



DESIGN & TECHNOLOGY

Design it. Make it. Improve it.

CREATING SOLUTIONS. SHAPING THE FUTURE.

Design and Technology inspires children to be creative problem solvers who design and make products that have purpose and meaning. Through an iterative process of designing, making, evaluating and improving, children develop practical skills, resilience and innovation to succeed in an ever-changing world.



LEADERSHIP



ORGANISATION



RESILIENCE



INITIATIVE



COMMUNICATION



KINDNESS

• OUR DT GOLDEN THREADS •



MECHANISMS AND MOVEMENT

Understanding how things move and using mechanisms to create movement in purposeful products.



TEXTILES

Exploring and using textile materials and techniques to design and make functional and decorative products.



FOOD

Preparing and cooking food, understanding nutrition and making healthy choices.



STRUCTURES

Designing and building strong, stable structures for a range of purposes and users.



THINK CREATIVELY • WORK SKILLFULLY • EVALUATE CAREFULLY • IMPROVE CONFIDENTLY



Year 2 Design and technology Medium Term plans

<u>Year 2</u>	<u>Castles and Coastlines</u> <u>The Great Castle Banquet</u>	<u>Queens and the United Kingdom</u> <u>Purses Through Time</u>	<u>Seaside</u> <u>Beach Hut Builders</u>
Prior learning	• Knows that food comes from plants and animals. • Can prepare simple foods safely using basic tools. • Can design and make a food product for a purpose. • Can evaluate a finished product.	• Can design a product for a purpose. • Can select and use simple materials and tools. • Can join materials in different ways. • Can evaluate and improve a finished product.	• Knows that structures are built for a purpose. • Can build simple structures using different materials. • Can join and strengthen materials. • Can evaluate and improve a finished structure.
Year 2	Topic: Cooking and Nutrition – Castle Banquet Enquiry Question: How can we design and make a healthy banquet food fit for a castle?	Topic: Textiles – Victorian Purse Enquiry Question: How can we design and make a purse for a specific user?	Topic: Structures – Beach Huts Enquiry Question: How can we design and build a strong and appealing beach hut?
Explore 1	WALT: explore foods eaten at castle banquets and evaluate existing food products. Children: • Investigate foods eaten in castles. • Compare foods from the past and present. • Discuss where foods come from. • Evaluate existing food products. Skills: • Evaluates existing products. • Identifies food origins. • Expresses opinions. Vocabulary: banquet, castle, ingredient, evaluate, origin	WALT: explore and evaluate purses used in Victorian times. Children: • Explore a range of Victorian purses. • Compare Victorian and modern purses. • Identify features, materials and purposes. • Discuss what makes a purse useful and appealing. Skills: • Evaluates existing products. • Identifies product features. • Uses vocabulary to discuss products. Vocabulary: purse, textile, fabric, feature, evaluate, Victorian	WALT: explore and evaluate a range of beach huts and structures. Children: • Explore different beach hut designs. • Discuss the purpose of beach huts. • Identify key features and materials. • Evaluate what makes a beach hut useful and appealing. Skills: • Evaluates existing products. • Identifies key features. • Expresses opinions about products. Vocabulary:

			beach hut, structure, shelter, feature, evaluate
Design 1	WALT: design a simple banquet food using design criteria. Children: • Discuss who their food is for. • Create simple design criteria. • Draw and label a design. • Choose suitable ingredients. Skills: • Generates ideas. • Develops design criteria. • Communicates ideas through drawings. Vocabulary: design, criteria, user, purpose, ingredients	WALT: design a purposeful and appealing purse for a specific user. Children: • Discuss who their purse is for. • Create simple design criteria. • Draw and label a purse design. • Explain design choices. Skills: • Generates ideas. • Develops design criteria. • Communicates ideas through drawings. Vocabulary: design, criteria, user, purpose, plan	WALT: design a beach hut for a specific user. Children: • Discuss who their beach hut is for. • Create simple design criteria. • Draw and label a beach hut design. • Choose suitable materials. Children create a simple paper mock-up of their design before making the final product. Skills: • Generates ideas. • Develops design criteria. • Communicates ideas through drawings. Vocabulary: design, criteria, user, purpose, materials
Make 1	WALT: select and prepare ingredients safely and hygienically. Children: • Learn food hygiene rules. • Select ingredients. • Practise cutting, spreading and assembling. • Use tools safely. Skills: • Uses tools safely. • Selects ingredients appropriately.	WALT: explore and practise joining textiles. Children: • Investigate different fabrics. • Practise simple sewing techniques. • Learn how to join materials safely. • Explore ways to strengthen joins. Skills: • Selects suitable materials. • Uses simple sewing techniques. • Joins materials effectively.	WALT: explore ways of making structures strong, stiff and stable. explore and use mechanisms (for example, levers, sliders, wheels and axles), in their products Children: • Investigate different construction techniques. • Explore folding, rolling and joining materials. • Test structures for strength and stability.

	• Demonstrates food preparation skills. Vocabulary: hygiene, prepare, slice, spread, assemble	Vocabulary: design, criteria, user, purpose, plan	• Discuss which methods work best. Skills: • Explores construction techniques. • Tests materials. • Identifies successful joins. Vocabulary: strong, stiff, stable, join, support
Make 2	WALT: make a banquet food following a design. Children: • Follow a design plan. • Use ingredients appropriately. • Assemble a final product. • Work safely and hygienically. Skills: • Follows a plan. • Uses ingredients appropriately. • Creates a finished product. Vocabulary: construct, assemble, ingredient, product	WALT: construct a purse using textiles. Children: • Follow their design. • Cut materials carefully. • Join fabric pieces together. • Create the basic purse structure. Skills: • Follows a design. • Uses sewing techniques. • Constructs a textile product. Vocabulary: construct, stitch, fabric, template, structure	WALT: construct a beach hut using a range of materials. Children: • Follow their design plan. • Select and use materials appropriately. • Build the main structure. • Check stability throughout construction. Skills: • Uses tools and materials appropriately. • Constructs a simple structure. • Follows a design plan. Vocabulary: construct, assemble, structure, framework, build
Make 3	WALT: improve and present a banquet food. Children: • Review the product. • Improve presentation. • Compare with design criteria. • Prepare for evaluation. Skills: • Refines products.	WALT: decorate and improve a purse. Children: • Add decorative features. • Consider appearance and function. • Review work against design criteria. • Improve finished products. Skills: • Refines products.	WALT: improve and decorate a beach hut. Children: • Add features such as windows, doors and signs. • Decorate the structure. • Strengthen weak areas where necessary. • Review work against design criteria. Skills: • Refines products.

	• Makes purposeful choices. • Improves presentation. Vocabulary: improve, presentation, attractive, refine	• Selects decorative materials. • Makes purposeful choices. Vocabulary: decorate, embellishment, appearance, improve	• Makes purposeful improvements. • Selects materials appropriately. Vocabulary: decorate, improve, detail, feature, appearance
Reflect 1	WALT: evaluate a banquet food against design criteria. Children: • Recall and evaluate products. • Discuss successes. • Compare products with original designs. • Suggest improvements. Skills: • Evaluates products. • Reflects on decisions. • Identifies improvements. Vocabulary: evaluate, criteria, improve, successful	WALT: evaluate a purse against design criteria. Children: • Compare finished purses. • Discuss strengths and weaknesses. • Reflect on the making process. • Suggest improvements. Skills: • Evaluates products. • Reflects on decisions. • Identifies improvements. Vocabulary: evaluate, criteria, successful, improve	WALT: evaluate a beach hut against design criteria. Children: • Compare finished beach huts. • Discuss strengths and weaknesses. • Test structures for stability. • Suggest improvements for future designs. Skills: • Evaluates products. • Reflects on decisions. • Identifies improvements. Vocabulary: evaluate, criteria, stable, successful, improve
Assessment	How can we design and make a healthy banquet food fit for a castle? Children will demonstrate understanding by: • Exploring foods from the past and present. • Designing a food product for a purpose. • Preparing ingredients safely. • Making a product from a design. • Evaluating a finished product.	Enquiry Question: How can we design and make a purse for a specific user? Children will demonstrate understanding by: • Exploring and evaluating existing purses. • Designing a product for a user. • Using simple sewing and joining techniques. • Constructing a textile product. • Evaluating a finished purse.	Enquiry Question: How can we design and build a strong and appealing beach hut? Children will demonstrate understanding by: • Exploring and evaluating existing structures. • Designing a structure for a purpose and user. • Using construction techniques to strengthen structures. • Building a stable beach hut. • Evaluating a finished product.

End Point	Children design, make and evaluate a healthy banquet food inspired by foods served in castles. By the end of this unit, children will understand where food comes from and how foods can be prepared safely and hygienically. They will design, make and evaluate a healthy banquet food inspired by castle life and explain how their product met its purpose.	Children design, make and evaluate a Victorian-inspired purse using simple textile and sewing techniques. By the end of this unit, children will understand that textile products are designed for a purpose and user. They will use simple sewing techniques to design, make and evaluate a purse inspired by Victorian examples.	Children design, make and evaluate a beach hut structure that is strong, stable and appealing for a specific user. By the end of this unit, children will understand that structures are designed for a purpose and need to be strong, stiff and stable. They will design, construct and evaluate a beach hut using a range of materials and construction techniques.
Substantive Knowledge (What children need to remember)	Children will know: • Castle banquets included a variety of foods depending on wealth and status. • Food comes from plants and animals. • Some foods are healthier than others. • Food should be prepared hygienically. • Design criteria help designers make decisions. • Products are designed for a purpose.	Children will know: • A purse is designed to hold and store items. • Different fabrics have different properties. • Sewing is a method of joining textiles. • Design criteria help designers make decisions. • Products can be improved through evaluation.	Children will know: • Beach huts are designed to provide shelter and storage. • Structures need to be strong, stiff and stable. • Different materials have different properties. • Joining and strengthening techniques affect how well a structure works. • Design criteria help designers make decisions.
Disciplinary Knowledge (Thinking like a designer)	Children will: • Explore and evaluate existing products. • Design for a purpose and user. • Select ingredients appropriately. • Use tools safely and hygienically. • Follow a design plan. • Evaluate and improve products.	Children will: • Explore and evaluate existing products. • Design for a purpose and user. • Select appropriate materials. • Use sewing and joining techniques. • Evaluate and improve products.	Children will: • Explore and evaluate existing structures. • Design for a purpose and user. • Select appropriate materials. • Test and improve structures. • Evaluate finished products.
Adaptive Teaching	Support • Picture design templates. • Visual vocabulary cards. • Adult support during food preparation. • Pre-prepared ingredients where appropriate. • Step-by-step visual instructions. Challenge	Support • Pre-drawn templates. • Larger sewing needles. • Adult support during sewing. • Visual instructions and vocabulary mats. Challenge • Create more detailed decorations. • Use more complex stitching.	Support • Pre-drawn templates. • Visual examples of beach huts. • Adult support with cutting and joining. • Step-by-step instructions. • Vocabulary mats. Challenge

	• Design for a specific banquet guest. • Justify ingredient choices. • Explain how the food links to castle life. • Suggest multiple improvements. • Adapt the recipe for a different user.	• Justify design choices. • Suggest multiple improvements.	• Create more detailed structures. • Explore different strengthening techniques. • Justify material choices. • Explain why their structure is stable. • Suggest multiple improvements.
Assessment for Learning	Throughout the unit, teachers will assess understanding through: • Design drawings. • Discussion and questioning. • Observation of food preparation skills. • Product evaluations. • Reflection activities. • Retrieval of key vocabulary and knowledge.	Throughout the unit, teachers will assess understanding through: • Design drawings. • Discussion and questioning. • Observation of sewing techniques. • Product evaluations. • Reflection activities.	Throughout the unit, teachers will assess understanding through: • Design drawings. • Discussion and questioning. • Observation of construction techniques. • Testing activities. • Product evaluations. • Reflection activities.
National Curriculum coverage	Pupils should be taught to: • Design purposeful, functional and appealing products. • Generate, develop and communicate ideas through talking and drawing. • Select from and use a range of tools and equipment. • Select from and use ingredients according to their characteristics. • Understand where food comes from. • Evaluate existing products and their own ideas and products.	Pupils should be taught to: • Design purposeful, functional and appealing products. • Generate, develop and communicate ideas through drawing and discussion. • Select from and use a range of tools and materials. • Explore and use simple sewing and joining techniques. • Evaluate existing products and their own ideas and products.	Pupils should be taught to: • Design purposeful, functional and appealing products. • Generate, develop and communicate ideas through drawing and discussion. • Select from and use a range of tools and materials. • Build structures and explore how they can be made stronger, stiffer and more stable. • Evaluate existing products and their own ideas and products.

DT PROGRESSION TIMELINE EYFS-YEAR 6

Building knowledge, skills and creativity through design, make, evaluate and improve.



OUR JOURNEY	EYFS	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6
EXPLORING & UNDERSTANDING ↓ DESIGNING ↓ MAKING ↓ EVALUATING ↓ EVERY CHILD WILL...	Explore materials, foods and existing products through play and discussion.	Explore a range of products and materials. Talk about how and why things are made.	Explore more complex products and ingredients. Identify features and how they work.	Research products and ingredients in depth. Understand purpose and user.	Investigate how products work and are made. Understand systems and structures.	Analyse products in detail. Consider function, aesthetics, sustainability and user needs.	Investigate, research and question widely. Understand innovation and impact.
	Generate simple ideas and make choices with support. Begin to plan.	Design purposeful products for a specific user using simple design criteria.	Develop ideas and designs. Choose materials and explain choices.	Create detailed plans and sketches with annotations. Use design criteria.	Use research to inform designs. Create prototypes and refine ideas.	Produce detailed designs and plans. Consider function, form and sustainability.	Develop innovative designs with clear purpose. Plan using advanced tools.
	Use tools and materials safely to make simple models and food products.	Make products following a plan. Use a range of tools and materials.	Use tools and techniques to make quality products.	Apply skills and techniques with increasing independence.	Use a wider range of tools and techniques with accuracy.	Work confidently and accurately. Combine techniques and select appropriate materials.	Use advanced techniques and technology to make high-quality products.
	Talk about what they like and dislike. Begin to suggest changes.	Evaluate products against design criteria. Suggest simple improvements.	Evaluate against criteria and user needs. Identify what worked well.	Test and evaluate products. Make improvements based on feedback.	Evaluate function, quality and appearance. Improve designs.	Critically evaluate products. Consider sustainability and impact. Refine ideas.	Evaluate thoroughly and make considered improvements. Reflect on learning.
	Be curious, explore and enjoy using tools and materials safely.	Design and make simple products for a purpose.	Apply skills to create functional and appealing products.	Test their knowledge to solve problems and create quality products.	Design and make products that are fit for purpose and well made.	Work confidently and creatively to design innovative products with purpose.	Become independent, creative problem solvers and critical evaluators.

OUR DT GOLDEN THREADS



MECHANISMS AND MOVEMENT

Understanding how things move and using mechanisms to create purposeful products.



TEXTILES

Exploring and using fabrics and techniques to design and make functional and decorative products.



FOOD

Preparing and cooking a variety of dishes. Understanding nutrition, seasonality and where food comes from.



STRUCTURES

Designing and building strong, stable structures for a range of purposes and users.



THINK CREATIVELY



WORK SKILLFULLY



COMMUNICATE IDEAS



EVALUATE CAREFULLY



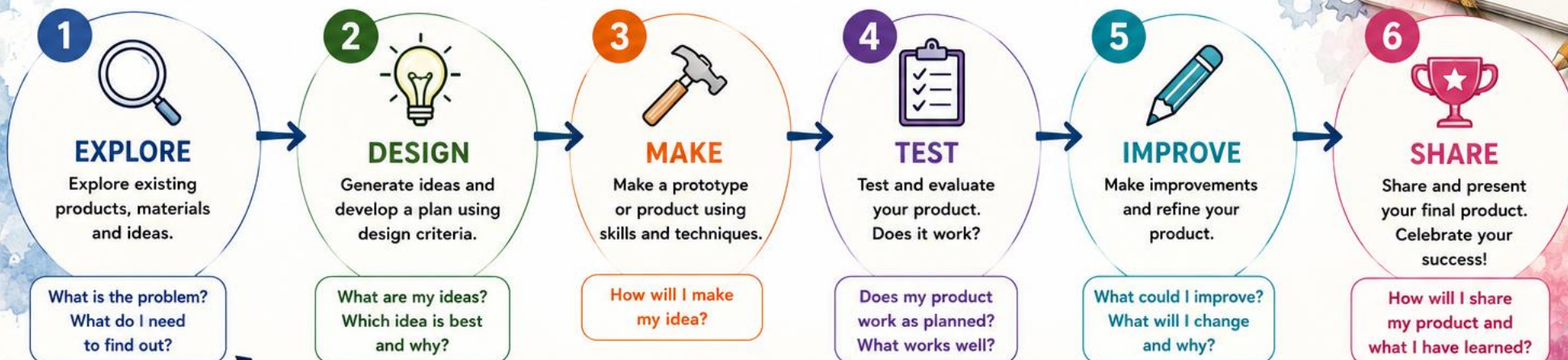
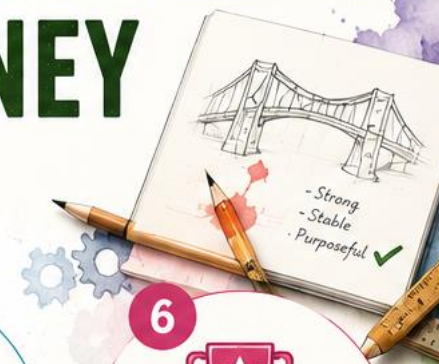
IMPROVE CONFIDENTLY

**DESIGN IT.
MAKE IT.
IMPROVE IT.**

DT DESIGN PROCESS JOURNEY

Design it. Make it. Improve it.

WE ARE DESIGNERS • WE ARE MAKERS • WE SOLVE PROBLEMS



DESIGN IS AN ITERATIVE PROCESS – WE KEEP IMPROVING!



MECHANISMS AND MOVEMENT

Understanding how things move and using mechanisms to create movement in purposeful products.

Examples: levers, linkages, gears, wheels and axles, electrical systems.



TEXTILES

Exploring and using fabrics and techniques to design and make functional and decorative products.

Examples: sewing, stitching, joining, embellishing, finishing.



FOOD

Preparing and cooking a variety of dishes. Understanding nutrition, seasonality and where food comes from.

Examples: cooking techniques, flavour, presentation, hygiene.



STRUCTURES

Designing and building strong, stable structures for a range of purposes and users.

Examples: frameworks, shells, bridges, buildings, 3D forms.

AS DESIGNERS AND MAKERS WE...



THINK CREATIVELY

We explore ideas and solve problems.



WORK SKILLFULLY

We use the right tools, materials and techniques.



COMMUNICATE IDEAS

We share our thoughts and listen to others.



EVALUATE CAREFULLY

We look at what works well and what could improve.



IMPROVE CONFIDENTLY

We learn from mistakes and keep improving.

EVERY DESIGN STARTS WITH AN IDEA. EVERY PRODUCT TELLS A STORY. EVERY IMPROVEMENT MAKES US BETTER.