DESIGN AND TECHNOLOGY POLICY

Introduction

Design and Technology prepares children to take part in the development of tomorrow's rapidly changing world. Through this subject, children are given the opportunity to expand and experiment with their own creative ideas, whilst learning new skills and reflecting on technology in today's society.

Art and Design Curriculum Intent, Implementation and Impact Overview

At Saltersgate Junior School, we aim to provide a design and technology curriculum that is both inspiring and creative.
We aim to provide opportunities for pupils to take risks in designing and making products that solve real and relevant problems within a variety of contexts, considering their own and others' needs, wants and values in a relevant and enjoyable way.

Our curriculum closely follows the aims of the National Curriculum for Design and technology 2014. 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
- understand and apply the principles of nutrition and learn how to cook.

School has identified key intentions that drive our Design and Technology curriculum. At Saltersgate Junior School our Design and Technology curriculum intentions are:

Intent	Research Link	Implementation	Impact
To build a Design and Technology curriculum that allows children to develop a repertoire of knowledge,	"D&T is a subject that transforms; pupils learn about designing solutions	*** Knowledge Organisers** Emphasis on knowledge gives children the skills and abilities to engage	* Children will achieve age related expectations in Design and Technology at the end of their cohort year.

understanding and skills in order to design and make products for a wide range of users to solve a range of problems.

We aim to motivate pupils by providing interesting and stimulating experiences in order to become creative problem solvers as individuals and as members of a team.

We recognise the importance of developing design and technology in its own right, as well as being a valuable tool within other areas of the curriculum.

To design a Design and Technology curriculum that will develop children's critical abilities, allowing the evaluation and testing of their ideas and products and the work of others.

This is through the use of:
-planning with the National Curriculum
-subject specific content
-appropriate connections to other curriculum areas

to improve people's lives, they are able to make better decisions, they understand more about the impact of products on the world." STEM learning.

The National Curriculum states: "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. 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."

Patron of DATA (Design and Technology Association), James Dyson, describes:

positively with the designed and made world, how to be innovative and to make creative use of a variety of resources to improve the world around them.

* Key Vocabulary

The promotion of a language rich design and technology curriculum is essential to the successful acquisition of knowledge and understanding in Design and technology.

* Independent learning

In Design and Technology children are encouraged to have a keen interest in creating and developing functional and decorative design ideas. They are encouraged to make their own design decisions by being creative, solving real problems, trialling different materials, applying knowledge from other subjects.

* **Displays**
Design and Technology displays will be present throughout school. They will reflect the children's sense of pride in their work and celebrate the children's achievements.
Teachers will ensure their classroom is a visually stimulating and creative environment, which celebrate the design process of learning, practicing

* Children will retain knowledge that is pertinent to design and technology with a real life context.

*Children will know more, remember more and understand more.

* The pupil voice will represent an understanding of what design and technology is and how they have applied this learning in a given context as part of a highlight task.

* Children will develop a sense of pride in their work

*Children will have increased confidence in the use of different tools and materials.

*Children will understand the importance of a healthy eating and varied diet for their future health and well-being.

* Children will develop and use their skills in cooking that will enable pupils to feed themselves and others affordably and well, now and in later life.

* As Design and Technology learners, children will embed lessons from design and technology to influence the outcomes of their lives in the future.

| | "Design and technology is a phenomenally important subject. Logical, creative and practical, it's the only opportunity students have to apply what they learn in maths and science - directly preparing them for a career in engineering. Policy-makers must recognise design and technology's significance for the UK economy and strive not just to preserve it – but to ensure it appeals to the brightest of young minds." | and developing skills in design technology lessons.

* Educational Visits to enhance their cultural capital

Where applicable links to design and technology will be made to develop the children's topical learning.

* Outdoor Learning opportunities with the curriculum

Teaching and Learning should plan for outdoor learning opportunities within design and technology lessons. This may be using the school grounds, local area or wider community to apply and explore their specific task.

*Assessment

Class teachers will be responsible for assessment and recording of pupil's design and technology capabilities and achievements using the progression of skills.
Assessment will also take place though monitoring a child's recorded work i.e. models, photographs, written work; individual/group discussions with pupils and observations of children's skills.
Children will self-assess their learning throughout the creative process.
Samples of children's design and technology work will be collected and | |

		monitoring will take place regularly through sampling children's work, teacher planning and lesson observations. At the end of each full term, teachers judge children against age related expectations to be at, above or below expectations. This data is then analysed by the Design and Technology subject leader. ***Approaches to teaching** Key areas to consider are: - Identifying needs - Generating ideas - Planning and designing - Making and testing - Evaluating - Applying technical knowledge - Develop cooking skills, nutritional knowledge and a love of cooking. A wide variety of teaching approaches are used in lessons to ensure children make good progress and all learning styles are catered for. Class teachers ensure there is a good balance of whole class, group work and individual learning in design technology.	

Pedagogy

In Design and Technology, like all other subjects, we recognise the importance of the methods and practice of teaching (the pedagogy) we choose to use in enabling pupils to know more, understand more and remember more. In Design and Technology, the following approaches will be used, and be evident in pupils' sketchbooks, in order to ensure that the learning opportunities are as effective as possible and that pupils progress throughout the year and across year groups during their experiences in school:

Teaching Sequence in Design and Technology	Big picture: Identifying needs. A design brief that outlines what problem a design will solve.	Possible pedagogical approaches used in Design and Technology	Behaviourism	Direct teacher instruction; modelling of skills and techniques; demonstration
	Brief review of learning covered in previous lesson/s		Constructivism	Inquiry-based learning; Explore different materials and techniques to create different outcomes.
	Specify key vocabulary to be used and its meaning		Social Constructivism	Teacher modelling; questioning; mix of individual, paired and group instruction
	Generating ideas		Liberationism	Pupil-led learning; opportunities to showcase learning
	Teacher modelling of new skills or concepts		Learning, working and talking like an 'designer'	Being introduced to the key vocabulary that a designer/engineer would use; defining the key vocabulary that a designer/engineer would use; high expectations of pupils 'talking' like a designer; high expectation of pupils researching, interpreting and presenting like a designer.
	Planning and designing			
	Children practise the new skill, making and testing			
	Make modifications Reflect on and evaluate their learning and compare with previous learning as appropriate			

E-safeguarding
The Design and Technology policy and scheme of work adheres to the whole school E-safeguarding Policy.

Equal Opportunities
Design and Technology follows the school's Equality Policy.

All children have equal opportunities to reach their full potential across the art curriculum, regardless of their race, gender, cultural background, and ability, or of any physical or sensory disability.

Links to other Subjects
At Saltersgate Junior School, we use Design and Technology to promote learning across many areas of the National Curriculum, including:

* The application of all basic skills (including Reading, Writing and Mathematics) within the design and technology curriculum
* The use of computing to aid design.
* Citizenship, through moral, social and cultural development.
* Developing language skills, through encouraging children to ask and answer questions.
* Develop understanding of measurement and geometry when planning in two-dimensions to be converted into three-dimensions.
* Developing art skills when designing.
* Looking at history and culture through changes in design and technology.
* Developing skills in science by creating solutions to a problem and through the study of nutrition.
Any cross curriculum links between subjects are identified in medium and short term planning, and children are made aware of them.

Links to Spiritual, Moral, Social and Cultural Development

The teaching of design and technology offers opportunities to support the social development of our children through the way we expect them to work with each other. Allowing the children to work together, gives them the chance to discuss their ideas and feelings about their own work and the work of others. Children develop respect for the abilities of other children and a better understanding of themselves. They also develop a respect for the environment, for their own health and safety and that of others. They develop cultural awareness and learn to appreciate the value and differences and similarities.

Organisation of Teaching
Design and Technology at Saltersgate Junior School is taught through discrete lessons. Skills, knowledge and attitudes are taught through a focus that lasts across a full term.

Teaching Methods
We use a variety of teaching methods at Saltersgate Junior School, in order to suit as much as possible the abilities and interests of our pupils.

These include:
*Demonstrations by the teacher and pupils
*Experiment with techniques/new skills
*Progression of individual skills
* Discussions and debate
* Questions and answers
* Individual and group investigations
* Television, radio, audio recording, video, film, internet and other computing resources
Throughout the school, design and technology lessons should begin with the teacher sharing the learning objectives of the lesson with the class, and end with a plenary session that summarises what has been learnt.

Reasonable Adjustments in Design and Technology
The curriculum leader in design and technology recognises the importance of ensuring that children with identified Special Educational Needs and/or Disabilities have access to an ambitious design and technology curriculum. Within the curriculum area of Desihn and Technology, SEND children will be provided with reasonable adjustments through their tasks and level of challenge provided. Advice can be sought from the school's SENDCO where applicable.

Special Educational Needs

Some children experience learning difficulties, which affect their progress in art. Class teachers inform the SENDCO and Inclusion Team if they are concerned that a child may have underlying learning difficulties. Some children then receive SEN support. This may include:

Access for all
At Saltersgate Junior School we develop an inclusive curriculum. Design and technology allows creative expression and non-verbal communication. Therefore, design and technology may be used as a means of supporting children with special educational needs to develop their own learning skills and levels of personal self-esteem.

* Setting suitable learning challenges: It is the aim of the school that children should be given achievable learning targets, and be motivated by success. This may involve deepening children's skills and understanding, so that all children's learning needs are catered for, and pupils achieve as high a standard as possible.

*Responding to pupils' diverse learning needs: Design and Technology at Saltersgate is planned so that all pupils can take part in lessons fully and effectively so that there is an equality of opportunity through teaching approaches.

*Design and Technology at Saltersgate is planned so that potential barriers to learning and assessment for individuals and groups of pupils are overcome. This is achieved through:

* Provision being made where necessary to support individuals or groups of pupils to enable them to participate effectively in design and technology lessons.
* Pupils' understanding being developed through the use of all available senses and experiences.
* Aspects of the programmes of study that may present specific difficulties for individuals being identified.

In assessment, judgements allow for the provision described above.

High Achievers Children (GDS groups – Greater Depth of Study groups)

GDS pupils who achieve highly in Design and Technology will be supported and given opportunities to deepen their knowledge and skills through differentiation. The success criteria for key lessons will indicate how greater depth has been taught, or provide a challenge within the context of the lesson and how this can be demonstrated by the child in outcomes of work. Children should also be provided with opportunities to take part in related extra-curricular activities, where possible.

In assessment, judgements allow for the provision described above.

Planning
From Y3 – Y6 the school uses a range of resources, developed in school, creating our own exciting and varied design and technology lessons. These help to ensure that coverage of the National Curriculum is secure and that year group expectations are met. Teachers also ensure that, wherever possible, lessons are linked with other areas of the curriculum and have a cross-curricular approach and support work done in other areas of the curriculum when topics allow close links.

Assessment
Assessing a child's performance is a continual process.

Class teachers will be responsible for assessment and recording of pupil's design and technology capabilities and achievements, assessing work against the learning objectives for their lesson and against the progression of skills.

Assessment will also take place though monitoring a child's recorded work i.e. models, photographs, written work; individual/group discussions with pupils and observations of children's skills.

Children will self-assess their learning throughout the creative process.

Samples of children's design and technology work will be collected and monitoring will take place regularly through sampling children's work, teacher planning and lesson observations.

At the end of each full term, teachers judge children against age related expectations to be at, above or below expectations.
This data is then analysed by the Design and Technology subject leader.

Health and Safety
Safety is of paramount importance in Design and Technology. It is the teacher's responsibility to be aware of safety issues in all Design and Technology activities by:

* Providing a safe working area (furniture, materials storage, tool maintenance)
* Teaching and implementing safety rules and good practice, including hygiene
* Ensuring the safe and correct usage of tools and materials
* Ensuring working areas are kept clean and tidy
* Considering storage of partially completed work
* Ensuring the correct disposal of waste

The teacher is responsible for ensuring that children are adequately supervised when using tools and that other adults working in the classroom understand safety rules and maintain rigorous safety standards.

Safety rules and safety issues should be taught to *all children* within each Design and Technology unit of work.

Targets
At Saltersgate Junior School, we aim for the majority of pupils to be at age related expectations for Key stage 2 by the end of year 6

Responsibilities

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 provision for every child, including outstanding teaching and learning, effective use of resources and the highest standards of achievement for all.

Some key duties that the subject leader should undertake over the course of the year include:

● Monitoring and effective feedback of books

● Learning walks and other lesson observations with effective feedback given in a timely manner

● Planning and organising enrichment opportunities and competitions

● Helping identify and facilitate the professional development needs of staff so that lessons are never less that good, and that most are outstanding in design and technology

● Liaising with ELT to help implement school improvement priorities

● Liaising with the school SENDCO to best support children with difficulties

● Organising, maintaining and cataloguing resources

● Keeping abreast of new initiatives in design technology teaching

Staff Development

Over the course of the academic year the design and technology subject leader monitors and evaluates:

* The attainment and progress of pupils in design and technology
* The pupils' response and attitude to design and technology
* The quality of design and technology teaching in school
* The quality of children's work in design and technology

This is achieved through:

* Classroom observation of design and technology, including learning walks, with written feed back
* Questioning of children during these observations
* Discussions with pupils
* Carrying out regular scrutiny of work, and feeding this scrutiny back to teachers.
* Looking at art learning displays in classrooms and corridors.
* Monitoring each teacher's design and technology planning every term, as appropriate, and providing written feedback.
* Keeping all staff informed on changes that effect art in school.

Subject Development
The design and technology leader will:

* Ensure the subject of design and technology meets statutory requirements of the national curriculum.
* Continue to monitor the implementation of the art scheme of work and policy documents.
* Continue to monitor staff development, through classroom observations if appropriate, staff questionnaires, monitoring and feeding back on medium term planning and children's work.
* Attend appropriate courses, if available, to develop personal knowledge and expertise, and to share this in school.
* Complete pupil discussions with pupils from a range of classes, on how design and technology is delivered in our school.
* Monitor and evaluate the quality of design and technology resources in school, and bring in new resources as appropriate.

For a detailed description of the development of art in the next academic year, please see the 2019 – 2020 School Development Plan.

Parents

We recognise how crucial the home/school link is for supporting children to have the highest standards of achievement in design and technology. We encourage and welcome all parents/carers to support and assist in whole school events. Parents and carers with specialist design and technology skills are encouraged to approach the school with support and ideas or invited into school to support and enrich design and technology at Saltersgate Junior school.

Review

This policy is a live document, being constantly updated and it is the responsibility of the Design and Technology Subject Leader to maintain this.

Revision Date	Revision Version	Previous Revision Date	Previous Version	Summary of Changes
September 2020	New policy	-	-	New policy