



Curriculum map: Design and Technology (D&T)

Become the best that you can be: for learning, for life, for future success.

Intent:

Pupils will use their creativity, imagination and practical skills to design and make products that solve problems in a range of contexts. They will be able to draw on their learning in other subjects such as maths, science, computing and art to support their design work. Pupils are able to take risks, become resourceful, innovative and capable citizens as part of their learning. They will be able to evaluate existing products to empower them to have their own ideas and designs, to be resilient in the design process and to be reflective of their own design work at the end of projects. We will foster a love of learning through challenging the children to design and make products for a purpose. Children will develop key skills in their projects and have the time to test their own products and make adjustments to them, which enables them to change and improve their end products.

Implementation:

We use the Design And Technology Associations Projects on a Page to support the planning of D&T in our school, ensuring that appropriate skills and knowledge are taught. This provides a clear progression of skills and knowledge which is built upon previous learning, year on year. Design and Technology is taught in all year groups across the schools and projects are often linked with other areas with the curriculum including Science, RE and History. Our D&T curriculum should follow six main principles:

- User – pupils will have a clear idea of who they are designing and making products for, considering their needs, wants, values, interest, and preferences.
- Purpose – pupils will be able to clearly communicate the purpose of the products they are making and designing.
- Innovation – when designing and making, pupils need some scope to be original with their thinking.
- Authenticity – pupils will design and make products that are believable, real and meaningful to themselves and others.
- Functionality – pupils will design and make products that work / function effectively in order to fulfil users' needs, wants and purposes.
- Design decisions – pupils will have opportunities to make their own design decisions, which allows pupils to demonstrate their creative, technical and practical expertise and draw on learning from other subjects.

Each project follows a structure of three key areas: investigative and evaluative activities, focused tasks and then designing, making and evaluating their project. Each of the projects are designed to be relevant, motivating, engaging and authentic to the children and inclusive of all groups of children across the school.

Assessment is carried out through a range of formative assessments, which includes book scrutiny and pupil practical tasks. Assessment informs planning, identifying any gaps in knowledge or skills including across the school.

Impact:

At the end of Key Stage 2, the children will know and understand the key stages for designing and making a product. They will have a clear design brief, which makes the reason for their product authentic to them. They will have a clear purpose for their design which helps to keep them motivated to complete the design process and create a finished product.

Children will have built resilience and independence in overcoming failures. They will build the skills in design where they are able to have the resilience to try different ways to make their product to the best of their abilities.

Children will develop as responsible citizens by giving them first hand experiences with tools and equipment where they have been taught how to be safe and responsible with them.

Children will have had rich, broad and exciting experiences within their learning and this includes making links between different areas of the curriculum.

| | Autumn term | Spring term | Summer term |
|---------------|---|---|--|
| Year 3 | Structures: shell structures | Mechanisms: Levers and linkages | Textiles: 2D shape to a 3D project |
| Year 4 | Electrical systems: simple circuits and switches | Structures: shell structures using computer aided design | Food: healthy and varied diet |
| Year 5 | Mechanisms: cams | Food: celebrating cultures and seasonality | Textiles: using computer aided design in textiles |
| Year 6 | Textiles: combining different fabric shapes | Electrical systems: monitoring and control | Mechanisms: pulleys and gears |