



Tregolls Academy Progression of Substantive & Dicipinary Knowledge



At Tregolls Academy, we aim to develop eager, motivated and curious learners that can reflect on the past and make meaningful links to the present day.

Our DT curriculum holds our curriculum drivers at its core: **C**uriosity, **A**spiration, **R**esilience and **E**xcellence. At Tregolls Academy, we **CARE**.

EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<p>Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, form and function.</p> <p>Children share their creations, explaining the process they have used.</p> <p>Make use of props and materials when role playing</p>	<p>Mechanisms: Moving storybooks</p> <p>Textiles: Puppets</p> <p>Mechanisms: Wheels and axels</p> <p>Nutrition: Fruit Smoothies</p>	<p>Mechanisms: Moving monsters</p> <p>Structures: Baby Bear's Chair Cooking and</p> <p>Nutrition: A Balanced diet</p>	<p>Textiles: applique and cross stitch (Egyptian Collars) Cooking and</p> <p>Nutrition: Eating seasonally (tarts)</p> <p>Structures: Constructing a castle</p> <p>Digital World: Wearable Technology</p>	<p>Textiles: Fastenings (book sleeve)</p> <p>Cooking and Nutrition: Biscuits (Christmas)</p> <p>Mechanisms: Slingshot cars</p> <p>Structure: Mini Greenhouse</p>	<p>Mechanical: Pop-up books</p> <p>Structures: Bridges</p> <p>Cooking and nutrition: What could be healthier?</p>	<p>Electrical : Steady Hand Game Cooking and</p> <p>Nutrition: Come dine with me</p> <p>Digital: Navigating the world</p> <p>Textiles: Waistcoats</p>

EYFS

In EYFS, design and technology learning begins in 'Expressive arts and design' where children begin to explore, use and a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. Children use what they have learnt about media and materials in original ways, thinking about uses and purposes. In Physical Development (Moving and Handling) Children handle equipment and tools effectively.

Adapting the curriculum for pupils with SEND in design and technology

Design and technology is an essential means of creative expression that can boost self-esteem and give learners the agency needed to develop and communicate their personal ideas, observations, and creations. It lends learners opportunities to develop both individually and collaboratively, designing naturally encourages learners to problem solve, to be self-critical, to make decisions and to take risks within their learning. The encouragement of self-expression and exploration supports learners to embrace 'the happy accident' and 'learn through their mistakes'.

- Adaptive teaching takes place.
- The tools available are carefully considered for children with physical disabilities.
- Encourage a culture of experimentation, with no one right way to do something
- For sensory needs, consider when alternative materials or tools may need to be offered
- Teachers identify and break down the components of the subject curriculum into manageable chunks for pupils who find learning more difficult, particularly those with cognition and learning needs. These may be smaller 'steps' than those taken by other pupils to avoid overloading the working memory.
- A variety of additional scaffolds may be used in lessons, such vocabulary banks, additional visual stimuli or adult support.

Substantive Knowledge:

Substantive & Disciplinary Concepts						
Term 3 – Electrics						
EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
				Torches <ul style="list-style-type: none"> • Electrical conductors are materials which electricity can pass through. • Electrical insulators are materials which electricity cannot pass through. • A battery contains stored electricity that can be used to power products. • An electrical circuit must be complete for electricity to flow. • A switch can be used to complete and break an electrical circuit. 		Steady Hand Game <ul style="list-style-type: none"> • To know that 'form' means the shape and appearance of an object. • To know the difference between 'form' and 'function'. • To understand that 'fit for purpose' means that a product works how it should and is easy to use. • To know that 'form over purpose' means that a product looks good but does not work very well. • To know the importance of 'form follows function' when designing: the product must be designed primarily with the function in mind. • To understand the diagram perspectives 'top view', 'side view' and 'back'
Disciplinary Concepts						
				Torches <ul style="list-style-type: none"> • Designing a torch, giving consideration to the target audience and creating both design and success criteria focusing on 		Steady Hand Game <ul style="list-style-type: none"> • Designing a steady hand game, identifying and naming the components required.

				<p>features of individual design ideas.</p> <ul style="list-style-type: none"> • Making a torch with a working electrical circuit and switch. • Using appropriate equipment to cut and attach materials. • Assembling a torch according to the design and success criteria. • Evaluating electrical products. • Testing and evaluating the success of a final product. 		<ul style="list-style-type: none"> • Drawing a design from three different perspectives. • Generating ideas through sketching and discussion. • Modelling ideas through prototypes. • Understanding the purpose of products (toys), including what is meant by 'fit for purpose' and 'form over function'. • Constructing a stable base for a game. • Accurately cutting, folding and assembling a net. • Decorating the base of the game to a highquality finish. • Making and testing a circuit. • Incorporating a circuit into a base. • Testing their own and others' finished games, identifying what went well and making suggestions for improvement. • Gathering images and information about existing children's toys. • Analysing a selection of existing children's toys.
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