

# What does 'Design & Technology' look like at Adswood Primary?

## 1. Curriculum mapping

D and T	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 1		Textiles: Templates and joining techniques		National Science Term-STEM-Me an Engineer		Mechanisms: Sliders and levers
Year 2		Food: Preparing fruit and veg	Structures: Free standing structures	National Science Term-STEM-Me an Engineer		Mechanisms: Wheels and Axles
Year 3	Structures: Shell structures			National Science Term-STEM-Me an Engineer		Textiles: 2D shapes to 3D shape
Year 4	Food: Healthy and varied diet		Mechanisms: Levers and Linkages	National Science Term-STEM-Me an Engineer		Electrical Systems: Circuits and switches
Year 5	Textiles: Combining different fabric shapes		Celebrating culture and seasonality	National Science Term-STEM-Me an Engineer		Mechanical Systems: Pulleys or gears
Year 6	Electrical Systems: More complex switches and circuits	Cook 4 Life	Cook 4 Life	National Science Term-STEM-Me an Engineer Cook 4 Life	Cook 4 Life	Structures: Frame structures Cook 4 Life

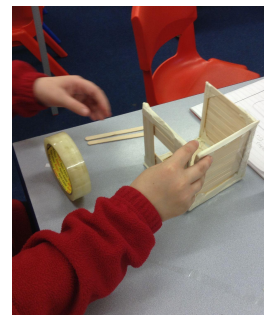
Design & Technology at Adswood utilises knowledge and skills acquired from across the curriculum, which can be applied to meet the requirements of a design brief, provided at the beginning of a D&T Project Day.

In the Early Years Foundation Stage, Design and Technology forms part of the learning children acquire under the 'Knowledge and Understanding of the World' branch of the Foundation Stage curriculum, which also covers geography, history, ICT, and science.

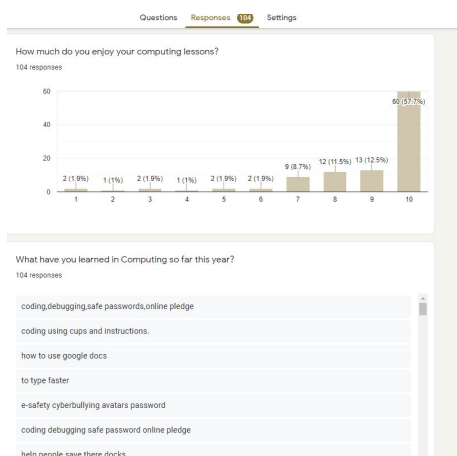


Children are encouraged to experiment with methods of mixing and combining different materials and ingredients; exploring, building and collapsing structures; investigate electronic equipment and generally test, evaluate and improve the resources in their environment.

KS1, LKS2 and UKS2, each have 5 Project Days. Each day begins with a design brief, then follows the process of Research, Design, Make and Evaluate, covering areas such as; structures, food technology, mechanical systems, fabrics and electronics.



## 2. Learner voice



Following each D&T Project Day, learners evaluate their products against the design brief. This is can be either written or a video demonstration of how their products.

We also conduct learner voice sessions, where pupils can talk about their project days, suggest ways of developing the curriculum and showcase their learning.

### 3. Adaptive teaching



The creative and kinaesthetic nature of design and technology provides opportunities for all learners to engage with the design and make process. The development of practical skills and use of physical resources promotes engagement, especially when children understand how these skills can be applied in real life situations. For children who find traditionally academic subjects more challenging, Design and Technology can often generate aspirations for their future as they take pride in their achievements.

At Adswood, the teaching of **Design and Technology** is **inclusive** through **quality first teaching**. Provision for learners is **age appropriate** but **differentiated to meet the needs of our learners**. SEN Support plans outline specific targets for our learners with additional needs.

All learners at Adswood complete a '**One Page Profile**' to let their staff teams know how they learn best and what support they might need.

### 4. Learning environment

The Design and Technology curriculum at Adswood has been designed allow for the efficient use of time and maximum impact on engagement and learning.

Completing a Project in a 'D+T Project Day' allows for the classrooms to be adapted and resourced prior to the children entering, ensuring the time spent is dedicated to learning rather than the otherwise time consuming process of distribution and collection of materials and resources.

Completing the project in a day also eliminates the need to store partially completed projects, which can often lead to damage to models and loss of parts.

Feedback from both staff and learners suggest that this approach results in greater success.



## 5. Opportunities to celebrate Design Technology.

Testing the effectiveness of their products is a key aspect of the design process, as it feeds into their evaluation where they assess if their product has met the requirements of the design brief.

From land yacht galas and water rocket launches to feeding the staff with healthy lunches - the opportunities to celebrate Design and Technology are embedded into the planned experience of the project days.

At the very least the learners have a treasured product with a purpose that they can take home and share with their family



Often the products are linked to other aspects of their learning and are displayed and used as discussion tools and prompts for further learning - just like this class did when they learned about the Brazilian Favelas.



## 6. Cross curricular Design and Technology

Every project planned, specifies the 'Related learning in other subjects' - whether this is learning in Design Technology that can be applied to other subjects or learning from other subjects that can be applied to this project. Common cross curricular links include; Science, Maths, Computing, Literacy, Art and Design and Spoken Language.

<p>r – specify</p>	<p>To be completed by the teacher. Use the project title to set the scene for children's learning prior to activities in 10, 12 and 14.</p>	<p>10. Related learning in other subjects</p>
<p>i that explored</p> <p>collection movement ed? What ve the team made? it are companies</p>	<p><b>11. Related learning in other subjects</b></p> <ul style="list-style-type: none"> <li><b>Spoken language</b> – Ask relevant questions, formulate and express opinions, give well-structured descriptions and explanations. Use relevant strategies to build their vocabulary.</li> <li><b>Computing</b> – Use search technologies for research purposes and be discerning when evaluating digital content.</li> </ul>	<p>11. Related learning in other subjects</p>
<p>ut direction or pulley of rotation?</p> <p>Investigate the gear ratios</p> <p>a reversing a wire, and by. Draw a</p> <p>lamps, as</p>	<p><b>12. Related learning in other subjects</b></p> <ul style="list-style-type: none"> <li><b>Spoken language</b> – Ask relevant questions, formulate and express opinions, give well-structured descriptions and explanations. Use relevant strategies to build their vocabulary.</li> <li><b>Mathematics</b> – Understand ratios. Apply understanding and skill to carry out accurate measuring using standard units i.e. cm/mm.</li> <li><b>Science</b> – Apply knowledge and understanding of circuits, switches, conductors and insulators. Recognise that some mechanisms, including pulleys and gears, allow a smaller force to have a greater effect.</li> </ul>	<p>12. Related learning in other subjects</p>
<p>nd a purpose</p> <p>ded of the end output, appropriate</p> <p>ts. Children that</p> <p>ation. h and fitness</p>	<p><b>13. Related learning in other subjects</b></p> <ul style="list-style-type: none"> <li><b>Computing</b> – Use search technologies for research purposes and be discerning when evaluating digital content.</li> <li><b>Art and design</b> – Use and apply drawing skills. Use techniques with colour, pattern, texture, line and shape.</li> <li><b>Science</b> – Apply knowledge and understanding of circuits, switches, conductors and insulators in the design of the final product.</li> <li><b>Mathematics</b> – Understand ratios. Apply understanding and skill to carry out accurate measuring using standard units i.e. cm/mm.</li> </ul>	<p>13. Related learning in other subjects</p>

## 7. Learning beyond the classroom

On top of the incredible outdoor provision for our EYFS children in our Willow Garden, we offer plenty of opportunities for children to engage with Design and Technology beyond timetabled curriculum lessons.

Links and visits to local restaurants such as 'where the light gets in' gives pupils an opportunity to see food technology in practice whilst also learning about seasonality and food sources.

Engagement with the Primary engineers programme has seen some of our pupils awarded with distinctions for their innovative designs.



Primary Engineer®

...the first step



Through our involvement with the SSISSP Primary Partnership programme Year 5 and 6 have worked with staff and students to complete Design and Technology challenges including STEAM projects where they built their own models which incorporated electrical circuits (Year 5) and finger printing and chromatography (Year 6)



The Royal Navy work closely with Year 5 linking STEM with aspirations and future careers. They have worked with students on projects involving electrical components, pneumatics, coding and rocket launching.



Through our Life skills curriculum/EBA awards children in EYFS, KS1 and KS2 have the opportunity to receive awards which extend their curriculum through home learning and extra curricular activities.

## 8. Challenges to deepen learning

The nature of Design and Technology is that there is always an opportunity to develop and improve a product.

The evaluation process always challenges children to think of how they could have improved their design or product.

In reality the children are limited to the resources available (which in itself can often provide challenges), however with the evaluation the only limit to improving their design is their imagination.

## 9. Self- Assessment

As mentioned previously, the evaluation stage of the design process is a built in Self-Assessment tool, giving pupils the opportunity to reflect on their learning and encouraging them to explore their learning, application of skills and outcomes to try to find ways to improve or develop their ideas.

Scan the QR code to see an example of a Y1 Child evaluating their Penguin Soft toy they made during a Fabrics D&T Day.

SCAN ME



## 10. Staff CPD

Staff CPD was planned over a 3 year programme, developed following a staff survey where most shared a lack of confidence in delivering design technology as the greatest barrier to delivering effective lessons. This initially took the form of co-coaching and model lessons from the DT Subject Lead (BA Hons in Creative Art, Design and Technology) who had trained to be a KS3/4 Design & Technology Teacher.

In the first year, the DT Subject Leader led the DT days, observed by the class teachers.

In Year 2, the DT days were co-coached, with the DT Subject Leader present and offering support throughout.

Year 3's objective was to pass back responsibility to class teams for leading the DT days, however they were offered support with planning and resourcing the lessons.