**Design and Technology at All Saints**

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| **Purpose of Study at All Saints** |
| Design and technology is an inspiring, rigorous and practical subject. Using creativity and imagination, pupils design and make products that solve real and relevant problems within a variety of contexts, considering their own and others’ needs, wants and values. At All Saints, they acquire a broad range of subject knowledge and draw on disciplines such as mathematics, science, engineering, computing and art. Pupils 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. Design and technology education begins well before children begin their formal schooling. Children constantly explore their world through a variety of activities and it is vital for us to continue to extend this. The child’s increasing understanding of the process of design and technology should match their intellectual and physical development throughout their primary education. Design and technology at All Saints should be taught through a combination of defined design and technology projects, the direct teaching of skills and through activities integrated within the learning of other National Curriculum subjects or ‘Themed’ work. |
| **National Curriculum Aims** |
| The national curriculum for design and technology aims to ensure that all pupils: • 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 • critique, evaluate and test their ideas and products and the work of others Design and Technology Policy 2019-2020 • understand and apply the principles of nutrition and learn how to cook. At All Saints, we strive to provide a program of learning opportunities for all pupils to gain the basic knowledge and understanding, which underpin design and technology. In addition, we endeavour to provide continuity and progression for all pupils throughout the curriculum as they move through the school. We aim to ensure health and safety of all pupils during design and technology activities. |
| **Planning at All Saints** |
| We use a skills based cross-curricular approach to teaching and learning using objectives taken from the National Curriculum. At All Saints, Design and Technology is planned in a cyclical manner across the school. This is to promote familiarity for the pupils and to ensure progression of skills across the Key Stages.In Early Years Foundation Stage, Design and Technology is an integral part of topic work, relating aspects of the children’s work to the objectives set out in the Early Learning Goals, and Expressive Arts and Design. To facilitate our objectives different teaching styles and methods are used as appropriate. These include small group and individual work. **All DT topics must be based around a Design Brief that is referred to repeatedly throughout the cycle.** To meet the requirements of the National Curriculum it is essential that each teacher carry out the following Design Technology activities with a year; - Mechanisms - Textiles - Food – Structures There are 4 topics in Design and Technology at All Saints**: structure, mechanics, textiles and cooking and nutrition.** Research Design Create Evaluate  |
| * **Research**
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| * + In EYFS, this will be in input of the session.
	+ In KS1 this may be in the form of whole class teaching around the topic and may not be documented in Topic books individually.
	+ In LKS2, the children should begin to conduct teacher directed independent research. During this stage, the teacher should model how to research and children should be encouraged to present their findings in a range of ways. This should be documented in Topic books at the ‘Research’ stepping stone of the DT cycle.
	+ In UKS2, children should conduct independent research either individually or as a team. Children should be confident at displaying their research in creative ways and there should be an expectation that children present their findings to their peers or members of staff either verbally or through work in their Topic books.
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| * **Design**
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| * + In EYFS, the children should be encouraged to sketch their designs and those who are able should label the materials using appropriate scaffolding.
	+ In KS1 the children should begin to design their products individually with a lot of support and modelling from staff. With the support of the teachers, the children should label their designs using subject specific vocabulary from the vocabulary grid. Teachers should support children in fulfilling the design brief. This should be evidence in books.
		- **design purposeful, functional, appealing products for themselves and other users based on design criteria**
		- **generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology**

**Across KS2:*** **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 and exploded diagrams, prototypes, pattern pieces and computer-aided design**
	+ In LKS2, the children should design their products independently adding subject specific vocabulary from the vocabulary grid. Children should be supported in justifying their choices and decisions and they should be encouraged to question their own designs to be make improvements before they move on to the create stepping stone. Children should be encouraged to check their designs against the design brief regularly. Teachers should demonstrate how to represent designs in a sketchbook style showing the evolution of ideas. The children should be encouraged to self-evaluate their designs before moving on.
	+ In UKS2, the children should design their products independently adding subject specific vocabulary from the vocabulary grid. Children should be supported in justifying their choices and decisions and they should be encouraged to question their own designs to be make improvements. Children should check their designs against the design brief regularly. The children should demonstrate their designs in independent ways demonstrating the evolution of ideas.
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| * **Create**
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| * + In EYFS, the children should experiment with different materials, methods and techniques.
	+ In KS1 the children should begin to choose materials to create their products. This may be completed as a class activity and the children can work in pairs to support each other’s learning. Staff should model techniques using appropriate language from the vocabulary grid. The children should be taught how to use machines, tools and equipment safely. This should be evidenced as a photograph.
		- select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing]
		- select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics

**Across KS2:*** **select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately**
* **select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities**
	+ In LKS2, the children should choose materials to create their products independently with support from staff if needed. Teachers should model techniques using appropriate language from the vocabulary grid. The children should be taught how to use machines, tools and equipment safely. This should be evidenced as a photograph.
	+ In UKS2, the children should choose materials to create their products independently. Teacher should encourage them to make decisions for themselves and should encourage mistakes. There should be an expectation that the children use appropriate language from the vocabulary grid. The children reminded of how to use machines, tools and equipment safely. This could be evidenced as a photograph.
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| * **Evaluate**
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| * + In EYFS, the children should verbally respond with their likes and dislikes about their own products and be encouraged to evaluate their peers’ work positively.
	+ In KS1 the children should be expected to self- evaluate their designs. This could be annotations on their create photograph with likes and dislikes. All children should be encouraged to comment on improvements they would make. The children should be asked to verbally evaluate the products of their peers.
		- **explore and evaluate a range of existing products**
		- **evaluate their ideas and products against design criteria**

**Across KS2*** **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**
* **apply their understanding of how to strengthen, stiffen and reinforce more complex structures**
	+ In LKS2, the children should be expected to self- evaluate their designs in a written from. This could be annotations on their create photograph, response to directed questions provided by a teacher or a written piece of work. All children should be encouraged to comment on improvements they would make and the teacher should model how to justify design decisions when discussion heir won work. The children should be encouraged evaluate the products of their peers through DT walks, post-it note commenting of through the use of IT.
	+ In UKS2, the children should be expected to self- evaluate their designs in a written from. This could be annotations on their create photograph, response to directed questions provided by a teacher and a written piece of work. All children should be encouraged to comment on improvements they would make to their products and make justifications for their design choices. The children should be encouraged evaluate the products of their peers through DT walks, post-it note commenting of through the use of IT.
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| **Vocabulary and Reading**  |
| All members of staff should use subject specific language to expose children to higher-level vocabulary wherever possible. Teachers and other members of staff should refer to the progressive vocabulary grid to ensure that all new vocabulary (green) for the Key Stage is covered across the year and any pre-existing (purple) vocabulary is recapped to encourage use. New vocabulary should be taught explicitly at the beginning DT lessons following the DERIC methods from the reading policy. Vocabulary should be displayed and used appropriately in all DT lessons and teachers should encourage children to use higher-level vocabulary from the vocabulary grids in their annotations and evaluations.  |
| **Personal, social and Health Education (PSHE)** |
| PSHE and Design and technology contributes to the teaching of personal, social and health education and citizenship. We encourage the children to develop a sense of responsibility in following safe procedures when making things. They also learn about health and healthy diets. Their work encourages them to be responsible and to set targets to meet deadlines, and they also learn through their understanding of personal hygiene, how to prevent disease from spreading when working with food. Within the DT cycle, teaches must also ensure that the **cooking and nutrition curriculum** covers the following aims. These may also be over in PSHCE, Geography and Science lessons. **KS1** * use the basic principles of a healthy and varied diet to prepare dishes
* understand where food comes from

**KS2** * understand and apply the principles of a healthy and varied diet
* understand and apply the principles of a healthy and varied diet
* understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed
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| **Equipment and Resources** |
| Equipment availability is the responsibility of the class teacher. Orders will be made on a termly basis where needed. Any specific equipment is to be ordered by the class teacher. The DT subject Leader will be responsible for:* textiles: needles, thread, buttons
* woodwork: tools, nails, screws
* mechanics; balloons pumps
* cookery and nutrition: tools

Any other equipment such as wood must be ordered a term in advance by the class teacher.  |
| **Assessment** |
| Assessing a child’s performance is a continuous process carried out over the full seven years of Primary school and our assessing methods include the following as appropriate:- 1. Looking at a child’s recorded work i.e. model, photographs, written work. 2. Individual discussion. 3. Listening to the children’s ideas as they discuss between themselves. 4. Group discussions in both planning and reporting back sessions. 5. Observing the children’s skills in Design and Technology. 6. Record the progress that children make by assessing the children's work against the learning objectives for their lessons. At the end of a unit of work, teachers make a judgement against the Key Learning Skills. |
| ***Written by subject leader***  | Miss Martin  |
| ***Signed by Head Teacher***  | Miss Mackle  |
| ***To be reviewed July 2021***  |