Trinity Primary School

Church of England / Methodist Ages 2 - 11

'Let your light shine'

DT POLICY

Approved | May 2024

Next Review Date | May 2027

'Letting our light shine as we live, love and learn, together with Jesus'

OVERVIEW

At Trinity Primary School we aim to inspire our future creators to take risks, become resourceful and innovative. Design and Technology in this school will develop pupils' creativity and imagination, as they design and make products for a wide range of users that solve real and relevant problems within a variety of contexts, considering their own and others' needs, wants and values. 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. 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. High-quality design and technology education make an essential contribution to the creativity, culture, wealth and well-being of the nation.

INTENT

1. To help pupils to develop the creative, technical and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world;
2. To develop an understanding of technological processes, products and their manufacture, and their contribution to our society;
3. To enable pupils to build and apply their knowledge, understanding and skills in order to design and make high-quality prototypes and products for a wide range of users;
4. To teach pupils how to critique, evaluate and test their ideas and products and the work of others;
5. To enable pupils to understand and apply the principles of nutrition and learn how to cook.

IMPLEMENTATION

1. Each Design and Technology unit will be taught in every year group over a focused 'theme week' spanning 12 hours of learning time to ensure a depth of understanding.
2. Teachers will use a variety of creative and practical activities to teach pupils the knowledge, understanding and skills needed to engage in an iterative process of designing and making.
3. Pupils will use research to develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups.
4. They will generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design.
5. Pupils will work with a range of relevant contexts [for example, the home and school, gardens and playgrounds, the local community, industry and the wider environment].
6. They will be provided with opportunities to generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology; and they will apply their understanding of computing to program, monitor and control their products.
7. Pupils will select from a range of appropriate tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing] whilst following safe procedures.
8. They will have opportunities to select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics, functional properties and aesthetic qualities.
9. Pupils will be given time to explore and evaluate a range of existing products and evaluate their ideas and products against design criteria, including their own design criteria and consider the views of others to improve their work.
10. They will be given the opportunity to build structures, exploring how they can be made stronger, stiffer and more stable; and use mechanisms [for example, levers, sliders, wheels and axels], in their products.

Rosenshine's Principles of Instruction at Trinity School

Learning is at least in part defined as a change in long-term memory. As Sweller et al (2011) has pointed out, 'if nothing in the long-term memory has been altered, nothing has been learned'. It is, therefore, important that we use approaches in our classrooms which help pupils to integrate new knowledge into the long-term memory and make enduring connections that foster understanding. To do this we can draw on a growing evidence base from Barak Rosenshine.

Barak Rosenshine's principles of direct instruction inform the way teachers plan and deliver lessons in Design and Technology. This ensures that pupils build strong understanding in their long-term memory and as such 'remember more'.

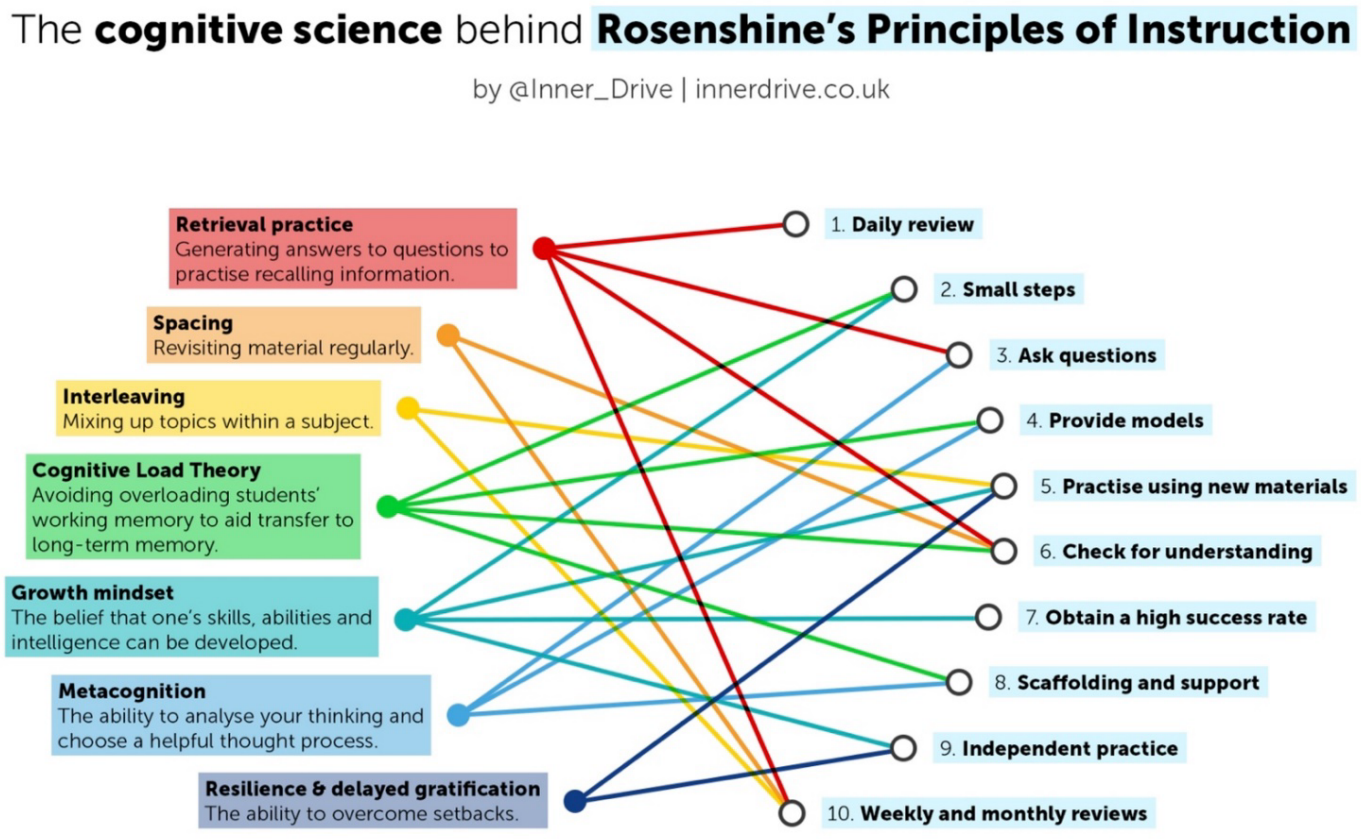
Each lesson in Design and Technology is planned using Rosenshine's Principles of Instruction to provide a shared foundation on which to build rather than a rigid checklist. Design and Technology lessons are brought alive using the 10 principles of instruction to structure lesson delivery and ensure that all children can access the same learning outcomes through high quality instruction and adaptive teaching.

Each unit of work is strategically planned as a series of high-quality Medium Term Plans (MTP's) to ensure that substantive and disciplinary knowledge are delivered in a timely and effective manner with strong vocabulary links underpinning all teaching and learning. Lessons typically follow a My turn, Our turn and Your turn structure, to ensure that children are able to make connections, explain, attempt and apply new and previously taught content together to obtain a high success rate. This is further enhanced through the on-going commitment to daily, weekly and monthly reviews to further embed learning and identify any gaps in learning or misconceptions in a timely manner.

All lessons are strategically planned and well scaffolded to ensure that all children can achieve the same learning outcomes with quality adaptive teaching in place. This may take the form of additional resources, pre-teaching and adult support.

The diagram below explains the science underpinning Rosenshine's principles of instruction. Specifically, they interlink with seven areas of cognitive science addressing:

- How to effectively implement classroom strategies;
- How to help students learn and remember new class material;
- How much support teachers should be giving their students.



IMPACT

Through a variety of creative and practical activities, pupils will be confident in the knowledge, understanding and skills needed to enable them to engage in an iterative process of designing and making as they draw on other subjects such as mathematics, science, engineering, computing and art. Pupils will be confident to take risks as they develop and become resourceful, innovative, enterprising and capable citizens and they will understand how key events and individuals in design and technology have helped shape the world. Pupils will celebrate their learning with their parents and carers through a 'Design and Technology' showcase, either as a whole school, an individual class or virtually to enhance their understanding of the importance of products being intended for users.