



CASTILION PRIMARY SCHOOL

Engage, Enthuse, Empower



Reviewed	Agreed by Staff	Review Date	Committee responsible for review
September 2020	September 2020	When necessary	Learning and Achievement

DT POLICY

Rationale

At Castilion Primary School we are committed to providing all children with learning opportunities to engage in design and technology. Our planning and practice is based on the 2014 National Curriculum for Design and Technology.

Aims

We believe design and technology is about designing and making products for a specific user and purpose. It involves children in learning about the world we live in and developing a wide range of knowledge and skills through designing and making. It helps children to think through problems creatively, about how to organise themselves and how to use knowledge and skills to bring about change and to shape the environment. Through design and technology children become discriminating and informed users of products and become innovators.

We believe Design and Technology offers opportunities for children to:

- develop their capability to create high quality products through combining their designing and making skills with knowledge and understanding;
- develop a sense of enjoyment and pride in their ability to make;
- nurture creativity and innovation through designing and making;
- develop an interest and understanding of the ways in which people from the past and present have used design to meet their needs.

In the Early Years Foundation Stage, we provide opportunities for children to:

- develop a curiosity and interest in the designed and made world through investigating, talking and asking questions about familiar products;
- develop confidence and enthusiasm through frequent exploration of construction kits to build and construct objects, and activities for exploring joining, assembling and shaping materials to make products;
- extend their vocabulary through talking and explaining about their designing and making activities.

Implementing Design and Technology

Time allocation

At Castilion Primary School, Design and Technology is blocked with Art and Design so is taught half termly. Each design and technology project will be taught for one afternoon per week in a six/seven week block to give greater coherence to children's learning.

Planning

The D&T Association's Projects on a Page scheme of work provides the framework for learning and teaching in design and technology.

- One project is planned and undertaken in one half term each term.
- Teachers should use the project planners in the scheme imaginatively, whilst ensuring the learning objectives remain the same in order to ensure progression.
- In the EYFS, daily design and technology activities are planned; some initiated by children and some led by adults.
- Children in their designing and making will apply knowledge and skills of: textiles, food, mechanisms, mechanical systems and structures. Electrical systems are taught in KS2.
- All design, make and evaluate assignments provide learning opportunities for developing creativity through designing skills such as generating, exploring, modifying ideas through drawing, and modelling through materials.

Links with other subjects and key competencies

- We believe design and technology provides a natural opportunity to practice and improve basic skills such as spoken language, English and mathematics.
- In our design, make and evaluate assignments we aim to provide learning opportunities for developing key competencies such as problem solving, teamwork, negotiation, consumer awareness and organisation.
- One project each year will focus on team or group work in Key Stage 2.
- Through evaluating the process and their final products children will be encouraged to improve their own learning and performance.
- Children develop and apply knowledge and skills for art and design, science, computing and English in design and technology. Teachers will make links wherever possible to help raise standards in both subjects and enhance children's learning.
- The school curriculum map indicates how relevant subjects are grouped together with design and technology; specific links are made with science.
- Design and technology is used to raise children's appreciation of fundamental British values.

Computing

- Programming and control is used in electrical systems projects in Year 4 and Year 6 to operate children's products. This builds on work developed in computing.
- Paint software is used for finishing techniques and simple paper pattern making in textiles projects.
- Our computer-aided design (CAD) software is used when children are designing the net for packaging.

Extending the curriculum

- Children should develop an understanding of the design and made world through first-hand experience.
- Wherever possible children will be given opportunities to visit local museums, shops and restaurants and meet with designers, engineers, chefs, architects and students from college and secondary schools.

Organisation

All class teachers will have responsibility for planning and teaching D&T to their classes. The D&T Association's Projects on a Page scheme of work will be used to inform teaching. Teachers can annotate over the plans to make any changes necessary to suit the requirements of their own class.

Inclusion

- A wide range of cultural images and contexts will be used in design and technology, and we will use these opportunities to challenge stereotypes.
- For all children to produce their best, we plan differentiated resources and tasks through:
 - adapted worksheets;
 - changing the demands of a task;
 - more limited choices;
 - greater teacher intervention, small group work and teaching assistant support;
 - ensuring manipulative skills needed are manageable;
 - selecting appropriate tools and equipment.
- Talented or able children are challenged through more demanding tasks such as more open-ended design briefs, rigorous testing of their products, carrying out independent research, giving additional responsibilities such as leading a team.

The learning environment

- We aim to provide a learning environment where children feel secure and creative risk-taking and problem solving is encouraged and children's design ideas and suggestions are valued.

Assessment, recording and reporting (see Assessment policy)

- The design and technology subject leader will collect selected examples of children's work from the projects in our scheme of work Projects on a PGE. The examples will be used for identifying progression and expectations.
- Children in Key Stages 1 and 2 will keep sketches, plan drawings, paper mock-ups, notes and evaluations in their sketch books. These can be used for assessment purposes and for monitoring progression.

- Teachers make notes at the end of projects on children who were significantly above or below expectations set out in the project planners; this will inform future planning.
- Children are encouraged to make personal assessments of their own work through evaluating activities and identify what they need to do to improve.

Management and organisation of resources

- The design and technology subject leader will order consumable resources at the end of each term for specific planned projects. A request for alternative or additional resources can be made at this time.
- The consumable resources are stored in project-based boxes and must be used for the planned projects only. These are based in the D&T cupboard and can be taken to the classroom for the duration of the project. A consumable check list will be included in all project boxes which needs to be completed at the end of each project to inform the design and technology coordinator of which consumables need to be replaced.
- Also including in the boxes are supporting materials: help sheets, worksheets and products for investigation, posters and photographs.
- Teachers are asked to check that support materials are complete prior to returning the project box to the D&T cupboard.
- Consumable materials such as masking tape and PVA will be given out at the beginning of the year to class teachers.
- Tools and equipment such as wire strippers, hacksaws, bench hooks and snips are kept in the D&T cupboard.
- Food will be bought and used on the day it is needed.
- Utensils and equipment for food will be stored in a labelled cupboard in the staffroom kitchen.

Health and safety

- Risk assessments will be carried out prior to design and technology projects.
- Teachers will always teach the safe use of tools and equipment and insist on good practice.
- Children will be taught how to take steps to control risks.
- Glue guns will be used by Key Stage 2 children under supervision, only when there is no other appropriate joining technique.

Food – hygiene and safety

- A trained teaching assistant will support with work on food. He or she will ensure all equipment is clean and in working order. Plastic aprons will be worn by adults and children when working with food.
- Prior to food activities, children who are not permitted to taste or handle food products or ingredients will be identified.

Role of the subject leader (see subject leader policy)

The subject leader will:

- inspire learning through bringing design and technology alive for our children;
- monitor and evaluate the learning and teaching of design and technology within the school;

- devise an action plan to show future developments and review progress;
- provide specialist support and guidance on teaching projects and planning;
- purchase and organise resources and maintain equipment to make them easily accessible for colleagues;
- attend courses for CPD and report them back to staff;
- explore ways to raise the profile of design and technology within school and make links with local businesses;
- encourage parents to be involved in their children’s learning in design and technology.

Long – term planning

- To ensure that children receive the breadth of learning required by the National Curriculum and that they increase their knowledge, understanding and skills over time, it is essential that a long-term plan has been devised:
- To ensure that the requirements of the programmes of study are met effectively, aim to complete one project per term or six projects in KS1 and twelve in KS2.
- As long as projects are covered within the two-year block (e.g. Early Key Stage 2), they can be taught in any order. This means that projects can be matched with termly topics or themes and links can be made with related learning in other subjects, such as science, mathematics or art and design.
- Ensure that each term’s project addresses a particular aspect of the subject. At KS1, these are mechanisms, structures, food and textiles, and at KS2 mechanical systems, electrical systems, structures, food and textiles.
- Identify the focus for children’s learning in each project you are undertaking e.g. the focus for the Y1/2 Project Planner on textiles is ‘templates and joining techniques’.
- Teach two mechanisms projects in KS1 – one on sliders and levers, and the other on wheels and axles. This will ensure the necessary prior learning for mechanical systems projects in KS2 on lever and linkages, and pulleys or gears.
- Build the requirements for ‘cooking and nutrition’ in each key stage into projects on food. These requirements have been incorporated into each of the Project Planners on food.
- There are fifteen Project Planners in total, with five for Y1/2, five for Y3/4 and five for Y5/6. This means that there are three terms across KS1 and 2 where schools can carry out an additional project. To comply with the ‘cooking and nutrition’ requirements that children should ‘prepare dishes’ (i.e. more than one dish) in KS1 and a ‘prepare and cook a variety of predominantly savoury dishes’ (i.e. several dishes) in KS2, schools may wish to reuse the food Project Planners to carry out an additional project with food in Y1/2, Y3/4 and Y5/6, identifying different products, user and purposes. This is particularly advisable if no additional, standalone food preparation and cooking activities have been planned.

Design and Technology long – term plan at Castilion Primary School

Year 1

Mechanisms	Structures	Food
Sliders and levers	Freestanding structures	Preparing fruit and vegetables (including cooking and nutrition requirements for KS1)

Year 2

Mechanisms Wheels and axles	Food Preparing fruit and vegetables (including cooking and nutrition requirements for KS1)	Textiles Templates and joining techniques
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Year 3

Structures Shell structures using computer-aided design	Food Healthy and varied diet (including cooking and nutrition requirements for KS2)	Textiles 2D shape to 3D product
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Year 4

Mechanical Systems Pneumatics	Electrical Systems Simple programming and control	Food Healthy and varied diet (including cooking and nutrition requirements for KS2)
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Year 5

Structures Frame structures	Food Celebrating culture and seasonality (including cooking and nutrition requirements for KS2)	Electrical Systems Monitoring and control
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Year 6

Textiles Using computer-aided design in textiles	Mechanical Systems Cams	Food Celebrating culture and seasonality (including cooking and nutrition requirements for KS2)
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Monitoring and review

The Head Teacher, Deputy Head and Assessment Leader will ensure this policy is implemented consistently throughout the school using strategies such as discussion with teachers, pupils and parents/carers, sampling pupils' books and reports, lesson observations, learning walks and sampling teachers' planning.

Senior Leaders and Subject Leaders will carry out quality assurance, assessment moderation, book and planning scrutinies as part of their monitoring process.

Signed: Head Teacher

Date:

Signed: Chair of Governors

Date:

