

Intent

Design and Technology at Christ Church is an inspiring, rigorous and practical subject that supports our school vision of inspiring *life in all its fullness* through developing creativity and problem solving skills. Pupils learn how to take risks and to become resourceful, innovative, enterprising and capable citizens. Our design and technology curriculum is designed to provide opportunities for all children to build their knowledge and key skills progressively, working with a range of materials including mechanics, structures, electrical systems, textiles and food technology.



The intent of our high-quality design and technology curriculum is to cultivate creativity and imagination and to give all children the skills and knowledge they need to design and make products that solve real and relevant problems within a variety of contexts and with an identified purpose and audience. Our Design and Technology curriculum, which works sequentially towards the end points as set out in the EYFS and National Curriculum, makes explicit links to learning in several other subject areas including mathematics, science, computing and art and lays the foundations for interest and engagement in areas of engineering, design and food technology. The ongoing evaluation and testing process is vital to understanding how and why a product or design element has been successful or not, with evaluation evidence used to inform learning in an iterative process. Our curriculum aims to highlight the importance of creating sustainable products and to develop in all children a firm knowledge of where materials come from and the environmental impact they have.



Implementation

- Taught by class teachers, with support from subject leader and SLT.
- Carefully planned Design and Technology (DT) class projects that have a focus on designing and making a product with intent for use. For example, Year 3 in the spring term make an obelisk structure to grow plants. Other DT projects produce items to be sold at the school fairs.
- Each project has time given for the three core concepts within DT: design, make and evaluate. The design aspect of the project also includes research of existing products.
- CPD in DT includes in-school training sessions and distribution of DT 'project on a page' resource booklet. Additionally, the subject leader attends the new Camden DT network and intends to share resources and skills gained from the network within staff meetings and/or to support with individual projects.
- Rec/KS1 have ample opportunities during playtimes, golden time and within play (EYFS) to explore different building materials and construction toys. Often children will orally design and evaluate their work as they build at this stage.



Recording in DT has been refined to highlight class projects within the DT portfolios. These project packs provide evidence for learning at each stage of the project as well as including pupil voice and peer assessments.

Resources have been built up as we have refined the curriculum and established the different projects. All projects have been well resourced which enables all the children to make a high-quality product.

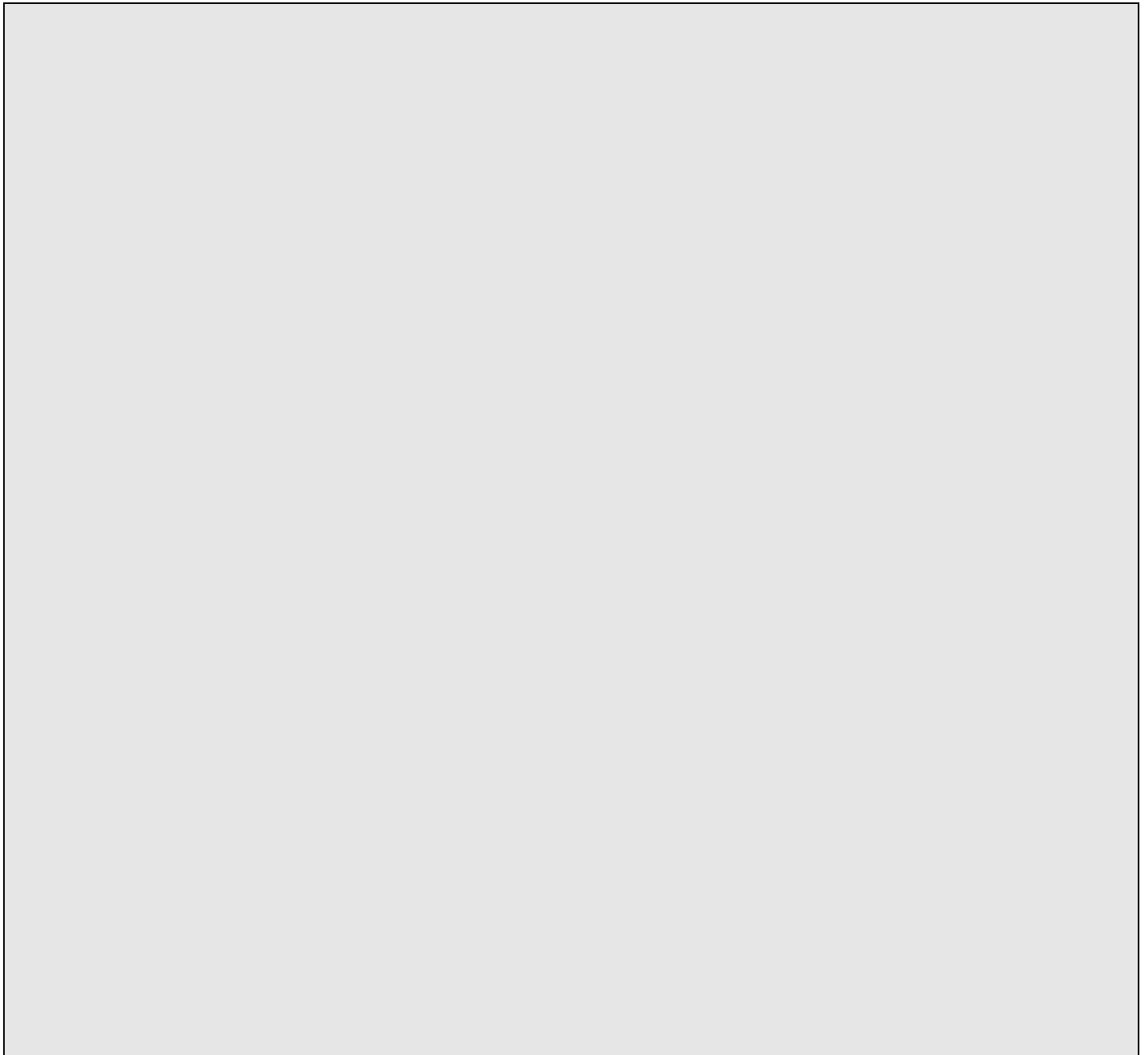
- Enrichment opportunities in DT include visitors/workshops (e.g. musical instrument making workshop) and links to after school clubs (tech club, Lego club and cooking club).
- Wide-ranging home learning tasks were set following our planned DT curriculum, including cooking, during both periods of school closure, with a conscious effort to make the activities inclusive to all, adapting materials and including open-ended activities with lots of choice.



Impact

- All children have the opportunity to design, make and evaluate a high-quality product each term.
- Children use relevant DT vocabulary and understand simple technical processes, for example, levers and pulleys.
- Children have opportunities to develop risk-taking and critical-thinking.
- Children have the opportunity to learn about existing products with emphasis on sustainability.
- Children continued to use and develop their DT skills during our periods of home learning, producing high quality designs and prototypes, using a range of online tools and having access to adaptable projects.

Whole school standards (two year trend)



Last year's key developments and successes in 2020/21:

- Developing cooking opportunities across the school has been at the forefront of the DT curriculum over the past 24 months. We successfully developed specific class cookery projects laid out in our content table for DT; examples of this are Year 5's culture and seasonality in food project, making gingerbread biscuits and Year 3's Healthy varied diet project, which has in-turn turned into a cookery unit spread across several weeks. We have also developed cookery opportunities across the curriculum such links to healthy eating in PSHE and baking traditional recipes in RE. Remote learning lent itself to the development of cookery skills, most classes had several cookery activities including taking part in our 'Virtual Cook Along' (20/21 target achieved). We continue to build back our links with Fitzjohn's Primary School and look forward to using their cookery room later on this year.
- Assessment in DT has developed with the confidence with class teachers in this subject. Echoing other curriculum areas in the school, assessment is accessible to all and adapted for individual needs. From patterns in data over the past two years it can be seen that a growing percentage of children are now assessed as working at greater depth (20/21 target achieved)
- Our detailed DT project packs provide a consistent and detailed account of class projects, infused with pupil voice and skills developed, including prior learning and exploration of existing products. (20/21 target achieved)
- Introduction of DT flow charts to reinforce to pupils the different stages of the project, ensuring each area of learning is given a good level of importance. (additional successful development)

Anti-Racism Review:

The review highlighted that although we aim to look at a variety of designers/engineers/chefs etc. from various backgrounds this could be more formally highlighted to staff with relevant people suggested for each topic. Thinking about the end user of each product is also something which would be useful to revisit with staff. For example, designing an accessible bird hide in Year 5 would be a good example of how we can design things inclusively for the diverse society we live in.

COVID impact –remote learning provision and recovery curriculum

Home learning provision (March–June 2020 and January-March 2021) included a wide range of activities set by class teachers, which had adaptations to ensure all learning was accessible to all the children. Activities were set using the skills progressions; however, some areas of learning lent themselves better to remote learning such as cookery, structures and textiles. Some provision was sent in class learning packs such as the electrical circuit kits added to the Year 4 packs to ensure children could continue to develop their learning of electrical systems. A mixture of teacher-led videos and sign posting to online videos or resources were used to teach the children. What worked well was the ability to give choice to the pupils with use of materials and designs. Most had access to a range of materials that may have not been available in school and allowed the children to be more creative with their design choices. The key worker group included DT activities in their enrichment afternoons, such as baking on birthdays and working in groups to build dens in the playground.

Whole school projects:

Virtual cook-along- Working collaboratively with an old employee, who now owns a children's cookery school, we encouraged all children (and families) to join in with a school cook along to make a healthy lunch. We made sure we gave out ingredients and equipment lists with lots of time to collect these items. The video provided teaching of key skills in kitchen safety alongside how to use some specific equipment. Adaptations were given for allergies and/or dietary preferences.



Design and Technology projects were used to support the transition back into school in many classes, giving the children the opportunity to work collaboratively, re-build friendship and take part in practical activities. Reception enjoyed making their own mini cushions, learning the foundations for textiles. Year 5 worked together in groups to research and build prototypes of bird hides.















Recovery curriculum: no major adaptations to our Design and Technology curriculum have had to be made for 21/22 school year, as the majority of key skills continued to be taught at home or at school last year. Some prior learning may have to be addressed and taught if a class project was missed; prior assessment will be a valuable tool for teachers to recognise gaps in learning. The DfE recovery curriculum document highlights the importance of design, specifying children should learn about “*different factors that contribute to complex design decisions*” emphasising the need to use subject specific vocabulary and clear teaching in each part of a project. This has been the driving power behind the use of the DT flow chart in class. In addition to this the recovery document reiterated that, when appropriate, children should be introduced to the use of simple tools.





Key actions moving forward (development priorities for 2021/22):

Target and <i>intended outcome</i>	Planned actions (including dates where applicable)
<p>1. To continue to cover a range of diverse role models within Design and Technology. <i>All children to have access to a diverse range of role-models in design and technology. Understanding the impact they had on the industry and the key skills used to develop their ideas or inventions.</i></p>	<ul style="list-style-type: none"> • Sept 2021-Research and compile a list of key inventors, designers, architects and chefs. Think about links to skills progression and key functions for individual projects such as pop-up cards for Year 2’s leavers and sliders. Asking teachers to add to the list as we explore different links throughout the year. • Oct 2021- Host CPD staff meeting to recap key learning opportunities and ask teachers to think about links to diverse role models (where appropriate) what did they invent/design or make? How did they achieve this? Did they need support? Who inspired them? Where can we see their work today? • 2021-22 Promoting the use of design and technology cross-curricular on school trips e.g looking at the architecture of the places of worship we visit on our RE trips. • 2021-22 Consider cross-curriculum links in Literacy. Fact pages, autobiographies, newspapers!
<p>2. To maintain a consistent form of evidencing of class DT projects. Ensuring full coverage of our termly topics and enrichment opportunities. <i>Detailed termly project packs to include lesson plans, links to skills and prior learning. Breaking down each part of the projects infused with pupil voice.</i></p>	<ul style="list-style-type: none"> • Nov 21- Book look at previous projects to find good examples for new members of staff. Ensure a good level of consistence is present, alongside evidence of pupil voice. • Nov 21- Introduce a flow chart system for each class projects. A detailed flow chart for teachers to support with the planning of sessions and a simple four-step chart that will be used by children during the project. This will expose the children to the area of learning they will be focusing on and highlight the skills being learnt. Moving away from the children only recalling the product made. • Nov 21-Recap the need for a lesson breakdown to be present in each project pack.
<p>3. To continue to re-establish communication and book cooking facilities from different schools and providers, which were previously established before COVID. Providing ample opportunity to develop key cookery skills and learning about where food has come from. <i>Children will continue to build key cookery skills from both class projects and enrichment opportunities.</i></p>	<ul style="list-style-type: none"> • Sept 21- Review the cooking skills progression against the content grid to ensure children’s learning is building on prior learning and no gaps have been created during COVID. • Dec 21-Ask teachers about others cooking opportunities, cross-curricular. • Jan 22- Contact Fiszjohn’s Primary school and find out if their cooking suite is available this year for Year’s 5 and 6. • Jan 22-Book school trips Waitrose cookery school for Yr 3 and Reception/KS1 farm trip. <div style="display: flex; justify-content: space-around;">   </div>

Work sampling 2020/21 – in school projects and home learning

	Remote Learning	In School
Year 6	<p>Electrical systems/Mechanical systems <i>Paper Prototype Model</i></p>  <p>Science/DT competition</p> <p>Cookery-Come Dine with Me-sourcing recipes, costing and making a meal (links with Maths): https://christchurchschool.co.uk/wp-content/uploads/2021/02/Year-6-Come-dine-with-me.pdf</p>	<p>Electronics- complex switches and controls:</p>  <p>Textiles-Fabric decorations: https://christchurchschool.co.uk/wp-content/uploads/2020/12/Y6-DT-Fabric-decorations.pdf</p>
Year 5	<p>Structures-Mayan Temples (cc with history):</p>  <p>Cooking: https://christchurchschool.co.uk/wp-content/uploads/2020/04/Year-5-cooking-and-PE.pdf</p>	<p>Mechanical and electrical systems-Fairground rides:</p>  <p>Cookery-Festive food: https://christchurchschool.co.uk/wp-content/uploads/2020/12/Y5-DT-Festive-food.pdf</p>
Year 4	<p>Electrical circuits (making lighthouses):</p>  <p>Structures-Salt dough Diwali lamps: https://christchurchschool.co.uk/wp-content/uploads/2020/05/Year-4-Diwali-and-Diva-lamps.pdf</p>	<p>Textiles- Purses</p>  <p>Structures: https://christchurchschool.co.uk/wp-content/uploads/2020/12/Y4-DT-Gift-boxes.pdf</p>
Year 3	<p>Cookery-Balanced diet/Knife skills:</p>  <p>Structures-3D models of dinosaurs: https://christchurchschool.co.uk/wp-content/uploads/2020/05/Year-3-dinosaurs.pdf</p>	<p>Structures- Obelisks</p>  <p>Pneumatics- Christmas Cards: https://christchurchschool.co.uk/wp-content/uploads/2020/12/Y3-DT-Pneumatic-cards.pdf</p>
Year 2	<p>Exploring Materials/structures-Design and make a kite:</p>  <p>Textiles-Making Puppets: https://christchurchschool.co.uk/wp-content/uploads/2021/02/Year-6-Come-dine-with-me.pdf</p>	<p>Mechanical systems- wheels and axles</p>  <p>Mechanical systems- leavers and sliders- https://christchurchschool.co.uk/wp-content/uploads/2020/12/Y2-DT-Moving-cards.pdf</p>
Year 1	<p>Year 1 chopping with a knife and fork:</p>  <p>Structures-Rapunzel towers:</p>	<p>Cookery-Preparing fruit and vegetables</p>  <p>Textiles-Finger Puppets:</p>

	https://christchurchschool.co.uk/wp-content/uploads/2021/01/Year-1-Art-Rapunzel-towers.pdf	https://christchurchschool.co.uk/wp-content/uploads/2020/12/Y1-DT-Sewing-puppets.pdf
Reception	<p>Super Strong Eggs:</p>  <p>Exploring materials-Three Little Pigs (exploring strength of materials): https://christchurchschool.co.uk/wp-content/uploads/2021/03/Reception-The-Three-Little-Pigs.pdf</p>	<p>Textiles capes:</p>  <p>Structures- salt dough: https://christchurchschool.co.uk/wp-content/uploads/2020/12/Reception-DT-Salt-dough-decorations.pdf</p>
Staff	<p>Cookery-Bake-off competition- https://christchurchschool.co.uk/wp-content/uploads/2020/03/Staff-%E2%80%98Bake-Off%E2%80%99-competition-March-2020-1.pdf</p>	

Pupil voice.

Pupil voice discussions in September 2021 demonstrated that:

Children could talk about the range of previous learning both from DT projects and with links to other subjects:

Yr 3- we made our own cars. We learnt about wheels and axles

Yr 2- We made fairground rides and had to strengthen the structures

Yr 5- We learnt about sewing, we made our own bags or purses

Yr 6- I know we will be making Christmas pudding decorations this year. But, last year we made fairground rides with working mechanisms. We also made bird hides in groups, not real ones just models.

Yr 4- We made the wind turbines for our Arts project last year

Children could explain how their current learning built on learning they had done previously:

Yr 5- We already knew how to do running stitch and sew two pieces of flat fabric together. This made it easier to make our bags; we did learn blanket stitch but could go back to running stitch if we found it too hard. We made lighthouses with electrical circuits that was brand new.

Yr 3-when we made our Obelisk structures we knew how to connect the different materials like when we made playground models in Year 1. We used our cooking skills like sieving and mixing from home and from cooking in Reception, Year 1 and Year 2.

Children could explain what helped them remember learning in DT:

Yr 5- Pictures of models already ready to buy

Yr 6- Recapping our last subjects using pictures or group discussion

Yr 3- Practising our skills again before we make a new thing.

Yr 2- Watching others like a teacher or skilled person first

What makes our curriculum provision for Design and Technology exceptional and beyond the expected?

- ❖ Giving real life purpose for our class projects, such as making products to sell at the Christmas fair.
- ❖ A wide range of cross curriculum links, giving children the opportunities to revisit key skills and apply their knowledge in a range of different contexts.
- ❖ Cooking enrichment opportunities each year including cooking club and our cooking projects using Fitzjohn's cooking suite and trips to explore where food have has come from.
- ❖ A wide range of resources to explore and use which allows for more creativity and experimental aspects of each projects. This includes some opportunities' to use tools (when appropriate).

Key points for discussion with governors about this report

- Share evidence in class DT portfolios and display of high-quality DT work around the school (classrooms and communal areas like the front office cabinet, musical instruments and wicker horses)
- Developing cooking skills-showing the cookery skills development documentation and the photo pages from home learning and in DT portfolios.
- Success of creative home learning activities, including whole school 'big cook' project.
- Skills progression document divided into design, make, evaluating and technical knowledge.
- Our dedication to using a diverse range of role models in the design and technology industry to promote key skills and learning.