Design & Technology Curriculum

West Meadows Primary School

Intent: knowledge, skills & the national curriculum

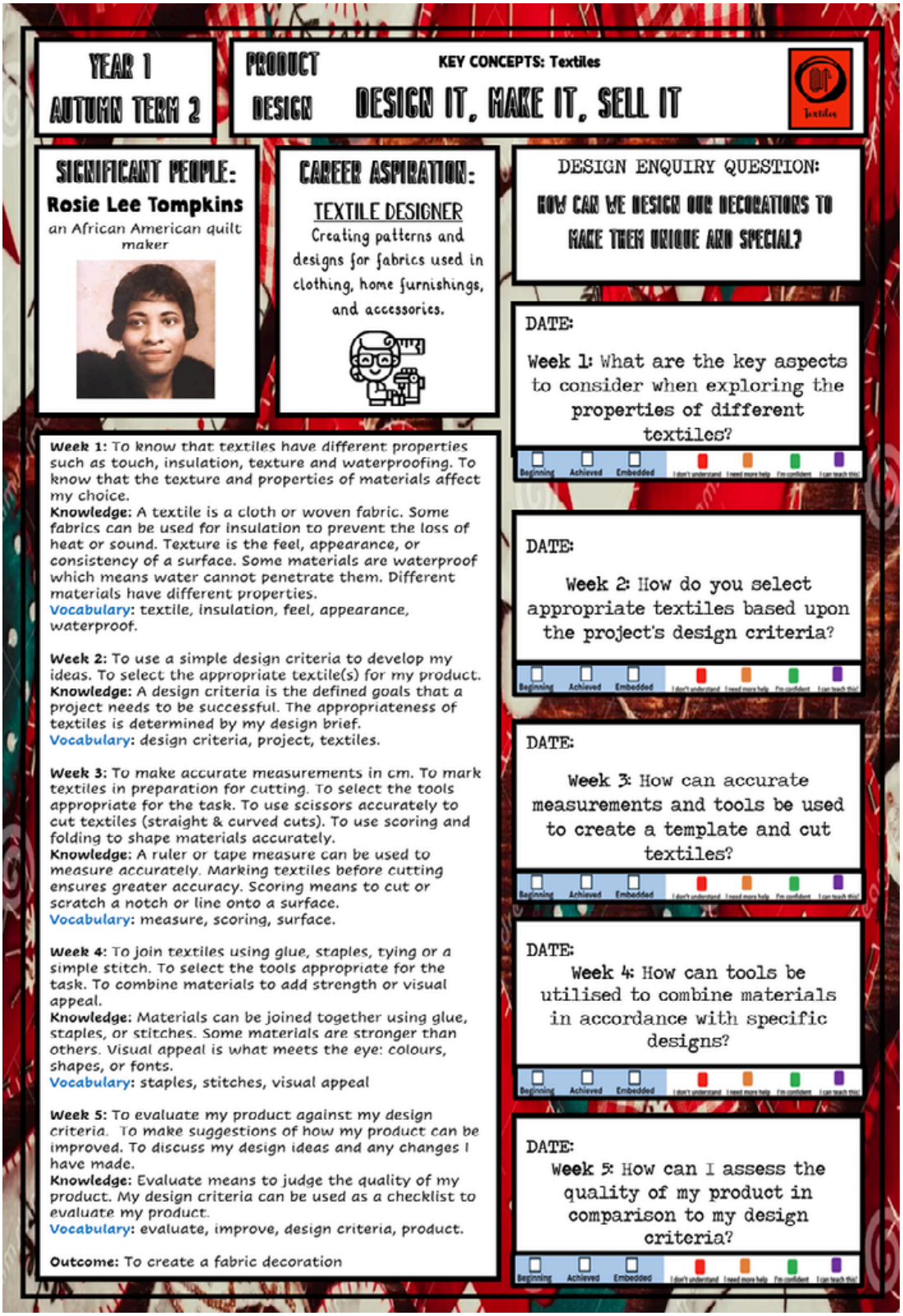
Our Design & Technology curriculum is taught discretely through specific concepts and themes, which is underpinned by the accelerated learning approach to teaching and learning.

The key concepts, principles and themes have been developed from the National Curriculum into a range of progressive knowledge and skills through which the children are helped to grow and develop to succeed in 21st century Britain. This progressive curriculum allows a purposeful way of teaching and learning, enabling us to provide a more meaningful and sequential approach to the schema for DT

At West Meadows, Design and Technology is an inspiring, rigorous and practical subject. Using creativity and imagination, pupils design and make products that solve real and relevant problems within a variety of contexts, considering their own and others' needs, wants and values. They acquire a broad range of subject knowledge and draw on various disciplines to inspire their learning.

As part of our Design and Technology curriculum, we cover several key areas:

HCAT Design & Technology Disciplines		
Food Technology	**Textiles**	**Resistant Materials**
Food Preparation	Design	Design
Cooking	Make	Make
Nutrition	Evaluate	Evaluate
		Technical Knowledge



An example of a DT Curriculum Organiser

The Design and Technology curriculum we offer is designed to meet the needs of all our pupils. It is rich, varied, imaginative and ambitious and meets the needs of individual learners by can easily be adapted for pupils with additional needs.

The intent of our Design & Technology curriculum is to provide an inspiring, rigorous and practical learning experience that fosters creativity and imagination in our pupils. Through a variety of creative and practical activities, we aim to equip students with the knowledge, understanding and skills needed to engage in a process of designing and making. Our curriculum focuses on three key areas: product design, mastering the maker techniques and food technology.

In product design, pupils will learn to solve real and relevant problems, working with a range of materials including textiles and resistant materials. The mastery of making techniques will be explored through hands-on experiences, allowing students to develop their skills across various contexts such as home, school, leisure and industry. Food technology will be integrated following the national curriculum requirements, promoting a 'pro-food' approach and developing core competences for children aged 5 to 11 years. By the end of Key Stage 2, pupils will have gained the ability to work in relevant contexts, applying their design and technology skills to create innovative solutions.

Implementation: Accelerated Learning

Our Design and Technology curriculum is taught discretely through specific concepts and themes, to ensure depth and rigour in key subject concepts and context. The Design and Technology curriculum is rich and varied and provides our pupils with the skills required for life in the 21st Century

Planned, systematic encounters with substantive concepts in specific and varied contexts support pupils' progress. Many of these concepts feature regularly throughout the study of DT in a range of disciplines.

- Design
- Make
- Evaluate
- Technical Knowledge

The Accelerated Learning Cycle, based on the work of Alastair Smith, is applied in all lessons. It stems from the idea of a supportive and challenging learning environment. The cycle has active engagement through multi-sensory learning, encourages the demonstrating understanding of learning in a variety of ways and the consolidation of knowing.

A gather, skills, apply approach to planning and delivery of lessons is taken across school to ensure children develop a deep understanding of specific skills and are able to apply these in a range of situations.

Our curriculum is designed with a core focus on retrieval practice, recognising its pivotal role in helping students know more and remember more. This intent is actualised through a dual approach: integrated retrieval within individual lessons and a structured, subject retrieval practice rota. In-session retrieval activities are carefully crafted to reinforce key concepts and knowledge, promoting immediate recall and application. Complementing this, our weekly retrieval practice rota systematically revisits content across various subjects, ensuring spaced repetition and interleaving of crucial information. This comprehensive strategy aims to strengthen neural connections, facilitate the transfer of knowledge to long-term memory and build increasingly complex mental models. By embedding retrieval practice as a fundamental aspect of our curriculum, we strive to enhance our pupils' ability to retain, recall and apply their learning effectively, thereby fostering deeper understanding and more robust academic progress.

Our curriculum is ambitious for all pupils, including those children with SEND. Curriculum designers and teachers have high expectations of what SEND pupils can achieve and the curriculum is not diluted or unnecessarily reduced for SEND pupils. Every pupil is different and so what works for each pupil varies. Pupil's individual needs are considered and adaptations are planned to ensure the success of pupils in all subjects.

The way that our curriculum is designed ensures that chunks of learning are sequenced in a coherent way to enable all pupils, including those with SEND, to build on prior knowledge. Too much information at once can be a barrier to learning which is one of the reason why we have chosen half termly curriculum drivers.

Where pupils are identified with having complex needs, it may be appropriate to provide a personalised curriculum which will be based on individual needs and will retain ambition for the pupil.

Where working memory is an issue for pupils, including those with SEND, we look to reduce extraneous load as much as possible as well as identifying key information when teaching. This helps pupils to pay attention to the content which they are expected to learn. Adaptations to support individual pupils will be recorded on personal school support plans.

We appreciate that it is not appropriate to adopt a one size fits all approach to SEND provision and in design and technology, adaptations are based on individual needs where appropriate. Targeted teaching can be effective to ensure that individual pupils achieve specific goals, starting with identifying subject matter to support those pupils who struggle with abstract ideas. When introducing pupils to the work of designers, it can be useful to start with identifiable subject matter so that pupils have more chance of making sense of the construction and design process. Time is also planned to ensure pupils with SEND are pre-taught vocabulary to support their understanding. Teachers may need to make adaptations to ensure that SEND learners can access the curriculum, such as adjusting equipment or allowing additional time.

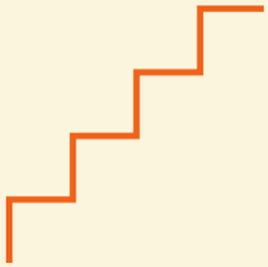
Impact: Assessment

Formative assessment is ongoing throughout each lesson. It judges progress and enables teachers to make flexible adaptions to their planned teaching.

Through this regular ongoing assessment, tasks are matched to the ability of each child through adapted activities and including adult support, providing a level of challenge that is stimulating for pupils and questioning skills.

Our schools are dedicated to providing a high-quality curriculum that is ambitious for all pupils. We have a robust system in place to ensure children are making strong progress in their foundation subjects using the Arbor MIS platform to conduct summative assessments at key points in the year. The purpose of these assessments is for our subject leaders and teachers to analyse pupil understanding against our assessment statements, which are progressively devised from our taught curriculum. This allows children to acquire knowledge that builds upon the fundamentals of their prior knowledge in a well designed curriculum sequence.

Our Progressive Curriculum



Design Technology and Art & Design Curriculums in EYFS

Expressive Arts and Design (educational programme) creating with materials: The development of children's artistic and cultural awareness supports their imagination and creativity. It is important that children have regular opportunities to engage with the arts, enabling them to explore and play with a wide range of media and materials. The quality and variety of what children see, hear, and participate in is crucial for developing their understanding, self-expression, vocabulary, and ability to communicate through the arts. The frequency, repetition and depth of their experiences are fundamental to their progress in interpreting and appreciating what they hear, respond to, and observe

Skills and knowledge (Fluid across FS1 FS2)	What does this look like in provision/adult interactions?	Transition to KS1	Characteristics of effective learning
- Notice patterns with strong contrasts and be attracted by patterns resembling the human face - Start to make marks intentionally (0-3)	- Ensure that the physical environment includes objects and materials with different patterns, colours, tones and textures for babies and young children to explore. - Offer a wide range of different materials and encourage children to make marks in different ways e.g. in cornflour, place hands and feet in paint	- I respond to ideas and starting points (Art)	Children in EYFS learn at different rates and abilities through: • **Playing and exploring** – children investigate and experience things, and 'have a go'. • **Active learning** – children concentrate and keep on trying if they encounter difficulties and enjoy achievements. • **Creating and thinking critically** – children have and develop their own ideas, make links between ideas, and develop strategies for doing things
- Explore paint, using fingers and other parts of body as well as brushes and tools - Express ideas and feelings through making marks - Explore different materials, using senses - Use imagination as they consider what they can do with materials - Make simple models which express their ideas (0-3)	- Provide a wide range of found materials ('junk') as well as blocks, clay, soft wood, card, offcuts of fabrics and materials with different textures. - Opportunities to use appropriate tools and joining methods for the materials offered.	- I can describe textiles by the way they feel (DT) - I can make a structure (DT) - Enjoys using graphic tools, fingers, hands, chalks etc (Art) - Use and begin to control a range of media (Art) - I can build construction using a variety of objects (Art)	
- Explore different materials freely, to develop their ideas about how to use them and what to make (3-4)	- Offer opportunities to explore scale e.g., long strips of wallpaper, child size boxes, different surfaces to work on e.g., paving, floor, tabletop, or easel Listen and understand what children want to create before offering suggestions. - Outdoor mark making on a larger scale e.g., paint brushes and powder paint, making own paintbrushes out of twigs and leaves.	- I can measure, mark out and cut fabric (DT) - I can join fabric using glue (DT) - Simple pictures by printing from objects such as fruit (Art) - I can develop simple patterns by using objects (Art) - I can make my own printing blocks (Art)	
- Develop own ideas and decide which materials to use - Join different materials and explore different textures - Create closed shapes with continuous lines. (3-4)	- Encourage them to develop their own creative ideas, give real life props or clip art around interests to inspire and ignite curiosity. - Encourage children to draw from their imagination and observation. - Using skills planner, add resources that are fluid and progressive to give them opportunity to join different materials e.g., PVA glue (Low level, Split pins, hole punch (high level)	- I understand how textiles can be used to make products (DT) - Produce lines of different thickness and tone using a pencil (Art) - Start to produce different patterns and textures from observations (Art)	
- Use drawing to represent ideas like movement or loud noises - Show different emotions in drawings and paintings - Explore colour and colour mixing (3-4)	- Talk to children about the differences between colours. Help them to explore and refine their colour mixing. - Allow children to have materials so they can mix their own colours e.g. powder paint.	- I can use pictures and words to describe what I want to do (DT) - Recognise and name the primary colours being used. Mix and match colours to different objects (Art) - Explore working with paint on different surfaces (Art)	
- Explore, use and refine a variety of artistic effects to express their ideas (4-5)	- Introduce children to the work of artists from across times and cultures. - Discuss children's responses to what they see. Visit galleries and museums to generate inspiration and conversation about art and artists.	- I can identify the work of a range of artists, craft makers and designers and make links to my own work (Art) - Use drawings to tell a story (Art) - Create accurate more drawings of people (Art)	
- Return and build on their previous learning - Create collaboratively sharing ideas, resources, and skills (4-5)	- Provide opportunities to work together to develop and realise creative ideas. - Encourage them to think about and discuss what they want to make. Discuss problems and how they might be solved as they arise. - Link to Characteristics (thinking and creating critically)	- I can talk about mine and others work (DT) I can how a product works (DT) - I know the features of familiar products (DT) - I think of ideas and with help can put them into practice (DT) - I have altered a textile to make it stronger (DT) - Look and talk about what they have produced describing simple techniques and media (Art)	
- Managing self (DT): Manage their own basic hygiene and personal needs, including dressing, going to the toilet, and understanding the importance of healthy food choices. - Fine motor (DT): Use a range of small tools, including scissors, paintbrushes, and cutlery. Begin to show accuracy and care when drawing.	- Talk to children about the importance of eating healthily and brushing their teeth. Consider how to support oral health. For example, some settings use a toothbrushing programme. Talk to children about why it's important to wash their hands carefully and throughout the day, including before they eat and after they've used the toilet.	- I have made a food product (DT) - I understand that I must wash my hands and keep work surfaces clean when preparing food (DT) - I can use knives safely to cut food with help (DT) - I can cut materials using scissors (DT) - Enjoy using a variety of malleable media (Art) - Cut shapes using scissors (Art)	

Early Learning Goals

- Share their creations, explaining the process they have used.
- Safely use and explore a variety of materials, tools, and techniques, experimenting with colour, design, texture, form and function.

Design & Technology Curriculum Progression in Early Years

Design and Technology

Food Technology	EYFS	Year One	Year Two	Year Three	Year Four	Year Five	Year Six
Food Preparation	I understand that I must wash my hands when preparing food.	I know how to prepare food safely and hygienically and can describe what this means. I know how to accurately weigh and measure my ingredients.	I know how to work in a safe and hygienic way. I know how to select ingredients for my food product. I know how to measure my ingredients by weight or quantity, using scales where appropriate.	I know how to produce a food product which uses a selection of ingredients to meet an identified need (e.g. lunchtime healthy snack healthy sandwich, low gluten). I know that different foods require storing in different ways.	I know how to select ingredients that complement one another as part of a recipe.	I know how a recipe can be adapted to change the appearance, taste, texture, and aroma.	I know how to use ratio and proportion to produce recipes of my food product, scaling up and down for different quantities.
Cooking	I know how to use a mixing bowl to prepare a mixture.	I know how to describe my food product using its properties: taste, smell, texture, and consistency. I know how to use techniques such as cutting, peeling, and grating. I know how to prepare simple dishes safely and hygienically without the use of a heat source.	I know how to describe my food product in terms of taste, flavour, texture and relate this to the intended purpose of the food. I know how to use techniques such as cutting, peeling, grating, spreading, and mixing. I know how to prepare simple dishes safely and hygienically without the use of a heat source.	I know how to use a range of techniques including peeling, chopping, slicing, grating, mixing, spreading, kneading, and baking. I know how to present my food product to impress the intended user. I know how to prepare and cook a variety of dishes safely and hygienically using a heat source (where appropriate).	I know how to create a product that has been cooked or chilled to change the nature of the raw ingredients. I know how to use a range of techniques including peeling, chopping, slicing, grating, mixing, spreading, kneading, and baking. I know how to prepare and cook a variety of dishes safely and hygienically using a heat source (where appropriate).	I know how to use my science knowledge of irreversible changes to create food products that combine to make a new material, that I know how to then describe using its sensory qualities. I know how to prepare and cook a variety of dishes safely and hygienically using a heat source (where appropriate).	I know how to prepare and cook a variety of dishes safely and hygienically using a heat source (where appropriate).
Nutrition	I know that some foods are healthy.	I know how to name and sort foods into the five groups (fruit & vegetables, starchy food, dairy, protein, and fat).	I know that everyone should eat at least five portions of fruit and vegetables per day.	I know that a healthy diet is made up from a variety and balance of different food and drink.	I know that to be healthy, food and drink are needed to provide energy to the body.	I know that different food and drink contain different substances – nutrients, water, and fibre – that are needed for health.	I know that different foods have different nutritional values (kcals, fat, carbs, protein).

Design and Technology Whole School Progression Document