

Ward Green Primary School
Approach to teaching of
Design & Technology



### <u>Intent</u>

Our Design and Technology curriculum is taught discretely through specific concepts and themes, which is underpinned by the accelerated learning approach to teaching and learning. The key concepts, principles and themes have been developed from the National Curriculum into a range of progressive knowledge and skills through which the children are helped to grow and develop to succeed in 21st century Britain.

This progressive curriculum allows a purposeful way of teaching and learning, enabling us to provide a more meaningful and sequential approach to the schema for DT At WGPS, 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 various disciplines to inspire their learning. As part of our Design and Technology curriculum, we cover several key areas:

- product design & evaluation
- food technology
- textiles
- resistant materials

The Design and Technology curriculum we offer is designed to meet the needs of all our pupils. It is rich, varied, imaginative and ambitious and meets the needs of individual learners by can easily be adapted for pupils with additional needs

# <u>Implementation</u>

At Ward Green Primary our Design and Technology curriculum is taught discretely through specific concepts and themes, to ensure depth and rigour in key subject concepts and context. The Design and Technology curriculum is rich and varied and provides our pupils with the skills required for life in the 21st Century. Planned, systematic encounters with substantive concepts in specific and varied contexts support pupils' progress.

Many of these concepts feature regularly throughout the study of DT in a range of disciplines.

- Design
- Make

- Evaluate
- Technical Knowledge

The Accelerated Learning Cycle, based on the work of Alastair Smith, is applied in all lessons. It stems from the idea of a supportive and challenging learning environment. The cycle has active engagement through multi-sensory learning, encourages the demonstrating understanding of learning in a variety of ways and the consolidation of knowing. A gather, skills, apply approach to planning and delivery of lessons is taken across school to ensure children develop a deep understanding of specific skills and are able to apply these in a range of situations.

# <u>Impact</u>

At Ward Green Primary, formative assessment is ongoing throughout each lesson. It judges progress and enables teachers to make flexible adaptions to their planned teaching. Through this regular ongoing assessment, tasks are matched to the ability of each child through scaffolds, adult support and providing a level of challenge that is stimulating for pupils and questioning skills.

Alongside formative assessment, Insights is used as a summative assessment to assess foundation subjects. The analysis of data from insights, identifies any gaps or misconceptions to be addressed.

# <u>Adaptations</u>

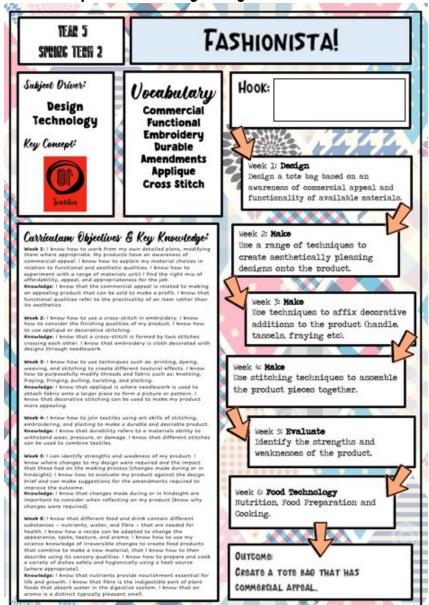
At WGPS our curriculum is ambitious for all pupils, including those children with SEND. Curriculum designers and teachers have high expectations of what SEND pupils can achieve and the curriculum is not diluted or unnecessarily reduced for SEND pupils. Every pupil is different and so what works for each pupil varies. Pupil's individual needs are carefully considered and adaptations are planned to ensure the success of pupils. The way that our curriculum is

designed ensures that chunks of learning are sequenced in a coherent way to enable all pupils, including those with SEND, to build on prior knowledge. Cognitive overload can be a barrier to learning which is one of the reason why we have chosen half termly curriculum drivers.

Where pupils are identified with having complex needs it may be appropriate to provide a personalised curriculum which will be based on individual needs and will retain ambition for the pupil. Where working memory is an issue for pupils, including those with SEND, we look to reduce extraneous load as much as possible as well as identifying key information when teaching. Adaptations to support individual pupils will be recorded on personal school support plans.

At WGPS we do not assume that pupils with SEND learn content better through practical work as this can cause distraction and cognitive overload rather than increase clarity or accessibility. The curriculum is not narrowed for any pupils. Knowledge is taught and then pupils are provided with opportunities for scientific enquiry to test and investigate the knowledge taught. Pupils' specific needs determine the types of adaptations which are required. These adaptations are in how the subject is taught rather than the content pupils are expected to learn. Where appropriate, learning will be chunked into smaller steps and pre learning and consolidation time in planned in to support need. Time is also planned to ensure pupils with SEND are pre taught vocabulary to support their understanding. Adaptations may include supporting pupils to pay attention to key aspects as well as reducing excessive or unhelpful demands on working memory.

### Example knowledge organiser



#### YEAR 2 SPERIC TEER 1

### SPRING WATCH

Hook:

Subject Driver Design Technology Key Concept:



Vocabulary Product Audience

**Design Criteria** Materials Junior Hacksaw Join Cut Freestanding **Evaluate** 

Week 1: Design Identifying target audience and exploring materials and design ideas.

Week 2: Design

Developing and selecting final product designs and materials.

Week 3: Make

Measuring and cutting materials. Joining materials.

Week 4: Make

Finalising the construction of the bird feeder, ensuring the structure is strong.

> Week % Evaluate Consider the success of the product against design criteria.

Week 6: Food Technology Nutrition, Food Preparation and Cooking.

OUTCOME:

TO BUILD A BIRDFEEDER

### Carriculum Objectives & Key Knowledge:

that a design criteria is a list of things that I must consider when designing my product. I know that a mock-up is a practice at making a product.

**Week 2:** I know how to select materials that are suitable (e.g. strong, malleable conductible). I know how to design a product to meet the needs of its intended user, I know how to develop and communicate my ideas through drawn flagrams and plans. I know how to use information and communication technology where appropriate to develop and communicate ideas.

Knowledge: I know that different materials have different properties. I know that properties are the qualities of materials (e.g. strength, stretch and absorbancy). I know that a diagram is a drawing showing the structure of

Week 3: Part 1: I know how to measure and mark our materials with care and use safe ways of cutting it, including using a junior hacksow. I know how to modify materials using appropriate tools. I know how to make cuts (coisons, areps, said. Part 2: I know how to join materials to make products using both permanent and temploring faitherings. I know how to esserble, join, and

contine materials. Whose that measuring is required to ensure my product is accurate see has a good finish. I know that marking is important to ensure any cuts are accurate. I know how to be self-when cutting (e.g. the wood needs to be secured to a cutting surface, I know how to hold the hacksino safely and securely, I know I need space when cutting). I know which tools will be more suitable for cutting wood, I know that glue is used to make permanent fautenings or fluings, and this can be used to join materials.

Week 4: I know how to make holes in my product (punch or drift). I know how a week in I nevel more on make notes in my process, yourne or seruly it house more freestanding structure can be mode stronger, stiffer, and more stable. I know how to make structures stronger by folding, joining or by shape (e.g. columns or throughs). I know how to shape my product carrielly, using techniques and tools that lead to a high-quality finish. Knowledge; I show that different tools can be used to make holes in different.

naterials (hole punch for card, drill for wood). I know that a freestanding tructure stands without support. I know that structures can be made atranger y adding additional support. I know that a high-quality finish means my roduct is suitable and looks appealing.

Week \$11 know how to discuss design ideas and make simple judgements. I know how to evaluate my products against my design criteria. I know how to suggest how my product may be improved.

Knowledge: I know that to evaluate means to judge the quality of my product.

Week 4: I know that everyone should eat at least five portions of fruit and age at a resource trust are a resource and a set at seast row portunes or rest are agestables per air, I know how to work in a safe and hyperial way. I know how select ingredients for my fixed product. I know how to measure my gredients by weight or quantity, using scales where appropriets. It know how o describe my food product in terms of taste, flavour, becture and relate this tothe intended purpose of the food. I know how to use techniques such as cutting

the interned purpose of the food. I show how to use techniques such as cutting-peoling, gisting, spreading, and mining I know how to prepare simple dishes safely, and hygienically without the use of a heat source. Knowledge I show that when describing the teste and fixour of food I refer to Knowledge I show that when describing the teste and fixour of food I refer to dyalifies such as if it is a sweet, bitter, sour, safty, meaty (imports), cool, or bot. I know that there are different techniques used to prepare food, these can change the appearance and texture of incredients.