



Townlands C of E Primary Academy

A journey of learning in the light of God's love.

Design and Technology

"I made 5,127 prototypes of my vacuum before I got it right. There were 5,126 failures. But I learned from each one. That's how I came up with a solution. So I don't mind failure."

James Dyson

Our Vision for Design and Technology

At Townlands, we believe that design and technology stimulates creativity and imagination and prepares children to take part in the development of tomorrow's rapidly changing world. This subject encourages children to become creative thinkers and problem solvers; whereby they can make positive changes to the quality of their life. We encourage children to identify needs and opportunities, and to respond by developing ideas, and eventually making products and systems. Through this subject, children combine practical skills with an understanding of aesthetic, social and environmental issues, as well as functionality. This allows them to reflect on and evaluate present and past design and technology, its uses and its impacts.

Why do we teach design and technology?

At Townlands, we value design and technology as an important part of the children's entitlement to a broad and balanced curriculum. Our DT curriculum intends to develop pupils who are confident and innovative designers, with a wide variety of design skills that they can use across the curriculum and for their own enjoyment. We teach DT every term to ensure that the children can fully immerse themselves and have opportunities to reflect and build on prior learning and skills.

Design and Technology in the curriculum

- We plan using the National Curriculum.
- We enhance the curriculum using progression grids.
- Subject progression grids are used to develop long term planning.

- Teachers use the long term planning to plan units of work and deliver individual lessons.

At Townlands, we want children to:

- develop the creative, technical and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world
- build and apply a repertoire of knowledge, understanding and skills in order to design and make high-quality prototypes and products for a wide range of users
- critique, evaluate and test their ideas and products and the work of others
- understand and apply the principles of nutrition and learn how to cook

Rationale – Why we do what we do...

After completing a design and technology audit with pupils and staff, we know that children really enjoy these lessons. However, to enhance the learning experience for our children we decided to block teach D & T, where possible. As a consequence of this approach, we feel that the children receive a more focused and immersive learning experience; one which enables their knowledge to become more deeply embedded. Teachers have the option to block teach over a day or several days, depending upon the project.

Enrichment

Children will learn about a range of areas where designing and creating for a purpose take places, including cooking, sewing and building structures. We link these subjects to real life experiences and famous engineering experts through cross curricular teaching.

Annually, all children at Townlands design, make and evaluate a product to sell at the Christmas Craft Fair. During Healthy Schools Week, children also create their own healthy meal which they then have the opportunity to share with each other and/or their family.

Townlands children participate in an annual community gardening event, where children have been awarded prizes for their gardening achievements. Townlands offers a range of varied design related after school clubs.

How do we deliver the design and technology curriculum?

The teaching and implementation of the design and technology curriculum at Townlands is based on the National Curriculum and linked to topics to ensure a well-structured approach to this creative subject. Our principal aim is to ensure that the act of investigating and making something includes exploring and developing ideas, and evaluating and developing work. Within lessons, we give children the opportunity both to work on their own and to

collaborate with others, listening to other children's ideas and treating these with respect. They have the opportunity to use a wide range of materials and resources, including ICT.

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Skills and techniques

- During their time at Townlands, children will learn and practice a range of skills and techniques:
- Designing and building
- Evaluating
- Technical Knowledge and making products work
- Food preparation, cooking and nutrition

EYFS, KS1 and KS2

- All pupils have design and technology projects which have a clear structure. Each key stage will undertake a construction topic, a textile topic and a food/drink topic.
- Each year group follows a clear design process where each project covers: research, design, make and evaluate.
- Each year group has a garden plot and takes ownership and responsibility for cultivating their plants.
- A range of skills will be taught ensuring that children are aware of health and safety issues related to the tasks undertaken.
- Clear and appropriate cross curricular links are developed within the curriculum giving the children opportunities to learn life skills and apply skills to 'hands on' situations in a purposeful context.
- Design Technology displays are evident across the school and these displays celebrate children's work and exemplify processes and vocabulary used.

This is how we support and ensure access for all children:

- Ensure that a range of equipment and resources are available to enable success for all pupils (e.g. different sized paintbrushes or paper, additional templates etc).
- We use teacher and self-assessment to quickly identify any child who requires additional support in specific skills

This is how we challenge:

- An additional challenge planned for, from the very start of the lesson

How does the design and technology curriculum embed knowledge?

The successful approach at Townlands results in an engaging and high-quality design and technology curriculum. Our children build knowledge, make connections and explore and create new ideas. The teaching of design and technology offers opportunities to support the social development of our children. Children have the chance to discuss their ideas and feelings about their own work and the work of others through collaboration and cooperation. They also develop a respect for the environment, for their own health and safety, and for that of others. The large majority of children will achieve age related expectations in Design Technology. But, as designers, children will develop skills and attributes they can use beyond school and into adulthood.

A sample of D & T learning across the school.

EYFS

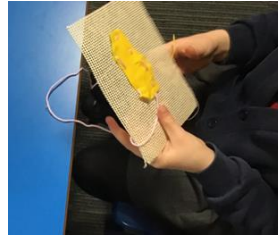
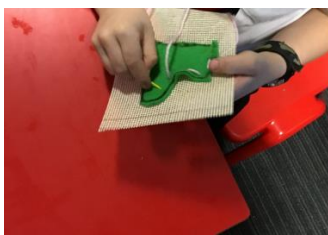


Year 1





Year 2



Year 3





Year 4



Year 5



Year 6



Useful Websites

<https://www.howstuffworks.com/>

<http://www.puppetpatterns.com/>

<https://inventivekids.com/>

<https://www.foodafactoflife.org.uk/>

<http://www.nutrition.org.uk>

British Nutrition Foundation. This site contains a wealth of information to support all aspects of food in school - healthy eating, information about healthy schools, curriculum advice, case studies and downloadable resources.