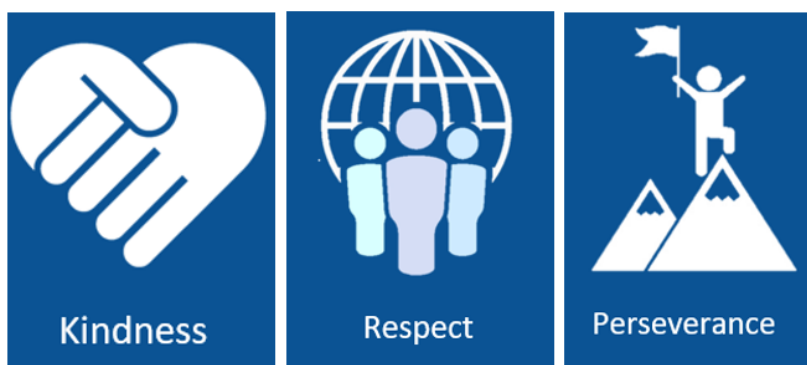


Ditchling (St. Margaret's) CE Primary and Nursery School

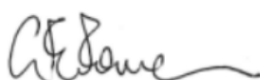
Design and Technology



'Living life in all its fullness' John 10:10

Version	Reviewed by	Approved by	Date Approved	Next Review Date
I	Ditchling developed Policy	Head/FGB	October 2024	October 2025

Signed: Chair of Governors



Signed: _Headteacher



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1. Curriculum Statement

Intent

Design and Technology is an inspiring, rigorous and practical subject. Design and Technology encourages children to learn to think and intervene creatively to solve problems both as individuals and as members of a team. At Ditchling, we encourage children to use their creativity and imagination, to design and make products that solve real and relevant problems within a variety of contexts, considering their own and others' needs, wants and values. We aim to, wherever possible, link work to other disciplines such as mathematics, science, engineering, computing and art. The children are also given opportunities to reflect upon and evaluate past and present design technology, its uses and its effectiveness and are encouraged to become innovators and risk-takers.

Implementation

Through a variety of creative and practical activities, we teach the knowledge, understanding and skills needed to engage in an iterative process of designing and making. The children design and create products that consider function and purpose and which are relevant to a range of sectors (for example, the home, school, leisure, culture, enterprise, industry and the wider environment).

When designing and making, the children are taught to:

Design

- use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups.
- generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional diagrams, prototypes, pattern pieces and computer-aided design.

Make

- select from and use a wider range of tools and equipment to perform practical tasks (for example, cutting, shaping, joining and finishing, as well as chopping and slicing) accurately.
- select from and use a wider range of materials, ingredients and components, including construction materials, textiles and ingredients, according to their functional properties, aesthetic qualities and, where appropriate, taste.
- Evaluate
- investigate and analyse a range of existing products.
- evaluate their ideas and products against their own design criteria and consider the views of others to improve their work.
- understand how key events and individuals in design and technology have helped shape the world.

Develop, Use and Apply Technical Knowledge

- apply their understanding of how to strengthen, stiffen and reinforce more complex structures.
- understand and use mechanical systems in their products.
- understand and use electrical systems in their products.
- apply their understanding of computing to program, monitor and control their products
- understand some of the ways that food can be processed and the effect of different cooking practices (including baking and grilling).

Key skills and key knowledge for D and T have been mapped across the school to ensure progression between year groups including EYFS. The context for the children's work in Design and Technology is also well considered and children learn about real life structures and the purpose of specific examples, as well as developing their skills throughout the programme of study. Design and technology lessons are also taught as a block so that children's learning is focused throughout each unit of work.

Each new unit of work begins with a recap of the previous related knowledge from previous years. This helps children to retrieve what they have learnt in the earlier sequence of the programme of study, and ensures that new knowledge is taught in the context of previous learning to promote a shift in long term memory. Key vocabulary for the new topic is also introduced as part of this 'unit introduction'. Once children know the new vocabulary for the unit and how it relates to previous learning, the children are asked what they already know specifically about the new topic. This provides the teacher with an insight into the children's 'starting points' for the topic, to enable the use of assessment to inform planning.

Within all sequences of lessons, teachers plan a phase of progressive questioning which extends to and promotes the higher order thinking of all learners. Questions initially focus on the recall or retrieval of knowledge. Questions then extend to promote application of the knowledge in a new situation and are designed to promote analytical thinking, such as examining something specific. In design and technology, an example of this level of questioning might ask children to consider how a mechanical system (such as gears and pulleys) might speed up, slow down or change the direction of movement. The questions that teachers ask within the same lesson phase, then focus on the children's own work and how they might change or create an outcome and justify a choice they have made which is based on their evaluation.

Impact

We ensure the children:

- 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 and 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. Children will design and make a range of products. A good quality finish will be expected in all design and activities made appropriate to the age and ability of the child

Children learn how to take risks, becoming resourceful, innovative, enterprising and capable citizens. Through the evaluation of past and present design and technology, they develop a critical understanding of its impact on daily life and the wider world. High-quality design and technology education makes an essential contribution to the creativity, culture, wealth and well-being of the nation.

2. Teaching and Learning

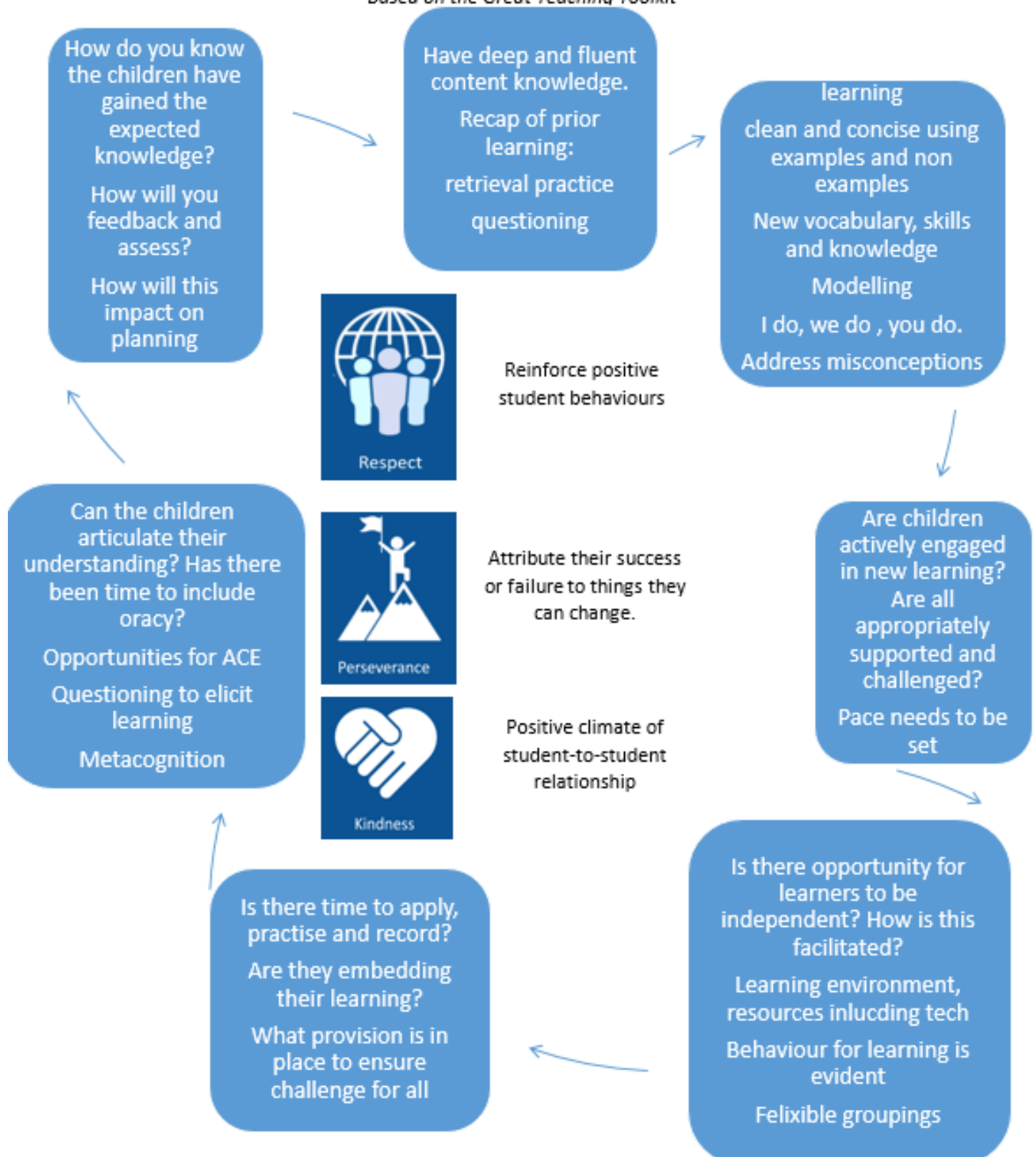
As part of the introduction to each new Design and Technology topic, teachers review what the children know already and identify what children would like to learn, to inform the programme of study so that it takes account of children's interests. Adults will support the acquisition of key knowledge and the accurate use of key vocabulary.

Lessons are planned to ensure that key knowledge is developed over time over the course of each Design and Technology block and in the correct sequence. Key knowledge is reviewed by the children and rigorously checked and consolidated by the teacher at the end of each unit of work as part of the school's assessment of Design and Technology. Lessons within each unit are also planned to ensure the systematic development of the key identified skills across the school.



Teaching and Learning at Ditchling

Based on the Great Teaching Toolkit



3. Assessment

Children's existing knowledge of the topic and the key related knowledge from previous year groups, is checked at the beginning of each unit.

Assessment for learning is continuous throughout the planning, teaching and learning cycle. Assessment is supported by use of the following strategies:

- Observing children at work, individually, in pairs, in a group and in class during whole class teaching.
- Using differentiated, open-ended questions that require children to explain and unpick their understanding.
- Providing effective feedback, to which recognises successful aspects of the children's work, as well as informing subsequent dialogue to address errors and misconceptions.
- Book moderation and monitoring of outcomes of work, to evaluate the range and balance of work and to ensure that tasks meet the needs of different learners (with the acquisition of the pre-identified key knowledge of each topic being evidenced through the outcomes).
- Child and teacher review of both the agreed success criteria at the end of each lesson and the key knowledge at the end each unit, to inform focused consolidation where this is necessary.

There is a strong focus on developing the quality, presentation and content of children's written work across all subjects through our 'Beautiful books' standards. The standard of children's writing is expected to be the same high standard across all subjects – teachers marking will address inaccuracies (such as, for example, inconsistencies in the use of capital letters and punctuation). It will also prompt when handwriting and grammar needs improvement, indicating an identified target and providing a suitable model where appropriate.

Although there will not always be a recorded outcome in children's books, task will be planned that provide plenty of opportunity for children to demonstrate the application of the key knowledge, skills and vocabulary for the lesson.

4. Planning and Resources

Lesson slides are designed to be accessible to all children, as well as to avoid cognitive overload. Lesson slides are used by the teacher to support the teaching, as well as to convey key information and instruction to the children. Teachers devise lesson slides according to what is stated on the progression map for Design and Technology according to the term and year group.

Teachers can source from a range of recommended lesson resources. Sourced resources for lesson slides might include imagery and ideas from slides from other schemes. However, these are not used in their entirety, to ensure a structured and consistent approach that is in line with the school's bespoke curriculum mapping. The key vocabulary for each topic is mapped and shared with the children using Widget. Our classroom displays present this vocabulary for Design and Technology.

The Design and Technology curriculum is designed to ensure that all pupils have a high quality, coherent and progressive experience of the subject. The school's Design and Technology knowledge and skills mapping is informed by the DT Association.

When planning, teachers ensure that teaching and learning activities provide a suitable level of challenge for all learners, with appropriate task adaptation where necessary. Lesson slides and resources are saved in the schools shared planning drive as a central resource. Not all lessons will be planned to have a written outcome, but the lesson slides of lessons without a recorded outcome will indicate the key knowledge and skills covered and how these were taught, including what the children did.

5. Organisation

The Design and Technology Knowledge and Skills Progression Map outlines the key knowledge for each unit and how these progress throughout the programme of study, as well as identified and planned cross-curricular links and opportunities for learning outside the classroom.

	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
EYFS	Structures Junk Modelling	Drawing – Marvellous Marks	Painting and Mixed Media: Paint My World	Sculpture and 3D: Creation Station	Textiles: Bookmarks	Structures: Boats
Year 1	Freestanding Structures – chair for baby bear	Drawing – Make your Mark	Food - Preparing Fruit and Vegetables Spring Fruit salad	Painting and Mixed Media: Colour Splash	Mechanisms Sliders and Levers - Dolphin Boy Card	Sculpture and 3D: Paper Play
Year 2	Food - Preparing Fruit and Vegetables. Healthy Rainbow Seasonal Pizza	Drawing – Tell A Story	Painting and Mixed Media: Life in Colour	Sculpture and 3D: Clay Houses	Textiles – Templates and Joining. Build a Bear Swimming costume	Mechanisms Wheels and Axles - Beach Wagon
Year 3	Sculpture – Abstract Shape and Space	Structures Shell Structures using CAD - Christmas Gift Box	Painting – Prehistoric Painting	Drawing – Growing Artists	Textiles 2D and 3D Product - Tool bag	Food: Healthy and Varied Diet - Healthy Stir Fry
Year 4	Healthy and Varied Diet - Sustainable Lunch	Craft and Design – Fabrics of Nature	Painting and mixed media: Light and Dark	Mechanisms Pneumatics - Toy for Year 1	Drawing – Power prints	Electrical Systems Simple Programming and control - Electronic Quiz
Year 5	Textiles: Combining different fabric shapes - Hats	Drawing – I Need Space	Sculpture and 3D – Interactive Installation	Structures: Frame Structures - Trojan Horse	Painting and Mixed Media: Portraits	Mechanisms – Cams -Toy for Tibetan Child
Year 6	Electrical Systems: more complex switches and circuits - Museum alarm for an artefact	Drawing: Make My Voice Heard	Structures: Frame structures using CAD - Battle of Britain Shelter	Painting: Artist Study	Sculpture and Mixed Media: Making Memories	Food – celebrating culture and seasonality Fairtrade food at Community Tea Party

6. EYFS

Expressive A Creating with Materials Being Imaginative and Expressive Painting, 3D modelling, messy play, collage, cutting, drama, role play, threading, moving to music, clay sculptures, following music patterns with instruments, singing songs linked to topics, making instruments, percussion. Work will be displayed in the classroom. Lots of links to Fine Motor Skills. Children to explain their work to others. Children will have opportunities to learn and perform songs, nursery rhymes and poetry linked to their work / interests and passions. The development of children's artistic and cultural awareness supports their imagination and creativity. It is important that children have regular opportunities to engage with the arts, enabling them to explore and play with a wide range of media and materials. The quality and variety of what children see, hear and participate in is crucial for developing their understanding, self-expression, vocabulary and ability to communicate through the arts. The frequency, repetition and depth of their experiences are fundamental to their progress in interpreting and appreciating what they hear, respond to and observe. Give children an insight into new musical worlds. Invite musicians in to play music to children and talk about it. Encourage children to listen attentively to music. Discuss changes and patterns as a piece of music develops.

7. KS1, KS2 and KS3

Design and Technology Education in KS1 and KS1 is enriched by the school's community links, which enables access to local places and visitors. The school also works closely with Downlands to help discover key skills needed by our students ready to being year 7:

Transition in to year 7 – KS3 Curriculum After liaising with secondary colleagues who deliver KS3 Design and Technology curriculum at our local primary school, these are the skills they believe children need to come into year 7 having experienced:

- Students need to learn to research existing products and solutions to inform their design ideas.
- Students need to be able to evaluate the development of engineered products.
- Students need to use sketching and modeling techniques to create products and solve problems.
- Students should be able to use technical vocabulary relevant to their projects.
- Students should know how to use computing to program, monitor, and control their products.
- Student should have experience learning to plan and construct their designs.
- Students should know how to assemble and disassemble their designs.
- Students know how to join, fix, and use materials effectively.

Children's work in books will mostly be their own recorded writing. Pages of scaffolded work will only be stuck into children's books when this is absolutely necessary. In some instances, children might stick a diagram or visual into their books that they will label or respond to into their books, rather than completing the entirety of an outcome on a separate sheet which is then stuck in. In Design and Technology, it might be appropriate for children to record a their learning or practice onto a provided format. However, the

majority of children will record their work directly onto the pages of their book, using the layout provided as a point of reference. This will enable greater ownership and pride in recorded outcomes.

8. Equal Opportunities

Ditchling School will ensure that all children are provided with the same learning opportunities regardless of social class, gender, culture, race, disability or learning difficulties. As a result, we hope to enable all children to develop positive attitudes towards others through our school values of kindness and respect. All pupils have equal access to Design and Technology and all staff members follow the equal opportunities policy. Resources for SEN children and children who are working at greater depth are made available to support and challenge appropriately.

9. Inclusion

Children with English as an additional language: It is vital that children who have English as an additional language have English modelled accurately by all staff at school. Collaborative work with peers (where English is their first language) is essential and EAL children are provided with consistent opportunities for this verbal interaction.

Assessment data is used to inform and allocate appropriate intervention, including speech and language groups. The school will also support EAL children and their families through drop in sessions for parents and carers, in line with the inclusion policy. Special Educational Needs Class teachers inform the Inclusion Lead if they are concerned that a child may have underlying learning difficulties. Support for children with identified SEN includes the following, as appropriate:

- Volunteer readers
- Reading buddies
- Language groups
- Social skills groups
- Booster classes
- Toe by Toe
- Get Spelling scheme
- One-to-one RWI (see SEN policy for further details).

10. Role of the Subject Leader

The role of the subject leader in Design and Technology is to coordinate the teaching of Design and Technology across all phases of the school. This is in order to secure high quality literacy provision for every child, including outstanding Design and Technology teaching and learning, effective use of resources and the highest standards of achievement for all.

Key duties that the subject leader will undertake over the course of the year include:

- Monitoring of Design and Technology
- Learning walks and participation in lesson observations
- Planning and organising Design and Technology including enrichment opportunities and competitions
- Helping identify and facilitate the professional development needs of staff
- Liaising with SLT to implement school improvement priorities and report on actions, progress and impact
- Liaising with the school Inclusion Lead to best support children experiencing difficulty in Design and Technology.
- Organising, maintaining and cataloguing resources
- Keeping abreast of new initiatives in teaching, including attendance of borough forums and dissemination of key content.

Lesson slides and outcomes for each unit of work will be monitored by the SLT, in collaboration with subject and phase leaders. This will inform any necessary follow-up 12 action and support, to ensure that school systems are consistent across year groups, age phases across the school throughout the curriculum. This is part of the school's commitment to ensuring a high quality, broad and stimulating curriculum.

Regular opportunities will be provided throughout the year for moderation of children's achievement, according to the programme of study for their year group. The subject leader will use the outcomes of this process to support further development in Design and Technology, as well as the findings from regular book looks (where teachers across year groups will view outcomes of work in each subject). The book look process itself will provide an opportunity to recognise, celebrate and disseminate good practice, and inform judgements as to the progress being made towards identified whole school and subject priorities. Wherever possible, models and that the children have created will be seen as part of this process. In-house moderation and Book looks will be scheduled to take place within teachers' directed time.

11. Parents and Carers

We recognise how crucial the home/school link is for supporting children to have the highest standards of achievement in Design and Technology At the 'Meet your teacher' meeting at the beginning of every academic year, the Design and Technology standards of the year group are explained, as well as further meetings throughout the year to support parents to understand the curriculum.