Micklands Primary School

DT Curriculum Syllabus

Our Intent

At Micklands, we believe that Design and Technology (DT) empowers children to become creative problem-solvers, critical thinkers and confident makers. Our DT curriculum is carefully structured to provide all children with the knowledge, skills and practical experiences they need to design, make and evaluate purposeful products.

Through focused units in textiles, structures, mechanisms, and food technology, children progressively build their understanding of materials, tools and processes. They learn to work independently and collaboratively, to reflect critically on their work, and to improve through testing and evaluation. Each unit involves designing for a user, making with accuracy, and evaluating against real criteria.

Design and Technology at Micklands develops independence, teamwork and resilience. It helps children understand how things work, how they are made, and how design can shape a better, more sustainable world.

Look out for:

- Cross-curricular links with science, geography, computing and art
- Climate and sustainability discussions embedded in many units
- Practical outcomes with real-world application
- Weekly making, evaluating and reflecting in lessons

Encourage your child to explore how things are made at home—cooking, building, sewing, fixing and designing all count as DT!

Content and Structure

Design and Technology is taught in three units per year from Year 1 to Year 6. Each unit focuses on one of the following core strands:

- **Food and Nutrition** – Exploring healthy eating, cooking skills, seasonality, and sustainability
- **Structures and Mechanisms** – Building and improving stability, movement and mechanical systems
- **Textiles** – Designing, stitching and assembling fabric products with increasing complexity

Each unit follows a sequence of: Design → Make → Evaluate

Children revisit and build upon core techniques each year. Lessons include prior knowledge checks, modelling, skill practice and reflective discussion.

Curriculum Progression

Year	Units	Key Learning and Skills
Y1	Puppets (Textiles), Fruit and Vegetable Smoothies (Food), Windmills (Structures)	Develop basic cutting, joining and shaping skills. Explore simple templates, healthy food choices and structure stability.
Y2	Making a Moving Monster (Mechanical Systems) Balanced Diet (Food and Nutrition) Pouches (Textiles)	Creating moving creatures with simple levers and linkages. Understanding food groups; preparing a healthy wrap. Stitching a fabric pouch using a template and running stitch
Y3	Eating Seasonally (Food and Nutrition) Pavillons (Structures) Egyptian Collars (Textiles)	Exploring climate, seasonality and local produce; making a fruit tart. Designing a frame structure with cladding for a theme or user. Decorating fabric with cross-stitch and appliqué
Y4	Adapting a Recipe (Food and Nutrition) Fastenings (Textiles) Slingshot Cars (Mechanical Systems)	Following and adapting a recipe. Designing and making a fabric item with a fastening. Constructing a vehicle with a slingshot mechanism
Y5	Playgrounds (Structures) Stuffed Toys (Textiles) Developing a recipe (Food and Nutrition)	Design and create playground structures. Using stiches to create and decorate fabric. Creating storybooks with interactive paper mechanisms
Y6	Bags (Textiles) Come Dine with Me (Food and Nutrition) Pop up books (Mechanical Systems)	Designing and sewing a functional bag for a user. Planning and cooking a three-course meal in groups. Designing a pop-up book with layered mechanisms

Link to Climate Change Education

Each year group in KS1 and 2 includes **explicit and implicit opportunities** to connect art with environmental awareness:

Year	Unit Focus	Link to Climate Education
Y1	Puppets (Textiles), Fruit and Vegetable Smoothies (Food), Windmills (Structures)	• Understand that the choices they make about materials can have an environmental impact. Introduce the concept of **reuse** and minimising waste, laying early foundations for sustainable thinking in design and technology. • Understand food miles and sustainability. Encourages consideration of local, seasonal produce to reduce environmental impact. • Understand the concept of **renewable energy** in a tangible, creative context. Build early awareness that wind is a natural energy source that doesn't run out or produce pollution, laying the foundation for climate-conscious thinking.

Y2	Making a Moving Monster (Mechanical Systems) Balanced Diet (Food and Nutrition) Pouches (Textiles)	• Introduce the idea of sustainable materials and waste reduction. Support understanding of reusing resources and making environmentally conscious design decisions. • Children begin to understand that choosing local, seasonal foods can help reduce pollution caused by transporting food long distances ("food miles"). • Understand that reusing materials can reduce waste and protect the environment – an early step in sustainable design thinking.
Y3	Eating Seasonally (Food and Nutrition) Pavillons (Structures) Egyptian Collars (Textiles)	• Understand how our food choices affect the environment and how seasonal eating supports sustainability and reduces carbon emissions. • Support awareness of material choices, waste reduction, and sustainable thinking in design and construction. • Understand how material choices affect the environment and introduces sustainable thinking about textile use and waste reduction.
Y4	Adapting a Recipe (Food and Nutrition) Fastenings (Textiles) Slingshot Cars (Mechanical Systems)	• Support children in making sustainable design decisions by thinking about food miles, seasonal produce, and eco-friendly packaging options. • Help children understand that fasteners contribute to waste and that thoughtful material choices support sustainability. • Encourage children to think critically about sustainable design, environmental impact, and material choices.
Y5	Playgrounds (Structures) Stuffed Toys (Textiles) Developing a recipe (Food and Nutrition)	• Understand the impact of materials used in construction and promotes the use of sustainable, recyclable options when building models or real-world structures. • Raise awareness of sustainable textile choices and waste reduction in design, supporting responsible consumption. • Help children consider sustainability and the environmental impact of their food choices.
Y6	Bags (Textiles) Come Dine with Me (Food and Nutrition) Pop up books (Mechanical Systems)	• Encourage sustainable thinking in material choices and raise awareness about the environmental impact of textiles. • Encourage awareness of sustainability, food sourcing and environmentally responsible choices. • Encourage children to consider sustainability in material choices and reduces waste in their design projects.

How We Teach DT

- Every unit includes opportunities for children to design for a purpose and user
- 1-Minute Checks are used in each lesson to assess understanding quickly and formatively
- Children learn through hands-on experience—testing, improving and evaluating their work
- Teachers model safe, accurate use of tools and materials
- DT is inclusive: children work at their own level, developing confidence in practical and creative tasks

DT Assessment Summary for Parents

We assess children's progress in DT by observing their ability to design, make and evaluate a product. Each unit ends in a finished outcome that shows what they've learned. Here's how we describe progress:

Below Expectations

Your child may:

- Struggle with accuracy or following steps
- Need regular adult support to use tools safely or complete tasks
- Give limited explanation of design choices or evaluation of product

At Expected Level

Your child is likely to:

- Design, make and evaluate with growing independence
- Use tools and materials safely and with some accuracy
- Explain their design thinking and make suitable improvements

Above Expectations

Your child may:

- Work confidently and independently, adapting designs as needed
- Use techniques accurately and select materials purposefully
- Reflect thoughtfully and evaluate their own and others' work

How You Can Support DT at Home

At Micklands, we believe every child is a designer, engineer, maker or chef in the making—and that creativity and problem-solving start at home. Here are some practical and meaningful ways to support your child's learning in DT:

Cook and Create Together

- Involve your child in everyday food preparation: chopping fruit, spreading butter, measuring ingredients.
- Let them help plan simple meals or snacks and talk about healthy food choices.
- Try baking or cooking a recipe from a different culture together.

Build, Fix and Make

- Offer recycled materials (cardboard boxes, bottle tops, string) to build models and inventions.
- Let them use age-appropriate tools (scissors, glue, rulers) to solve problems or build something.
- Help with simple fixing jobs at home and explain how things work (hinges, wheels, switches).

Design and Imagine
• Ask them to draw ideas for an invention, a game, or an improvement to a household item. • Discuss what makes products well-designed. Look at packaging, furniture, or favourite toys. • Encourage planning, testing and improving—remind them that redesigning is part of DT!
Talk About Sustainability
• Reuse and repurpose materials for crafting or model-making. • Talk about food miles, waste, and how we can make better choices when shopping or cooking. • Explore how the things we use are made and where materials come from.
Celebrate Effort and Ingenuity
• Praise problem-solving, perseverance and trying something new. • Display or photograph their creations—even if they didn't work as planned. • Ask open-ended questions: "What would you do differently next time?" or "Who might use this design?"
And most importantly…
• Let them be the maker. DT is about trying, thinking and improving—not about getting everything perfect. Keep it fun, hands-on and real-world. Show interest, offer encouragement, and let your child take the lead in their creative projects.