



## Curriculum Overview St Andrew's Church of England Junior School



### Curriculum Area: D&T

Subject Lead: Nathan Machell

Our curriculum approach to D&T reflects our ethos statement:

**'Shining a light on a world of Possibilities'**.

It is also based around our 'curriculum drivers':

- Curiosity, enquiry and creativity
  - Community
  - Possibilities

### Intent

Design & Technology is an exciting, practical subject that helps us understand our own capabilities, develop new skills, and learn how to solve problems related to real life scenarios. Linked to our Curriculum drivers and ensuring pupils acquire the range of skills needed to be designers and creators we want all children to:

- Develop an interest in and learn practical skills.
- To develop the ability to persevere and reflect on problems in their lives and how to solve them.
- To have realise the range of possibilities in the world and how they can interact with their local communities.
- To use their creativity in new and practical ways.
- To ensure all meet the expectations laid out in the national curriculum.

### Implementation

Our curriculum is designed to allow children to build on their practical knowledge and skills of materials and constructions methods as they progress through the school. To ensure this happens:

- D&T will be taught once a term during a sequence of lessons.
- Each year group will have a different focus every term, connected to their curriculum topic during that term.
- Each teacher is responsible for delivering D&T lessons as an individual subject and where appropriate, lessons should be cross-curricular.
- Each project will begin with a chance for the children to research previous products to help inspire them before they begin designing their own creations.
- Each project will call upon the children's families to gather any resources they can, encouraging the children to become involved and enthusiastic about their projects.
- Projects will start with a Design Brief, and end with a Project Evaluation, book-ending their projects in the Creative Journals.
- The children will use a range of diagrams to show their ideas. Their work in their Creative Journals should show a clear progression through the project.
- Photographic evidence will be used to show the children's journey and their finished product.
- Teachers use the Key vocabulary set out in the vocabulary progression document- vocabulary will be built on year upon year.
- The key skills progression grid is used to ensure coverage and progression.

### Impact

Our teachers rely on a range of tools to assess the knowledge and skills pupils have; their progress and development points. By the end of a unit we expect that:

- Children are able to use research to design appealing products that are fit for use and relevant to a real life scenario.
- Children are able to select from and use a wider range of tools and equipment to perform practical tasks accurately.

- Children can evaluate their product effectively, comparing theirs to pre-existing products and their own design criteria.
- Children can apply their technical knowledge to their projects and understand how to use relevant materials and mechanics.
- Children understand how to prepare and cook savoury dishes with a range of cooking techniques.
- Children's understanding of the key objectives will be recorded using INSIGHT.

### **Planning**

The detailed lessons can be seen within the Topic Scheme of Work. Each year group is responsible for their own planning, drawing upon the objectives available on Insight and the progression of skills document to form their own projects. Greater depth opportunities will be planned and will fit into the year's topic schemes of work. Teacher may then adapt these lessons, if they need to, to suit their class. Teacher will be expected to adapt the planning to suit their SEN children. The D&T projects should reflect the cross-curricular topic the children are learning at the time. This can be adapted if certain objectives and skills need to be covered during a specific term. The children should be able to link their project to their topic or a real life scenario independently.

### **Knowledge and skills progression through the school**

In KS2 knowledge and skills will be developed to involve:

#### **Research**

- Learn about how key events and individuals in Design and technology have helped shape the world.
- Investigate and analyse a range of existing products, discussing their features, construction, purpose and intended users.

#### **Design**

- Use research and develop design criteria to inform the design innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups.
- Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploding diagrams with prototypes, pattern pieces and computer-aided design.
- Include measurements on their design.
- List the materials/ingredients/tools that they will need.
- Write brief instructions for how they intend to make their products.

#### **Evaluate**

- Understand how key events and individuals in design and technology have shaped the world.
- Investigate and analyse a range of existing products.
- Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work.
- Test their products as they work, making informed adjustments and strive to address and anticipate any problems.

#### **Make – Materials**

- Cut materials with precision and refine the finish using sandpaper.
- Show understanding of the qualities of materials to choose appropriate tools to cut and shape.

#### **Make - Construction**

- Choose suitable techniques to construct products or to repair items
- Apply their understanding of how to strengthen, stiffen and reinforce more complex structures
- Develop a range of practical skills to create products (cutting, gluing, drilling, screwing, nailing, filing and sanding)

- Measure and mark materials with increased accuracy before cutting.
- Cut materials accurately, using appropriate tools.
- Strengthen materials using suitable materials.

#### **Make - Textiles**

- Make/use a paper pattern (front and back pieces.)
- Create an object that employs a seam allowance e.g. Cushion.
- Join textiles with a combination of stitching techniques e.g. back stitch for seams and running stitch for decoration.
- Select the most appropriate techniques to decorate textiles.

#### **Make – Electrics and Electronics**

- Create series of parallel circuits.
- Understand and use electrical systems in the products e.g. series circuits incorporating switches, bulbs, buzzers and motors.

#### **Make – Mechanics**

- Choose scientific knowledge of forces to choose mechanisms such as levers, winding mechanisms, pulleys and gears.

#### **Make – Food**

- Understand the importance of correct storage and handling of ingredients.
- Measure ingredients to the nearest gram accurately.
- Demonstrate a range of baking or cooking.
- Measure accurately and calculate ratios of ingredients in recipes.
- Create recipes including ingredients and methods.

#### **Cooking and Nutrition**

- Understand and apply the principles of a healthy and varied diet.
- Understand the seasonality and know where and how a variety of ingredients are grown, reared, caught and processed.

#### **Recording**

Recording of lessons will take place in Creative Journals across all year groups, alongside photographic evidence in books and on website if possible.

#### **Reporting**

On our annual reports, which are given to parents at the end of the year, a judgement will be made regarding their child's attainment in D&T relating to the national curriculum for their year group. For example, HNM (Has Not Met), ARE (Age Related Expectations), GD (Greater Depth).

#### **Monitoring**

Curriculum leader will collate evidence including analysing how planning matches the evidence in books, learning walks, speaking to pupils about their learning and discussing with colleagues what has gone well as well as any lessons learnt. The Curriculum Leader will produce a yearly report submitted to SLT. Where relevant, implementation of school policies (such as marking) will be reviewed in light of the well-being school's agenda to ensure the workload for geography is both manageable and is making an impact on the children's learning.

#### **Review**

Spring 2023