

KS2 UPPER DESIGN & TECHNOLOGY (D&T) CURRICULUM OVERVIEW FOR PARENTS

In Upper Key Stage 2, children take on more complex design challenges. They work with greater accuracy, apply technical knowledge creatively, and test and refine their ideas. They explore mechanical, electrical and structural systems and learn how designers and engineers improve the world around us.

Children should:

- Design products that meet specific needs, considering function, form and aesthetics.
- Use research to inform their ideas and create detailed design plans.
- Select from a wide range of tools and materials with accuracy and care.
- Apply mechanical and electrical systems to create moving products.
- Understand and apply the principles of nutrition and cooking.



Children will learn to:

- Design and make models using pulleys, gears, cams and levers to create movement.
- Explore architecture and frame structures, such as pyramids and arches.
- Create motorised models using cams and simple motors.
- Prepare and cook food from other cultures (e.g. Ramadan celebration dishes) using safe techniques.

They apply creativity and engineering skills to design functional, appealing products that solve real problems.



Children will explore:

- How to make moving mechanisms work accurately and safely.
- The role of design in different times, cultures and traditions.
- How to test and evaluate products for durability, function and appeal.

Children learn that design is about solving human needs with creativity and precision.



Children will:

- Investigate how structures, machines and materials work together.
- Learn about famous designers, engineers and inventors.
- Test, adapt and refine their designs through trial and feedback.



Design & Technology helps children:

- Build resilience through experimentation and problem-solving.
- Apply science, maths and art skills in practical ways.
- Appreciate design and innovation across the world.
- Develop teamwork, independence and a sense of pride in making.

How can I help my child at home?

Talking about design, testing ideas and improving them helps your child develop the mindset of an engineer, innovator and creative thinker.

Involve your child in practical household projects – measuring, building, fixing or cooking.



Look at designs in the world around you – bridges, vehicles, buildings – and discuss how they're made.

Encourage them to take things apart (safely!) to see how they work.



Watch documentaries or videos about inventors and engineers.

Support them to design or make a product at home – a model, a recipe, or a piece of simple technology.

