



## **Subject Philosophy: Design and Technology**



Our Design and Technology curriculum supports and supplements the delivery of the national curriculum, by providing a bespoke enquiry led context for learning, which provides:

- Meaningful links in learning following a theme-based approach
- Broad and balance coverage across a range of subjects
- Purposeful experiences that bring learning alive through visits and visitors
- Opportunities to respond to the needs and interests of our pupils
- A local, national, international dimension
- A response to the continually evolving educational perspective

We intend our Design and Technology curriculum to develop the whole child by encouraging the attitudes for learning that are displayed through:

- A resilience and resourcefulness in learning, where all children are confident to make mistakes and try new approaches
- An active contribution in lessons, by posing questions, evaluating their findings and sharing resources, ideas and thoughts
- Respect and consideration towards others and the learning environment
- Working happily and productively on their own, or with wider pupil groups

### **We intend to teach Design and Technology with passion and strong subject knowledge:**

- To develop curious learners who are confident to investigate technology
- To develop creative and technical expertise for children of all abilities
- To build up a body of key knowledge and practical skills for all children
- Provide access to a range of technological products, tools and materials to enable children to design and make imaginative, innovative working products of their own
- Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment
- Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions
- Underpinned by appropriate use of I. T.



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### Through our Design and Technology curriculum we will:

Teach the skills of:

- Design
- Make
- Evaluate
- Technical Knowledge
- Cooking and nutrition

### Ensure that children will learn about:

**Designing** – Making and recording plans to explain their ideas; showing what they want to achieve and how to do it and then using these plans to make products.

**Making** - Working with tools and equipment safely and accurately to measure, mark, cut, shape, join and combine a product and then decorate and finish different materials.

**Evaluating** – To explain how products work, what they do and what they are made of. Reviewing and revisiting their own products and adapting ideas as they work.

**Technical Knowledge** – To explain how to strengthen structures, explore and use mechanisms, incorporate electrical systems and computer programming in their products. Also learning how different materials and mechanisms can be used for a purpose.

**Cooking and Nutrition** – Understanding the principles of a healthy diet. Preparing and cooking dishes and developing an awareness of where seasonal food comes from.



## **Subject content**

### **Key Stage 1**

<b><u>Subjects</u></b>	<b><u>Year 1</u></b>
Food technology	Smoothie making
Textiles	Joining fabric
Mechanisms	Wheels and axels
Structures	Creating structures

<b><u>Subjects</u></b>	<b><u>Year 2</u></b>
Food technology	Simple, uncooked food
Textiles	Sewing
Mechanisms	Moving toys
Structures	Strengthening materials

### **Key Stage 2**

<b><u>Subjects</u></b>	<b><u>Year 3</u></b>
Food technology	Simple cooked food
Textiles	Sewing including cross stitch and applique
Mechanisms	Moving toys with pneumatics
Structures	Creating structures using 3D shapes
Electrical systems	Games with static electricity

<b><u>Subjects</u></b>	<b><u>Year 4</u></b>
Food technology	Designing a recipe within a budget
Textiles	Exploring a variety of fastenings
Mechanisms	Making a launching mechanism
Structures	Strong and stable structures with cladding
Electrical systems	Designing a torch

<b><u>Subjects</u></b>	<b><u>Year 5</u></b>
Food technology	Adapting a recipe, understanding nutritional value
Textiles	Introduction to blanket stitch
Mechanisms	Using a mix of stuctures and mechanisms
Structures	Testing the durability of structures
Electrical systems	Designing a game with a simple circuit



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<u>Subjects</u>	<u>Year 6</u>
Food technology	Writing and making a recipe
Textiles	Designing and making a waistcoat
Mechanisms	Making things move simultaneously
Structures	Designing a structure, considering effective and ineffective designs
Electrical systems	Designing a game, identifying components required

### Assessment and expectation

*We are committed to the belief that the nature of open-ended tasks allows pupils to be driven by their own curiosity, deepens their understanding and enables all children to fulfil their potential leading to greater performance.*

At Essendine, our expectation is that all pupils will at least meet age related expectations as prescribed in the new national curriculum September 2014, but will be challenged to achieve greater than this.

Where pupils are falling behind, work will be undertaken to close the gap including differentiation in planning, use of key/target questioning, small group work and teacher intervention. These strategies encourage all pupils to have access to Design and Technology, learning, gain in confidence and sharing ideas with each other.

### Assessment of Design and Technology

A range of assessment evidence will be collected to support teacher's judgement and will include:

- Photographs
- Records
- Design journals
- Work scrutiny
- Ongoing assessment tasks
- Pupils' discussion and consultation

### Key questions to ask pupils

#### **Design**

- What is this product for?
- Who is this product for?
- What is this product made of?



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- What do you think of the overall design?
- What changes would you make?
- Which materials/ techniques are you going to use?
- Why have you chosen these materials/ techniques?

### **Make**

- How are you going to cut/ join/decorate your materials?
- What tools will you need?

### **Evaluate**

- What made your product successful? (effectiveness, materials, techniques, appearance, taste)
- What changes were required?
- What changes would you make next time?
- What do other people think of your product?

### **General**

- What do you want to learn about?
- What have you learnt about?
- What skills have you developed?

### **Monitoring**

The Phase leader will liaise with the subject leader to ensure monitoring is being undertaken and recorded.

### **The Subject leader will:**

- Monitor products, design journals, provide feedback and support
- Provide training sessions to ensure subject knowledge is accurate
- Attend CPD courses
- Monitor the budget and order resources where required

Governors will liaise with the Subject Leader to support improvement, planning, processes and be aware of standards.

### **Partnerships**

#### **Parents**

Essendine positively promotes and encourages parents to support the work of the school in developing a love of Design and Technology. This can be done by inviting parents into Design and Technology workshops and taking children to museums and structures. An outline of the Design and Technology to be studied in a term is also detailed in the Parent's Information meeting.

### **Subject leaders – 2020**