How we teach Design and Technology at Anglesey

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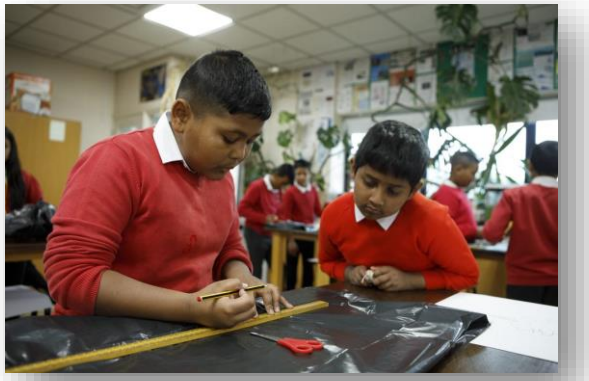
Our School Vision:

Inquisitive, Resilient, Independent

At Anglesey, we are a vibrant and nurturing school community, where children are given the skills to become, inquisitive, resilient, independent learners.
Our curriculum provides a range of creative, challenging and inspiring experiences for all. This equips our children with the life skills to be happy, flourish and be successful…*Today, tomorrow and in the future.*

1. Subject Vision Statement

Design and technology has always been an integral part of our lives as humans. From the very earliest women and men learning to create and use tools, right through to our complex array of technological advances in the modern world. Our children need to be able to adapt and thrive in this rapidly changing environment. At Anglesey, we aim to enable our children to become the designers, innovators and technicians of the future. In order for this to be achieved we aim to provide a range of projects which will coincide with a carefully mapped progression of skills. Our intention is for our children to build their skills until they become confident, independent and expert designers and creators. It is important to us that our children see the progression of innovation and provide education on inspirational experts who have used their knowledge to impact significantly their area of expertise. Promoting this will enable our children to aspire to create a better world, both for themselves and others around them. Built into each unit, children will have the opportunity to evaluate, in depth, previous designs and their purpose, enabling them to build on prior knowledge and give meaning to their work. They are provided with ample opportunity to practice the necessary technical skills. This then enables them to design, make and test their own product. This allows children the opportunity to understand the design process in depth which will enable them to become expert and confident designers of the future.



2. Subject Implementation

At Anglesey we aim to inspire children to be the designers of the future. We believe that it is vital that before children design their own products, they develop a secure knowledge of their purpose alongside the exploration of existing products, their components and the understanding of how to make good design choices. Children are given opportunity to practise and hone new skills so that they are fully ready to design and create their own product independently.

All units of work for DT at Anglesey follow the design and technology process from Nursery to Year 6 by:

1. Exploring and evaluating existing products-Deconstructing and exploring existing products that fulfil the key design question.
Evaluate products and use findings to help inform the design process.
Make links to real world products.

2. Learning new skills-Children are explicitly taught the skills needed to create their end product.

3. Skill development, activity and evaluation-Children take part in the skill activity to practise, refine and make meaningful evaluations before creating their end product.

4. Design own product-Children reflect back on the key question.
They use skills and knowledge gained in the previous tasks and prior learning to inform the design process.
Children present their designs in various ways such as sketches, instructions, conversations etc.

5. Creating the product-Children create the product to achieve the purpose set in the key question.
Use skills developed throughout the unit of work.
Use and adapt design.

6. Testing the product-Children reflect back to the key question and ask if the product achieves the purpose.
Test the product in various ways.

7. Evaluation of the product- Assess against the key question.
Ask what changes they would make to improve the product if they made it again

2. Subject Implementation

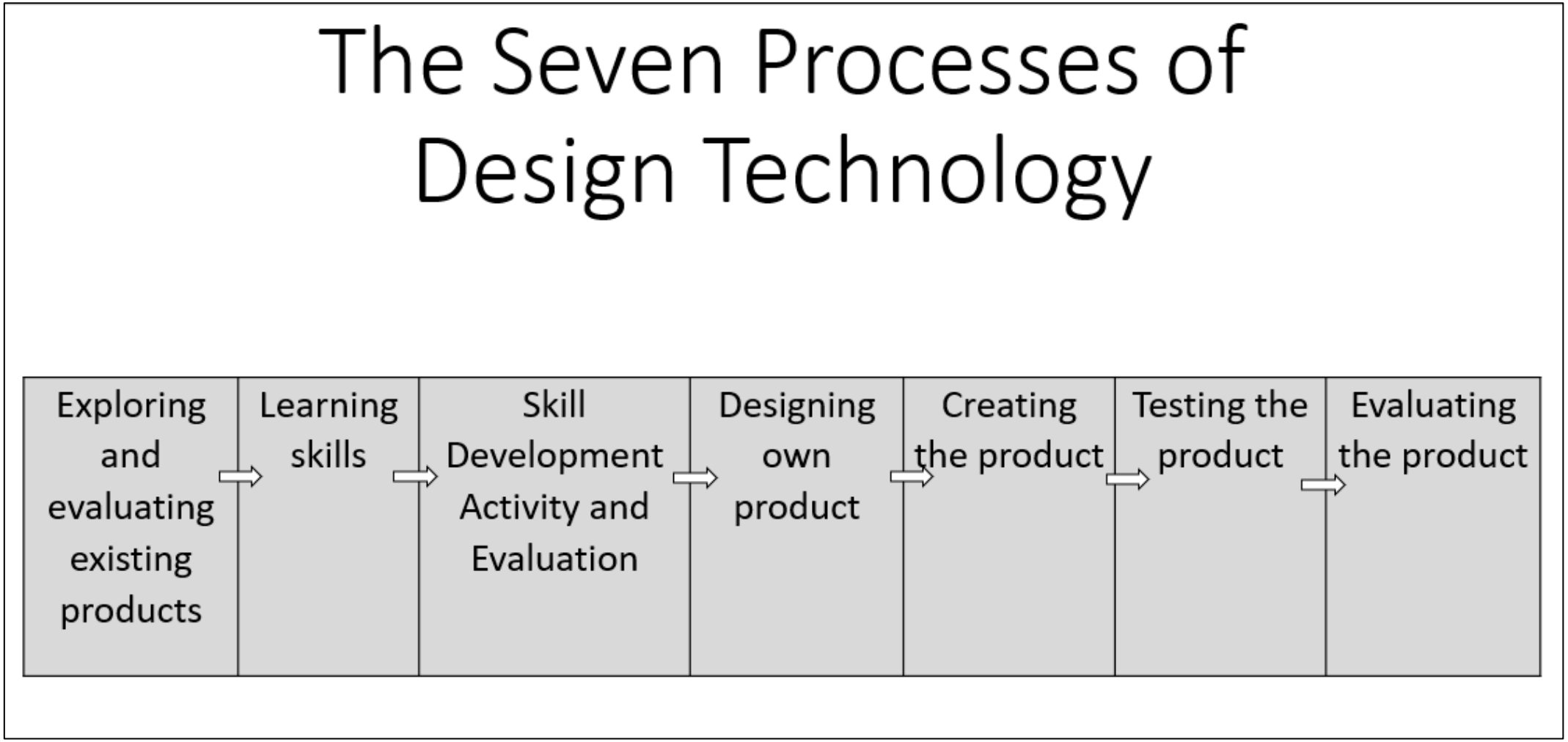
Each year children have the opportunity to develop their skills further in 6 key areas:

- Textiles.
- Mechanisms and mechanical systems.
- Structures.
- Food and Nutrition.
- Electrical systems (KS2 only)
- Digital world (KS2 only)

During Early Years and Key Stage One, children develop key technical skills and knowledge needed as a strong foundation for their continuing journey into Key Stage Two. By the time they progress to Key Stage 2, they are familiar and confident in the design process which has been followed through every D and T unit of work. These skills are embedded and so are transferable to any key area of Design and Technology. In Early Years and Key Stage One, all year groups follow the same key areas. During the Autumn, the focus is textiles, in the Spring, structures and mechanisms combined and during the summer term the focus is food. Key Stage two work on a two-year cyclical rotation of key areas. Year 3 and 5 develop their key skills through textiles in the autumn, structures in the spring and food during the summer term. Year 4 and 6 develop their key skills through mechanisms in the autumn, electronics in the spring and the digital world in the summer term.

We have developed a clear progression of technical skills for each area of D & T which demonstrates how children integrate and build upon these, year on year. Teachers evaluate and support pupils through assessment of their integration of new knowledge into prior learning and how they develop new skills and knowledge.

2. Subject Implementation



3. Meeting the aims of the National Curriculum

Purpose of study
A high-quality physical education curriculum inspires all pupils to succeed and excel in competitive sport and other physically-demanding activities. It should provide opportunities for pupils to become physically confident in a way which supports their health and fitness. Opportunities to compete in sport and other activities build character and help to embed values such as fairness and respect.

Aims
The national curriculum for physical education aims to ensure that all pupils:

- develop competence to excel in a broad range of physical activities
- are physically active for sustained periods of time
- engage in competitive sports and activities
- lead healthy, active lives.

3. Meeting the aims of the National Curriculum

In Key Stage 1:
Pupils should develop fundamental movement skills, become increasingly competent and confident and access a broad range of opportunities to extend their agility, balance and coordination, individually and with others. They should be able to engage in competitive (both against self and against others) and co-operative physical activities, in a range of increasingly challenging situations. Pupils should be taught to: master basic movements including running, jumping, throwing and catching, as well as developing balance, agility and co-ordination, and begin to apply these in a range of activities participate in team games, developing simple tactics for attacking and defending perform dances using simple movement patterns.

In Key Stage 2:
Pupils should continue to apply and develop a broader range of skills, learning how to use them in different ways and to link them to make actions and sequences of movement. They should enjoy communicating, collaborating and competing with each other. They should develop an understanding of how to improve in different physical activities and sports and learn how to evaluate and recognise their own success. Pupils should be taught to:

- use running, jumping, throwing and catching in isolation and in combination
- play competitive games, modified where appropriate [for example, badminton, basketball, cricket, football, hockey, netball, rounders and tennis], and apply basic principles suitable for attacking and defending
- develop flexibility, strength, technique, control and balance [for example, through athletics and gymnastics]
- perform dances using a range of movement patterns
- take part in outdoor and adventurous activity challenges both individually and within a team
- compare their performances with previous ones and demonstrate improvement to achieve their personal best.

4. Curriculum Topic Overview

Year – EYFS and KS1	Autumn Textiles	Spring Mechanisms and Structures.	Summer Food
Nursery	Can I make a Christmas decoration?	Can I make a tower that is strong and stable?	Can I make a fruit kebab?
Reception	Can I make a bookmark?	Can I make a bridge that is supported?	Can I make a fruit pizza?
Year 1	Can I design, create and evaluate a purposeful and functioning hand puppet?	Can I make a stable rocket with a sliding door?	Can I make a smoothie ice-lolly?
Year 2	Can I design, create and evaluate a functioning coin pouch?	Can I design a windmill that is stable with a functional rotating mechanism?	Can I make a savoury wrap and rainbow salad?
Year – KS2	**Autumn Textiles or Mechanisms**	**Spring Structures or Electronics**	**Summer Food or Digital World**
Year 3 Textiles, Food, Structures	Textiles: Can I create a tablet case?	Structures: Can I design and make a box for a pizza?	Food: Can I make a pizza base and toppings?
Year 4 Mechanisms, Electronics, Digital World	Mechanisms: Can I make a pneumatic toy?	Electronics: Can I make a torch?	Digital World: Can I program an electronic charm?
Year 5 Textiles, Food, Structures	Textiles: Can I design, make and evaluate a bag with a waterproof lining?	Structure: Can I make a bird feeder?	Food: Can I design, plan, make and evaluate a vegetable curry?
Year 6 Mechanisms, Electronics, Digital World	Mechanisms: Can I research, design, plan, make and evaluate an automata toy?	Electronics: Can I research, design, plan, make and evaluate a steady hand game?	Digital World: Can I program a navigation device?

5. Subject Impact

Through the consistent and thorough approach to teaching and learning in Design and Technology using the design process, we will enable children to become confident and skilled designers and makers. By the time children in year 6 are ready to leave for the next part of their learning journey, they will have developed the technical and design skills to allow them to confidently and independently conduct their own design process, think creatively and produce meaningful, quality products.

6. Pupil Voice

Year 3 Pupil

I used a needle and thread to do running and blanket stitches.

Year 1 Pupil

I made a dinosaur with moving parts.

Year 4 Pupil

I really liked cutting the wood and using the glue guns to stick it together.

Year 3 Pupil

I made a base so it (my shelter) wouldn't fall down, it would fall down without the base – straw and sticks.
I had one straw but it was bending a lot, so I got lots of sticks to make it stronger.