

School Curriculum 2020

Design & Technology at East Ayton Primary School

Principles and Purpose

- Children should acquire a broad range of subject knowledge drawing on their learning in Mathematics, Science, Computing and Art.
- Children should be encouraged to use their creativity and imagination in designing and making products that solve real and relevant problems.
- They should evaluate and test their products, and the work of others.
- They should develop technical and practical expertise along with the understanding and skills in order to design and make products for a wide range of users.

Entitlement & Enrichment

- Through a variety of creative and practical activities, pupils should be taught the knowledge, skills and understanding which should be applied in designing and making.
- Opportunities to design and make should grow from subjects across the curriculum, and for different purposes.
- Enrichment opportunities include:
 - Solving design problems in the environment – Forest Schools area, in the local woodland, by the river, etc.
 - As part of the East Barnby residential visit, working as a team to design and make a waterproof shelter.

Breadth & Balance

In Key Stage 1

When children are designing and making in Key Stage 1, they should be taught to:

- **Design**
 - Design purposeful, functional, appealing products for themselves and other users based on design criteria.
 - Generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology.
- **Make**
 - Select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing].
 - Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics.
- **Evaluate**
 - Explore and evaluate a range of existing products.
 - Evaluate their ideas and products against design criteria.
- **Technical knowledge**

- Build structures, exploring how they can be made stronger, stiffer and more stable.
- Explore and use mechanisms [for example, levers, sliders, wheels and axles] in their products.

In Key Stage 2

At Key Stage 2 children should be taught to:

- **Design**
 - Use research and develop design criteria to inform the design of 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 exploded diagrams, prototypes, pattern pieces and computer-aided design.
- **Make**
 - Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing] accurately.
 - Select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities.
- **Evaluate**
 - 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.
 - Understand how key events and individuals in design and technology have helped shape the world.
- **Technical knowledge**
 - Apply their understanding of how to strengthen, stiffen and reinforce more complex structures.
 - Understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages].
 - Understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors].
 - Apply their understanding of computing to program, monitor and control their products.

Cooking & Nutrition

The National Curriculum also requires that children learn about cooking and nutrition:

In Key Stage 1

- Use the basic principles of a healthy and varied diet to prepare dishes.
- Understand where food comes from.

In Key Stage 2

- Understand and apply the principles of a healthy and varied diet.
- Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques.

- Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.

The Teaching Narrative

- Focus Education's Assessment Criteria outlines when specific skills should be taught.

Resources

- Variety of construction materials.
- Natural materials sourced when working in the environment.
- Sources of research – books, computers, etc.

Review & Evaluate

- A yearly plan outlining the actions needed to ensure progress.
- Review and evaluation of the plan.