐ **Evaluate:** Needs support identifying what worked well and what didn't. ☐ **Technical Knowledge:** Needs help understanding how ingredients change when prepared.	☐ **Research:** Identifies vegetables and their basic properties. ☐ **Design:** Plans a simple vegetable-based dish. ☐ **Make:** Works safely when chopping and preparing. ☐ **Evaluate:** Comments on what worked well. ☐ **Technical Knowledge:** Understands that food changes when cooked/prepared.	☐ **Research:** Compares flavours and textures. ☐ **Design:** Creates more thoughtful ingredient combinations. ☐ **Make:** Shows accuracy in cutting and assembling. ☐ **Evaluate:** Suggests improvements based on flavour and presentation. ☐ **Technical Knowledge:** Explains why changes happen (softening, mixing).

Year 3

Autumn: Construction - Strengthening paper/cardboard structures-cake box-ribbing, lamination and corrugation

WTS	EXS	GDS
☐ **Research:** Needs support to examine real packaging and identify weak/strong points. ☐ **Design:** Needs guidance planning a box with accurate measurements. ☐ **Make:** Needs help using strengthening techniques effectively.	☐ **Research:** Identifies weak/strong points in packaging. ☐ **Design:** Produces a measured box plan with support. ☐ **Make:** Uses strengthening techniques (ribbing, corrugation). ☐ **Evaluate:** Tests and comments on strength.	☐ **Research:** Explains why certain structures fail/succeed. ☐ **Design:** Plans with accurate measurements. ☐ **Make:** Creates strong, neat, reliable structures. ☐ **Evaluate:** Suggests improvements linked to structure.

☐ **Evaluate:** Needs prompting to test and compare their product against criteria. ☐ **Technical Knowledge:** Requires support understanding ribbing, corrugation and lamination.	☐ **Technical Knowledge:** Knows different reinforcement methods	☐ **Technical Knowledge:** Can compare effectiveness of strengthening techniques.

Spring: Cooking and Nutrition - Design a chocolate bar including wrapper

WTS	EXS	GDS
☐ **Research:** Needs support understanding fair trade and comparing chocolate products. ☐ **Design:** Needs help planning a treat that considers sustainability. ☐ **Make:** Needs support following recipes with accuracy. ☐ **Evaluate:** Needs guidance evaluating flavour, texture and purpose. ☐ **Technical Knowledge:** Requires support understanding melting, setting and ingredient origins.	☐ **Research:** Identifies what fair trade means. ☐ **Design:** Plans a simple chocolate treat. ☐ **Make:** Follows simple steps to prepare/mix ingredients. ☐ **Evaluate:** Comments on taste and presentation. ☐ **Technical Knowledge:** Knows chocolate melts and sets.	☐ **Research:** Explains the importance of fair trade choices. ☐ **Design:** Considers sustainability in design. ☐ **Make:** Works accurately with measurements and timings. ☐ **Evaluate:** Reflects on multiple aspects and outcomes. ☐ **Technical Knowledge:** Explains melting/setting processes.

Summer: Textiles – Stone Age Mysteries:

WTS	EXS	GDS
☐ **Research:** Needs support investigating Stone Age containers and materials. ☐ **Design:** Needs guidance drawing and labelling a functional pouch. ☐ **Make:** Needs help cutting and sewing fabric accurately. ☐ **Evaluate:** Needs prompting to consider durability and usefulness. ☐ **Technical Knowledge:** Requires support to understand types of stitches and fastenings.	☐ **Research:** Identifies features of Stone Age storage. ☐ **Design:** Draws a labelled pouch design. ☐ **Make:** Cuts and stitches fabric with support. ☐ **Evaluate:** Comments on usefulness and durability. ☐ **Technical Knowledge:** Knows basic stitches and fastenings.	☐ **Research:** Explains Stone Age needs and relates them to design. ☐ **Design:** Includes accurate measurements and thoughtful choices. ☐ **Make:** Works with neat, strong stitching. ☐ **Evaluate:** Suggests improvements based on user needs. ☐ **Technical Knowledge:** Explains fastenings and stitch strength.

Year 4

Autumn: Textiles – Bag a story

WTS	EXS	GDS
☐ **Research:** Needs support evaluating examples of bags and their functions. ☐ **Design:** Needs guidance to create a scale-accurate plan with key features. ☐ **Make:** Needs assistance sewing accurately and assembling parts. ☐ **Evaluate:** Needs help considering how well the product meets the user's needs. ☐ **Technical Knowledge:** Requires support understanding hems, seams, and reinforcement.	☐ **Research:** Identifies features of bags and their functions. ☐ **Design:** Produces a plan with measurements. ☐ **Make:** Uses accurate stitching and assembly with support. ☐ **Evaluate:** Discusses how well it meets the purpose. ☐ **Technical Knowledge:** Understands hems, seams and reinforcement.	☐ **Research:** Compares bag designs with detailed reasoning. ☐ **Design:** Produces precise, well-scaled plans. ☐ **Make:** Works with independence and neat finishes. ☐ **Evaluate:** Reflects deeply on function and aesthetic. ☐ **Technical Knowledge:** Explains reinforcement choices.

Spring: Construction – Greek Vases

WTS	EXS	GDS
☐ **Research:** Needs support exploring Greek vase styles and patterns. ☐ **Design:** Needs help sketching a detailed vase plan. ☐ **Make:** Needs guidance constructing a stable, smooth 3D form. ☐ **Evaluate:** Needs support comparing their vase with historical examples. ☐ **Technical Knowledge:** Requires help understanding clay-forming or card construction methods.	☐ **Research:** Identifies features of Greek vases. ☐ **Design:** Produces a decorative plan. ☐ **Make:** Forms a stable vase structure with support. ☐ **Evaluate:** Compares product with Greek examples. ☐ **Technical Knowledge:** Knows methods for forming shapes.	☐ **Research:** Explains purpose and style of Greek vases. ☐ **Design:** Includes accurate patterns and shaping ideas. ☐ **Make:** Produces a smooth, strong, well-finished structure. ☐ **Evaluate:** Suggests improvements linked to historical accuracy. ☐ **Technical Knowledge:** Explains form and technique choices.

Summer: Cooking and Nutrition – Root and shoot

WTS	EXS	GDS
☐ **Research:** Needs support identifying root vegetables and seasonal produce. ☐ **Design:** Needs guidance planning a simple summer dish. ☐ **Make:** Needs assistance peeling, slicing and combining safely. ☐ **Evaluate:** Needs help describing flavour, texture and presentation. ☐ **Technical Knowledge:** Requires support understanding cooking changes.	☐ **Research:** Identifies root vegetables and describes taste/texture. ☐ **Design:** Plans a simple seasonal dish. ☐ **Make:** Prepares food safely. ☐ **Evaluate:** Discusses appearance and taste. ☐ **Technical Knowledge:** Knows how ingredients change when heated.	☐ **Research:** Selects ingredients based on flavour combinations. ☐ **Design:** Creates thoughtful and balanced dishes. ☐ **Make:** Works with accuracy in preparation and cooking. ☐ **Evaluate:** Suggests detailed improvements. ☐ **Technical Knowledge:** Explains cooking effects clearly.

Year 5

Autumn: Construction – Fair Tale engineering

WTS	EXS	GDS
☐ **Research:** Needs support exploring how pulleys/levers work in real structures. ☐ **Design:** Needs help creating a detailed annotated diagram showing mechanisms. ☐ **Make:** Needs guidance assembling mechanisms accurately. ☐ **Evaluate:** Needs support testing how well the mechanism solves the problem. ☐ **Technical Knowledge:** Requires help understanding forces and motion basics.	☐ **Research:** Identifies how pulleys and levers work. ☐ **Design:** Draws a mechanism design with labelled parts. ☐ **Make:** Assembles mechanisms with some precision. ☐ **Evaluate:** Tests product function and comments. ☐ **Technical Knowledge:** Understands basic forces and motion.	☐ **Research:** Compares mechanisms and explains efficiency. ☐ **Design:** Creates innovative mechanism designs. ☐ **Make:** Works precisely and solves problems independently. ☐ **Evaluate:** Gives detailed functional evaluations. ☐ **Technical Knowledge:** Explains mechanical principles confidently.

Spring: Textiles – Moonlit magic

WTS	EXS	GDS
☐ **Research:** Needs help exploring fabric textures and artistic textile examples.	☐ **Research:** Identifies how textiles can create atmosphere.	☐ **Research:** Analyses artistic textile examples. ☐ **Design:** Produces ambitious, expressive designs.

☐ **Design:** Needs support planning an atmospheric textile piece with clear stitching choices. ☐ **Make:** Needs assistance sewing creatively and securely. ☐ **Evaluate:** Needs guidance explaining how effectively the design creates atmosphere. ☐ **Technical Knowledge:** Requires support understanding embroidery and decorative techniques.	☐ **Design:** Produces a plan showing stitches and decoration. ☐ **Make:** Uses stitching techniques with support. ☐ **Evaluate:** Discusses how well the mood was created. ☐ **Technical Knowledge:** Knows decorative stitches.	☐ **Make:** Works with precision and creativity. ☐ **Evaluate:** Reflects deeply on artistic choices. ☐ **Technical Knowledge:** Explains advanced decorative methods.

Summer: Food and Nutrition – Central America on a plate

WTS	EXS	GDS
☐ **Research:** Needs support researching cultural food traditions. ☐ **Design:** Needs guidance planning a dish using appropriate flavour combinations. ☐ **Make:** Needs assistance cooking with accuracy and safety. ☐ **Evaluate:** Needs prompting to reflect on cultural influence and flavour balance. ☐ **Technical Knowledge:** Requires help understanding herbs, spices, and cooking processes.	☐ **Research:** Describes cultural food features. ☐ **Design:** Plans a dish using appropriate ingredients. ☐ **Make:** Cooks safely and follows steps. ☐ **Evaluate:** Comments on cultural influence. ☐ **Technical Knowledge:** Knows basic use of herbs/spices.	☐ **Research:** Analyses cultural influences in depth. ☐ **Design:** Produces thoughtful and authentic combinations. ☐ **Make:** Works with precision and timing. ☐ **Evaluate:** Gives detailed flavour and cultural evaluations. ☐ **Technical Knowledge:** Explains flavour and cooking processes.

Year 6

Autumn: Construction – Creating Anderson Shelters

WTS	EXS	GDS
☐ **Research:** Needs support understanding how shelters were used and built. ☐ **Design:** Needs guidance drawing accurate plans showing structure.	☐ **Research:** Describes key features and purposes. ☐ **Design:** Produces detailed plans. ☐ **Make:** Creates stable structures with support.	☐ **Research:** Explains the effectiveness of designs historically. ☐ **Design:** Produces accurate, thoughtful engineering plans.

☐ **Make:** Needs help creating strong frames and joining materials securely. ☐ **Evaluate:** Needs support testing strength and stability. ☐ **Technical Knowledge:** Requires help understanding reinforcement and material properties.	☐ **Evaluate:** Tests and comments on strength. ☐ **Technical Knowledge:** Understands reinforcement methods.	☐ **Make:** Builds highly stable and accurate structures. ☐ **Evaluate:** Gives deep reasoning about weaknesses. ☐ **Technical Knowledge:** Explains structural engineering clearly.

Spring: Construction – Electrifying creatures
How can we combine and design to create a spooky Gothic Themed model?

WTS	EXS	GDS
☐ **Research:** Needs support investigating simple circuits and Gothic architectural features. ☐ **Design:** Needs help planning a model combining circuits and structure. ☐ **Make:** Needs guidance wiring circuits safely and assembling components. ☐ **Evaluate:** Needs prompting to test and troubleshoot electrical function. ☐ **Technical Knowledge:** Requires support understanding electrical components and connections.	☐ **Research:** Identifies features of simple circuits. ☐ **Design:** Plans a product combining structure and electronics. ☐ **Make:** Constructs circuits safely with support. ☐ **Evaluate:** Tests and identifies issues. ☐ **Technical Knowledge:** Knows key electrical components.	☐ **Research:** Explains electrical functions confidently. ☐ **Design:** Integrates circuits creatively and accurately. ☐ **Make:** Builds reliable circuits and structures independently. ☐ **Evaluate:** Diagnoses faults thoughtfully. ☐ **Technical Knowledge:** Understands electrical flow and component purpose

Summer 1: Textiles – Trash to Treasure

WTS	EXS	GDS
☐ **Research:** Needs support exploring upcycled examples and materials. ☐ **Design:** Needs guidance planning how to repurpose materials effectively.	☐ **Research:** Identifies ways materials can be reused. ☐ **Design:** Plans how to repurpose items. ☐ **Make:** Joins unconventional materials.	☐ **Research:** Evaluates upcycled products in detail. ☐ **Design:** Produces innovative and environmentally-aware plans.

☐ **Make:** Needs help manipulating and joining unconventional materials. ☐ **Evaluate:** Needs support judging durability and creativity. ☐ **Technical Knowledge:** Requires help understanding sustainability and material properties	☐ **Evaluate:** Comments on creativity and durability. ☐ **Technical Knowledge:** Knows basic sustainability concepts.	☐ **Make:** Works creatively and accurately with unconventional materials. ☐ **Evaluate:** Gives detailed feedback on function and sustainability. ☐ **Technical Knowledge:** Explains environmental impacts.

Summer 2 – Food and Nutrition

WTS	**EXS**	**GDS**
☐ **Research:** Needs support investigating ingredient combinations. ☐ **Design:** Needs help creating an original recipe with clear steps. ☐ **Make:** Needs guidance following and adapting their recipe safely. ☐ **Evaluate:** Needs prompting to judge the success of the new dish. ☐ **Technical Knowledge:** Requires help understanding how ingredients behave when combined.	☐ **Research:** Identifies suitable ingredient combinations. ☐ **Design:** Creates a simple original recipe. ☐ **Make:** Follows and adapts recipe. ☐ **Evaluate:** Reflects on taste and appearance. ☐ **Technical Knowledge:** Knows basic food behaviours.	☐ **Research:** Analyses properties of ingredients confidently. ☐ **Design:** Designs ambitious, creative, well-balanced recipes. ☐ **Make:** Works independently and accurately. ☐ **Evaluate:** Gives detailed, constructive evaluations. ☐ **Technical Knowledge:** Explains the science behind the recipe outcome.

Vocabulary Progression in Design and Technology:

Textiles
Construction
Food and Nutrition

Year Group:	Autumn:	Spring:	Summer:
EYFS	• cut, stick, join • fold, bend, twist • smooth, rough, soft, hard • materials, tools, shapes • build, make, design, create • try, test, change, improve • safe, careful, strong		
Year 1	• fabric, textile, texture • thread, needle (plastic), stitch • join, fasten, glue • template, cover, page • soft, bumpy, fluffy, rough	• material, recycle, safe, strong • cut, slot, attach, assemble • wheel, axle, body • test, evaluate	• fruit, vegetable, plant • slice, chop, wash, mix • healthy, fresh, natural • smell, taste, crunchy, sweet
Year 2	• structure, stability, strong, weak • join, reinforce, base • flammable, waterproof • design criteria	• fabric, felt, pattern • running stitch, needle, thread • decoration, embellishment • purpose, function	• peel, grate, mash • nutrition, energy, vitamins • balanced diet • recipe, ingredient, method
Year 3	• ribbing, corrugation, lamination • structure, support, reinforcement • prototype, accuracy • stable, durable	• fair trade, ethical, sustainable • melt, combine, set • temperature, hygiene • origin, cocoa bean	• seam, hem, stitch types • durable, functional, fastening • template, pattern piece • weave, leather/skin (historical context)

Year 4	• seam allowance, applique • hemming, lining, fastening (button, zip, Velcro) • accuracy, precision • strength, durability	• form, shape, mould, carve • slip, score, join (clay vocabulary) • decorative, functional • motif, pattern, symmetry	• boil, roast, steam • seasonal, local, fresh produce • food groups, nutrients • sensory vocabulary (earthy, crisp, sweet, savoury)
Year 5	• mechanism, lever, pivot, fulcrum • pulley, axle, frame • force, motion, load • prototype, refine	• texture, tone, composition • embroidery, decorative stitch • overlay, layering, embellishment • aesthetic, atmosphere	• culture, cuisine, flavour profile • spices, herbs, marinade • fry, sauté, simmer • balanced meal, food origins
Year 6	• structure, reinforcement, bracing • corrugated metal, blast protection • air raid, design purpose • stability, durability	• circuit, component, switch • series, conductor, insulator • housing, mount, enclosure • design specification	• repurpose, upcycle, sustainability • patchwork, applique, repair • fibre, woven, non-woven • ecological impact • fusion, experiment, innovate • adapt, combine, evaluate • texture profile, flavour balance • recipe development

Addressing misconceptions in Design and Technology:

Year Group:	**Autumn:**	**Spring:**	**Summer:**
EYFS	• Thinking tools only have *one* correct use (e.g., scissors only cut straight lines). • Believing all materials behave the same when cut or joined.	• Believing stronger pressure always means more accuracy when using tools. • Thinking natural materials can't break or tear.	• Assuming their creation works the same way for everyone. • Believing they must copy an adult design exactly. • Thinking a design should remain the same and shouldn't be altered after testing.

	• Assuming things will stay together without needing to join them securely. • Thinking designs don't need to match a purpose — "just making anything is fine."	• Assuming structures will stand without support. • Believing that once something is built, it cannot be changed or improved.	
Year 1	• Believing all fabrics feel the same and can be used interchangeably. • Thinking glue works as well as stitching for all textile joins. • Assuming neat stitching is not important for the final product. • Believing templates don't need to be followed accurately.	• Assuming any recycled material is strong enough for toy construction. • Thinking wheels will turn even if the axle is fixed incorrectly. • Believing decorations are more important than safety or stability. • Thinking toys do not need to be tested because they "look fine."	• Believing all plant-based foods are automatically healthy, regardless of preparation. • Thinking fruit and vegetables don't need washing. • Assuming chopping techniques don't matter for safety. • Thinking food can be mixed in any order without affecting the result.
Year 2	• Assuming tall structures are automatically stronger. • Believing the Great Fire of London happened because houses were "badly built," not because of close spacing and flammable materials. • Thinking a base isn't important for stability. • Assuming all materials burn in the same way.	• Believing felt won't fray so it cannot tear. • Thinking large stitches make a piece stronger. • Assuming decorative features don't impact usability. • Believing patterns don't require planning or marking out.	• Thinking vegetables must always be cooked to be edible. • Assuming healthy foods don't need portion control. • Thinking peeling and grating are interchangeable techniques. • Believing recipes cannot be adapted for taste or texture.

Year 3	• Thinking thicker cardboard is always stronger than thin but reinforced card. • Believing corrugation or ribbing is decorative, not functional. • Assuming a lid isn't necessary for protection. • Thinking accuracy in folding doesn't affect strength.	• Believing "fair trade" means chocolate tastes different, not that it relates to ethics. • Thinking all chocolate melts at the same temperature. • Assuming hygiene isn't important because chocolate will be heated. • Believing sustainable choices don't impact design decisions.	• Thinking a pouch only needs one layer of material to be strong. • Assuming fastenings are optional because the pouch "holds itself closed." • Believing patterns and templates aren't necessary. • Thinking historical pouches were decorative rather than functional.
Year 4	• Assuming a bag is strong because the fabric feels thick. • Believing lining is only for decoration. • Thinking seams don't need seam allowance to stay strong. • Assuming symmetrical designs don't require measuring.	• Thinking ancient vases were made in one piece. • Believing clay dries instantly or won't crack. • Assuming decoration doesn't reflect Greek stories or beliefs. • Thinking shape doesn't affect function (e.g., storage, pouring).	• Believing all root vegetables taste the same. • Thinking "healthy" means low in calories only. • Assuming boiling is the only way to cook vegetables. • Thinking nutrition doesn't change depending on how food is cooked.
Year 5	• Believing a longer lever is always better. • Thinking pulleys and levers work automatically without secure fixing. • Assuming direction of movement doesn't change with mechanism placement.	• Thinking "atmosphere" refers only to colour, not texture or material. • Assuming any stitch can be used for any purpose.	• Believing all spicy foods come from the same culture. • Thinking spices are only for "making things hot." • Assuming cultural dishes cannot be adapted.

	• Believing decoration doesn't interfere with mechanical movement.	• Believing layered fabric always increases strength, not just aesthetics. • Thinking textiles cannot express mood or story.	• Believing frying is automatically unhealthy regardless of food type.
Year 6	• Thinking shelter strength comes from thickness, not shape (corrugation). • Assuming WWII shelters were underground bunkers everywhere. • Believing materials were chosen only because they were cheap. • Thinking the design wasn't tested or refined historically.	• Believing electricity flows only if wires "look connected." • Thinking all materials conduct electricity. • Assuming adding more components always makes a model better. • Believing bulbs will light no matter where they are placed in a circuit.	• Thinking recycled materials are always weak. • Believing upcycling is just decoration, not functional improvement. • Assuming materials cannot be repaired or repurposed. • Thinking sustainability is only about reducing rubbish. • Believing combining any foods creates a "fusion dish." • Thinking recipes can be altered without changing cooking time or method. • Assuming texture doesn't affect taste. • Believing evaluation is only about taste, not appearance or nutrition.