DESIGN AND TECHNOLOGY POLICY

Intent

At Fulwell Infant School Academy DT is set within a broad, integrated curriculum with a wide range of experiences, which will enable children to reach their full potential. We aim to ensure that every child has access to the intentions set out in our curriculum intent document.

Design technology will provide opportunities for the children to become creative problem solvers. By encouraging the children to explore, investigate, invent and experiment we aim to develop their knowledge and understanding of technological processes. Design Technology prepares children to take part in the development of tomorrow's rapidly changing world. We help children to appreciate the importance of design technology in everyday life. Our DT curriculum develops an understanding of the principles of food and nutrition and age appropriate opportunities to prepare food and observe/undertake simple cooking. Children are given opportunities to plan, to select materials, to make and then to evaluate and refine all types of items. This encourages them to become autonomous and creative problem solvers, both as individuals and as part of a team. Design Technology helps children to become discriminating and informed consumers and potential innovators. In our school, we emphasise practical activities in which skills are required, practised and used creatively. We expect that their increasing knowledge, understanding and skills in designing and making result in high quality products.

Aims

- To develop imaginative thinking this will enable the children to discuss their likes and dislikes of a product when designing and making.
- To enable children to discuss how things work and to draw and model their ideas.
- To encourage children to select the appropriate tools and techniques for making a product, whilst following correct health and safety procedures.
- To develop an awareness of the influence of design and technology in our everyday lives and begin to understand why products are as they are and how they work.
- To provide opportunities to develop and apply information technology capability.
- To encourage children to co- operate in a variety of work situations – as individuals, pairs and small groups or as a whole class.
- To foster enjoyment, satisfaction and purpose in designing and making.

General

In planning for the teaching and learning in Design and Technology staff should refer to National Curriculum documents, the EYFS document and the document and the programmes of study. The long term and medium term planning emphasise how Design and Technology is taught across each year group in a variety of different ways linking to different areas of the curriculum. The medium term planning document for year 1 and year 2 clearly show the range of activities children will encounter and the variety of different skills they will learn. These documents show the progression in the subject between year groups and the ability for children to reinforce key skills year upon year. These will also form the basis of teacher's assessments of the progress made by individual pupils.

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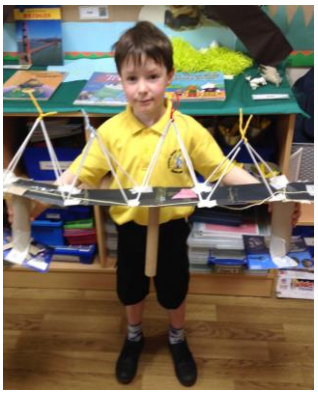
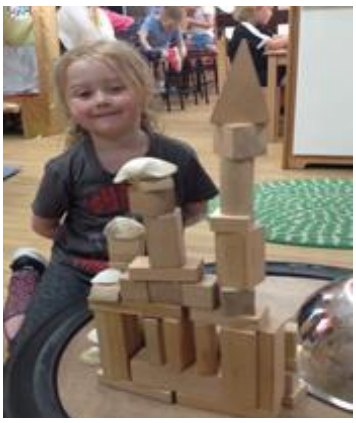
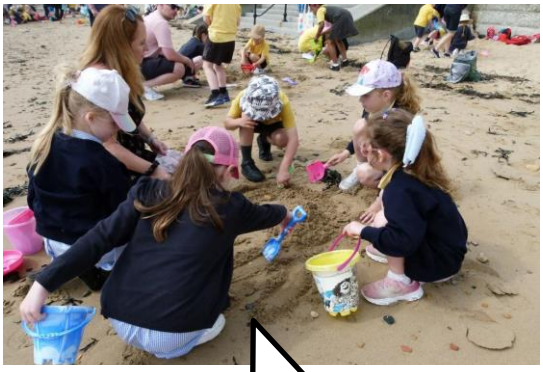
The essential characteristics of a designer at Fulwell Infants



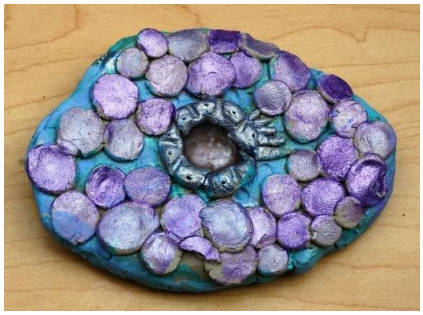
To discuss how things work, to design and develop drawings of ideas and test these out using selected resources.



To develop imaginative thinking through projects.



To work cooperatively in a variety of situations.



To foster a love of designing and making through a range of carefully planned projects.

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At Fulwell Infant School we work and support children to develop their design and technology ability. We aim towards enabling children to be:

- Someone who is able to generate ideas through discussion and experimentation.
- Someone who can adapt their plan by adding extra detail or change an element of their plan.
- Someone who is able to work with a range of different materials including construction kits, textiles, and food, wood, plastic and junk materials.
- Someone who can construct a model.
- Someone who can work as individuals and as a group.
- Someone who is able to evaluate their work by identifying strengths and weaknesses within their work and be able to adapt and improve their designs.
- Someone who will experiment with simple components, mechanisms and structures.
- Someone who can consider risks to themselves and others.
- Someone who can share their own creative ideas and discuss ideas as a group.

Time allocation

Throughout the school year we aim to seek a balance between all subject areas. Design Technology will be taught using a thematic approach providing flexibility for short and long projects at a relevant time for the children to build onto all their learning. Teachers will use their professional judgement in deciding the best use of time.

Behaviour and attitudes

The approach within our school is that all children will be encouraged to work positively and with enthusiasm in design and technology. Teachers will model appropriate behaviour for learning in which children will be encouraged to listen during class discussions, share their ideas and follow classroom rules and routines in order to keep themselves and other children safe. Within the subject we will model how to plan design tasks effectively including justifying materials used, demonstrate how to make purposeful products and then work towards encouraging children to evaluate and talk about products they have made. Throughout teaching and learning within this subject we will praise children for being resilient, independent designers. We will encourage children to share their own creative ideas and will support them to adapt upon their own original ideas.

Implementation

Role of the subject leader

This role is central to ensuring that all pupils receive their full D.T curriculum entitlement within the foundation stage and key stage 1 within our full school. Key tasks include:

- Monitoring the policy and practice of the DT curriculum.
- To attend relevant courses and keep abreast of new initiatives and best practice.
- To liase with the head teacher to co-ordinate the D.T funding within the whole school budget.
- To maintain DT equipment and monitor stock whilst evaluating new materials to ensure variety and value for money.
- Motivating and stimulating interest and excitement for learning.

- Ensure children discuss and take an active part in their learnin
- Address the literacy and numeracy needs of each individual and make full use of ICT in the provision of learning opportunities for all learners with additional educational needs, setting appropriate yet challenging targets for improvement.
- Provide a broad and balanced curriculum using a thematic approach where curriculum areas are linked.
- Provide opportunities that extend and enrich learning to include visits or visitors, where appropriate
- Ensure that we use a range of classroom practice and teaching style appropriate to the needs of the learners in the group.
- Use the full range of differentiation (scaffold and challenge) strategies to ensure that all learners have the opportunity to access the curriculum and make progress and adopt teaching methods that reflect the differing learning styles of the individuals in the group.
- Monitor progress against targets and share the information with the learner and parents
- Seek to overcome potential barriers to effective inclusion.
- Ensure display in the learning environment celebrates the achievement of our children and scaffolds their learning to extend their achievement further.
- Provide home learning activities, which extend and support learning.

Curriculum planning for Design and Technology

EYFS

In Early Years the children will have the opportunity to explore, investigate and make new discoveries about the world they live in. Their first experiences are likely to include;

- Developing and applying the skills of questioning, hypothesising, exploring, measuring, observing, identifying, predicting, discussing, comparing, classifying and listening.
- Exploring a range of construction materials to develop their own ideas for designing and making.
- Working with commercial construction kits assembling and disassembling to discover how things work or don't work.

Expressive Arts and Design (EAD) – Achieved by the end of Nursery

Three to Four Year Olds

3. Make imaginative and complex 'small worlds' with blocks and construction kits, such as a city with different buildings and a park.
4. Explore different materials freely, in order to develop their ideas about how to use them and what to make.
5. Develop their own ideas and then decide which materials to use to represent them.
6. Join different materials and explore different textures.

Expressive Arts and Design (EAD) Early learning goals – Achieved by the end of Reception

Children in Reception

20. Return to and build on their previous learning. Refining ideas and developing their ability to represent them.

Early Learning Goals

1. Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.
2. Share their creations, explaining the process they have used.

Physical development (PD) EYFS – Achieved by the end of Nursery

Three to Four Year Olds

8. Choose the right resources to carry out their own plan. For example, choosing a spade to enlarge a hole they dug with a trowel.
9. Collaborate with others to manage large items, such as moving a long plank safely, carrying large hollow blocks.
10. Use one-handed tools and equipment, for example, making snips in paper with scissors.
11. Use a comfortable grip with good control when holding pens and pencils.
13. Show a preference for a dominant hand.

Physical development (PD) Early learning goals – Achieved by the end of Reception

Children in Reception

20. Develop their small motor skills so that they can use a range of tools competently, safely and confidently. Suggested tools: pencils for drawing and writing, paintbrushes, scissors, knives, forks and spoons.

Early Learning Goals

5. Use a range of small tools, including scissors, paintbrushes and cutlery.

Long term plans for Year 1 and Year 2

Long Term plans map out the themes covered in each term for each year group in key stage 1. The curriculum leader for design and technology will liaise with all curriculum leaders to ensure that learning builds upon learning.

Design KS1

To design and plan a purposeful, functional, appealing product for themselves and other users based on design criteria.
To generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology.

Make KS1

To select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing.
Explain why they have chosen specific tools.
To select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics.

Technical knowledge KS1

To build structures, exploring how they can be made stronger, stiffer and more stable.
To explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products.

Food technology KS1

To use the basic principles of a healthy and varied diet to prepare dishes.
To understand where food comes from.

Evaluate KS1

To explore and evaluate a range of existing products.
To evaluate their ideas and products against design criteria.

Medium term plans Year 1 and Year 2

Medium term plans are a mapping overview of content, which are constantly being reviewed and amended to ensure relevance for the cohort of children, give details of each unit of work for each term. They ensure an appropriate balance and distribution of work across each term.

- Key skills development to ensure children progress at a level according to their ability. They identify learning objectives and outcomes for each theme.

Short-term plans Year 1 and Year 2

Short term plans are completed by staff for each block of learning.
These include:

- the specific learning objectives and detail how the lessons are to be taught,
- success criteria which are shared with the children to ensure children understand their next steps to learning,
- Activities to engage the children and to lead their development through active participation.

We plan the activities in so that they build upon the prior learning of the children. We give children of all abilities the opportunity to develop their skills, knowledge and understanding and we also build planned progression into the scheme of work, so that the children are increasingly challenged as they move through the school.

Planning is recorded in class files, which are accessible to all staff. In this way subject/curriculum leaders can monitor and develop learning within their curriculum area. Scrutinies of planning and work are carried out by subject leader/leadership with feedback given to ensure children access the full curriculum. We will ensure that we plan to meet the needs of the following clearly identifiable groups:

• Gifted and talented learners
• Learners from different ethnic groups
• Learners for whom English is an Additional Language
• Learners with Special Needs and disabilities
• LGBT
• Learners with emotional, behavioural or social needs
• Learners who are at risk of disaffection or exclusion
• Learners who are "Looked After" in public care
• Learners in receipt of Pupil Premium.

Spiritual, moral, social and cultural development

Learning through Design and Technology contributes to the children's spiritual development in many ways. We provide children with the opportunity to discuss moral questions, what is right and wrong. Children learn how society has changed and develop skills to become good citizens. They study their own rich cultural heritage and developing an understanding of how this culture is enriched by the multi-cultural British society of today, based on
British values of democracy, the rule of law, individual liberty and mutual respect and tolerance of those with different faiths and beliefs.

Personal development

We aim towards providing a wide range of activities across all aspects of the curriculum. At Fulwell infant school we will build upon children's natural design ability and support them to think purposefully about making and designing products. From an early age children have the ability to talk about what they are designing or making and throughout the EYFS and KS1 stage we work towards promoting self confidence and esteem within all our learners. We encourage our children to plan, design, make and evaluate a range of products as well as consistently providing modelling opportunities on how to be safety aware when using a range of tools. In addition to this we strive to promote a resilient, positive attitude in all learners by showing children why and how evaluating their work and thinking about the appropriate tools and resources needed will provide them with opportunities to adapt their work and make changes for the better. This positive attitude towards editing and improving products and designs allows our learners opportunities to support the mental, emotional and physical well being of all our children. By embedding these attitudes across the curriculum it will overall support our children to be caring, respectful members of the community.

Resources

We have sufficient resources available in school to meet the needs of the Academy Curriculum. This allows resources to be matched to any developments in the curriculum, through the teaching of knowledge, skills and understanding. In June 2019 a range of new Design and Technology resources were purchased to support the teaching of this subject and to enhance the learning for all pupils.

Assessment

Formative assessment involves spending time before and during each unit or theme time eliciting children's knowledge and understanding – Mind Mapping/ Spider Graphs, discussions etc. We follow the principles of Assessment for Learning in all of our Knowledge and understanding. This involves identifying a child's progress in each area of learning, determining what each child has learned and identifying the next steps in his/her learning, linked to the learning intention and success criteria for the session. Effective tools used by our teaching staff include:

- Sharing explicit learning intentions and success criteria
- Quality questioning
- Self-assessment and peer assessment against learning intentions and success criteria
- •Quality marking to identify areas where the success criteria has been met and areas that need to be improved

Summative assessment involves spending time at the end of each unit or at the end of year assessing children's skills and understanding. The National Baseline (2019) will provide a baseline assessment level for each child. Class teachers assess children against key learning, identified on the termly foundation plan. This identifies children needing additional support and those who are working at a mastery level.

Assessment against the National Curriculum allows us to consider each child's attainment and progress against age related expectations. This ensures that our teaching is matched to the child's needs. Intervention is provided, as set out in the renewed SEN

code of Practice (2014), through quality first teaching and where a child is in receipt of a statement of Special Educational Needs or Education Health Care (EHC) plan a specific education plan will be in place linked to specific targets. The targets may include, as appropriate, specific targets relating to Design and Technology.

Enrichment

Whole school projects

We strive towards promoting enthusiasm and exciting opportunities for all of our learners at Fulwell Infant School, we ensure children are exposed to a variety of different whole school and classroom opportunities to show their design technology knowledge and skills. We carry out an annual Easter egg competition in which each year group I given an overall theme for their egg design. The children are asked to complete their entry at home, which will showcase their year group theme. The children can include moving parts, mechanisms, a range of different materials and levers within their Diorama design. This annual activity encourages all children to complete a design-based activity to support their learning within the subject. In previous years we have had an influx of entries ranging from a 'Egg Sheeran playing guitar' to a 'lighthouse with moving picnic basket themed around the Light house keeper's lunch text'.

New resources

In the of Summer 2019 we updated our design and technology resources and the whole school received a variety of exciting equipment and tools to use within the upcoming year. These resources include a brand new class set of safety glasses, clamps, saws and dowels to allow the children to learn from using a range of woodwork tools first hand to build products that are purposeful and effective. In addition to tools the children will now have access to brand new cams, mechanisms and levers to explore using within their products. As well as a range of new tools and resources to use new resources have been bought to support the children to design products and build prototypes to test their ideas including lego, gear sets, large building bricks, floating water construction kits and Incastro sets. All children will have the opportunity to use the new equipment to support teaching and learning within the next upcoming year.

Visitors / trips and Outdoor Learning experiences (OLE)

OLE

The National Curriculum aims can be further developed by children experiencing outdoor learning and our local environment is a positive stimulus for children's learning.

Nursery OLE

To use the outdoor learning space and the large building blocks to plan, design and make products.

Reception OLE

To use the outdoor learning space and the large building blocks to plan, design and make products.

To begin to talk about their designs and support to make comments on how they could adapt/ improve their products.

Year 1 OLE

Autumn term - To use the outdoor learning space and the large building blocks to plan, design and make a bridge.

Spring term - Linking with Year 1's 'Three Little Pigs' topic, the Year 1 children will experience designing and building first hand within a Den building workshop. The children will talk about tools and resources they would need to use to build a den, then with support the children have the opportunity to use real life materials (Linking to their science topic – materials) to build a den. This OLE is then reinforced back in the classroom when the children write about their session. This allows the children to interlink various skills across the curriculum;

- skills they are learning within their topic of the three little pigs
- DT through planning, designing and making their den and evaluating their tool and resource choices
- their scientific learning of materials
- literacy – writing back in the classroom.

Summer term - To use the outdoor learning space and the large building blocks to create a castle.

Year 2 OLE

Autumn – To select healthy fruits for Hansel – children to walk to local fruit and vegetable shop to select appropriate fruit and vegetables.

Spring – children to select appropriate materials for their lighthouse keeper collage. While the children are walking around the LC the children will discuss their material choices and why they have chosen that particular material for that part of the lighthouse picture.

Summer – test their boat designed to float. The children will evaluate the product against criteria and evaluate their material choices and design.

Food technology

Within our school we have full use of kitchen facilities including a kitchen, oven, hob and cooking utensils that enables the children to experience and enjoy lots of food technology. Within our school children from nursery to year 2 are taught food technology and will have the opportunity to prepare and cook simple dishes as part of their design and technology curriculum.

Nursery – food technology determined by their child led learning throughout the year

Reception - food technology determined by their child led learning throughout the year

Year 1 – Gruffalo crumble (Autumn term), Spooky Halloween biscuits (Autumn term) Indian food tasting, (Spring Term) and Easter chick nests (Spring Term)
Year 2 – Food beard for Mr Twit (Autumn Term), Design a healthy plate (Autumn Term), Gingerbread house (Autumn Term) and Caribbean food tasting (Spring Term).

Inclusion

The governors and staff of the academy are committed to providing an inclusive range of high quality learning opportunities for everyone involved with the school and Community. We will ensure that everyone has an equal opportunity to access the full range of provision available in Design and Technology and will actively seek to remove barriers to learning and participation. The teaching and learning, achievements, attitudes and well-being of every child are important.

Health and safety

The teacher will be responsible for planned activities within Design and Technology that are appropriately risk assessed to comply with health and safety requirements. They are also responsible for the health and safety of themselves, classroom assistants, visitors and pupils within their class.

Impact

Leadership will consider first hand evidence of how children are doing in each subject. Quality first teaching in response to the planned curriculum will provide evidence and information to answer the key questions listed below:

Do all our children achieve as much as they can?
Are there differences in the achievement of different groups of children?
What are we doing for those children who we know are not achieving their potential?
Are our actions effective?
Is the curriculum promoting outstanding learning?

Subject leader

The Subject Leader has the responsibility for overseeing and resourcing the subject. There is an annual budget for resourcing Design and Technology so that effective teaching can take place and the school's policy can be maintained. This may vary from year to year according to curricular priority and resources available.
(see role of subject leader document)

Monitoring and Review

The leadership team (including the subject leader) is responsible for monitoring planning and the standard of children's work. Monitoring activities include planning and work scrutinies. This involves interviewing children across key stages. Children are asked focused questions about their learning with their work. This enables curriculum leaders to monitor progress within their subject. The curriculum leader supports colleagues in the teaching of Design and Technology, by giving them information about current developments in the subject and by providing a strategic lead and direction for the curriculum area in the school. Curriculum leaders meet with governors, as appropriate, to discuss current developments in their subject. Key questions are discussed during these meetings.

Subject lead
January 2025