

DESIGN TECHNOLOGY CURRICULUM POLICY

At St James Primary School we aspire for every single child to succeed. Through our Christian vision we thoroughly believe that all children have the potential to thrive regardless of their starting points, personal context, and characteristics. Our children learn through a supportive and purposeful curriculum, linked tightly to national curriculum objectives, that demonstrates that:

"With God there is no limit to what you can do. There is no obstacle you can't overcome. Through Him all things are possible." (Matthew 19:26).

Our staff are committed to developing a love of learning, whilst developing the skills and values to support the all-round development of every pupil. St James C of E Primary School is a special place where we dream, believe, learn, and achieve.

Intent

Staff at St James cultivate an enjoyment for designing and creating and a positive attitude, enabling students to approach all problems with confidence and enthusiasm, so they reach their full potential and achieve their highest possible standards. At St James Primary School we provide an enriching, challenging Design Technology curriculum, made up of planned activities that we as a school deliver in order to promote learning, personal growth and development, and life beyond primary education. It includes not only the formal requirements of the National Curriculum, but also an exciting range of opportunities to enrich the experience. We teach our children to grow into positive, responsible role models who can work and co-operate with others whilst developing the knowledge, skills and understanding within subjects as well as a positive attitude to use throughout their lives. 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. Design and Technology is an inspiring, rigorous and practical subject. It can be found in many of the objects children use each day and is a part of children's immediate experiences. 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 St James, our intent is to combine skills, knowledge, concepts and values to enable children to tackle real problems, sometimes linking to science, engineering, computing and art. The children are encouraged to become innovators and risk-takers. High-quality design and technology education makes an essential contribution to the creativity, culture, wealth and well-being.

IMPLEMENT

We implement this by teaching a balanced curriculum. Intent documents for each project ensure staff are supported and learning follows on from prior knowledge. Over a 2 year cycle, 4 projects are completed, ensuring full coverage of the National Curriculum objectives of skills and knowledge. Each project is taught through a planned learning sequence moving from identifying a need, disassembling existing products, designing and planning a product, through to focused practical skills which are then applied to make the product. There is progression and reflection and children are given the opportunity in each lesson to evaluate an aspect of their learning. Design and Technology units are taught in a weekly block.

When delivering the DT curriculum, teachers aim to expose children to a variety of real-world contexts, by learning about influential designers of past and present, and exploring case studies which show how key designers and key moments in design have impacted upon the world we live in. Through this, DT is brought to life and placed in a meaningful context which aims to not only help children know, remember and understand more, but also to encourage our young people to begin to imagine and consider further learning or careers. At St James, all children are given equal opportunities to learn the national curriculum for Design Technology. SEND children are supported appropriately by both teaching and Support staff who are used to target the development of pupils' vocabulary and technical skills.

In EYFS Design Technology is taught through the EYFS framework through focused modelling, exploration and daily provision activities.

Children's DT books are used to record the build-up of knowledge and skills needed to create a purposeful product. Focused practical tasks are photographed and recorded on Seesaw.

Adaptive Teaching

Leaders within school ensure the highest ambition for all pupils and create opportunities to experience success. This is done by adapting lessons whilst maintaining high expectations by using: scaffolding, explicit instruction, cognitive & metacognitive strategies, flexible groupings, and use of technology (Mould, K. 2020 EEF). Teachers ensure the balancing of input of new content so that pupils master important concepts, i.e., 5-part teaching model, and make effective use of teaching assistants.

Long Term Memory

Knowledge empowers and nourishes children, it belongs to the many, not the few. A knowledge rich curriculum has the power to address issues of social disadvantaged and leaders at St James CE Primary have high ambitions so that all pupils can take full advantage of opportunities, responsibilities, and experiences in later life.

Learning can be defined as alteration in long term memory, with this being the case leaders have implemented strategies taken from cognitive science to enhance and support pupils in the transfer of new knowledge into their long-term memory.

Teaching staff have drawn on research focussing on Cognitive Load Theory, and teachers understand that pupils working memory is limited and that new content should be introduced to pupils in small and manageable steps to avoid overloading the working memory.

Research from Oliver Caviglioli has also been considered and leaders utilise strategies of dual coding to support pupils in integrating new knowledge into long term memory. By providing simple images to pupils when new content is introduced, they can use both visual and auditory strategies to process the information, forming a greater link with long term memory. Spaced retrieval is also a strategy employed by teachers to enhance pupils' retrieval and in turn secure knowledge into long term memory. Lessons typically begin with a daily retrieval opportunity and additional retrieval sessions are planned over the year.

Learning is a long-term process and teachers utilise four main strategies to support pupils in being successful and confident learners. The agreed strategies are:

- Knowledge organisers.
- New content in small, manageable steps.
- Images to support new learning.
- Spaced retrieval practice.

For each Design and Technology unit, children are provided with a 'Knowledge Organiser', these are one of the strategies used in school to improve long-term memory. They are used in class and at home to develop the retention of DT knowledge and understanding and are regularly referred to throughout the year. Children are encouraged to revisit previous learning in other ways, such as quizzes and vocabulary games, to further embed their learning.

Teaching & Learning

Each teaching session in geography, follows the agreed school policy of teaching and learning, and is planned to support pupils long term memory development. There are 5 stages in each session:



Activate- teachers activate the appropriate schema and make long term links to learning that occurred in the past.



Vocabulary – teachers explicitly teach vocabulary that pupils need a deep understanding of to support their learning.



Retrieve – pupils complete a retrieval task relating to more recent learning such as self-testing key information from their knowledge organisers.



Teach – The teacher presents new information clearly and in manageable chunks.



Apply – pupils apply their learning by demonstrating their skills gained.

Assessment

Teachers use formal as well as regular on-going teacher assessment to adapt their planning where appropriate to meet the needs of all pupils. End of unit attainment is tracked so that leaders can ensure pupils are making at least good progress through their learning.

Teaching staff utilise strategies of verbal feedback to support pupils with their learning. Whole class feedback grids are utilised to capture areas of work to praise and share, misconceptions and teaching points, presentation and adaptations used to support pupils.

Reading

Pupils have regular opportunity to engage with texts which are academic and support their knowledge acquisition. Teachers ensure texts are age appropriate and teachers explicitly clarify any new vocabulary to support pupils learning.

Impact

Children enjoy a range of lessons with cross curricular links to other subjects. They understand how designers and influential people from a range of diverse backgrounds have had a positive impact on the lives of others. Good progression is made across each Key Stage with regards to national curriculum objectives. Objectives are measured against planned outcomes. Children leave St James having undertaken an enriching and enlightening curriculum. They understand the importance of problem solving and how to apply their skills and knowledge to design and make products in real life situations.

Data recorded on Insight show the majority of pupils make good or better progress. Pupils are able to discuss their learning; including discussion of their thoughts, ideas, vocabulary, concepts taught skills and evaluations of work. Our Design and Technology Curriculum is high quality, well thought out and enables progression year on year. The impact is pupils have skills, knowledge and vocabulary that they need to move forward in their learning, alongside opportunities to apply their knowledge to real life.

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