## Design Technology rationale for September 2024 - Holmes Chapel Primary School

The National Curriculum states that design and technology is an inspiring, rigorous and practical subject. Children should use creativity and imagination in designing and making 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 disciplines such as mathematics, science, engineering, computing and art. Pupils should learn how to take risks, becoming resourceful, innovative, enterprising and capable citizens. Through the evaluation of past and present design and technology, they develop a critical understanding of its impact on daily life and the wider world. High-quality design and technology education makes an essential contribution to the creativity, culture, wealth and well-being of the nation.

The intent of the design technology curriculum is to

- show how design technology is relevant to the real world
- be inclusive to all pupils
- promote resilience
- encourage problem solving
- develop teamwork
- be cross curricular (where appropriate)
- develop practical skills of measuring, cutting, shaping, assembling, joining, combining and finishing
- embed the principles of nutrition and foundation of cooking skills
- provide a cycle of design

evaluate existing products

evaluate   design and make
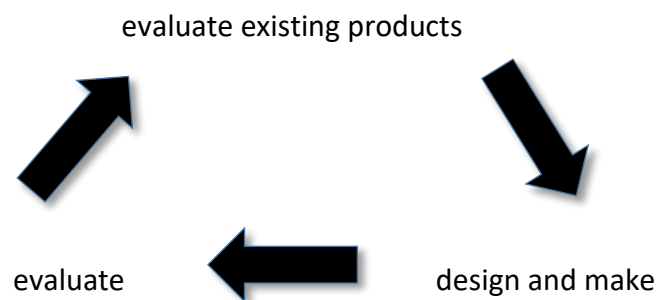
Curriculum design

EYFS

By the end of EYFS children should be able to handle equipment and tools effectively. They should have learnt to safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. They should be able to use what they have learnt about media and materials in original ways, thinking about uses and purposes. They should be able to represent their own ideas, thoughts and feelings through

design and technology. Children should be confident to try new activities and confident to speak in a familiar group. They should be able to talk about their ideas, and will choose the resources they need for their chosen activities. They should be able to say when they do or do not need help. They should take account of one another's ideas about how to organise their activity.

KS1 and KS2

Moving into KS1, children will build on the basic skills they have developed during EYFS. They will have developed the confidence to try out their ideas in a variety of creative and practical activities. They will demonstrate increasing levels of independence and teamwork.

The curriculum overview can be seen below. Each year group covers food as there is a strong emphasis on cooking and nutrition in the National Curriculum. We believe this provides key life skills for their future. Similarly, there are many mechanisms in the N.C. so each year covers a different mechanism, with a greater focus on control in UKS2 as children have skills from Science and Computing which they can apply. Structures and textiles are covered in alternate years so children meet each in KS1, LKS2 and UKS2 giving them the chance to build on and develop skills as they revisit each area. For example – in Y2 children learn to join fabrics, in Y4 they learn how to create fastenings and in Y6 they use CAD to make an accurately assembled product.

Teachers use the DATA (Design and Technology Association) Clickable Progression Framework to support with the progression of skills and to support their understanding of age related expectations in D.T. It is organised into KS1, LKS2 and UKS2 so children meet skills at least once and in many cases will have a chance to revisit and further develop skills as they progress through school.

Cycle of design

Each unit of work is planned using the cycle of design. Children will begin by looking at existing products to evaluate their design and purpose. This knowledge informs their own designs which leads to design criteria for their own product. Children will then undertake focussed practical tasks (FPTs) to develop the skills they will need during making. The children then use these skills to make their designs. They are encouraged to evaluate as they are making and to adapt their designs if necessary. Once they have finished making their product, they use their design criteria to evaluate their product.

Overview of coverage in KS1 and KS2

Year	Area – not interchangeable though context can be to suit context of other curriculum subjects		
1	structures bridges	mechanisms – levers moving pictures	food smoothies (chopping soft fruits)
2	food Indian chutneys (mashing)	mechanisms – wheels/axles vehicles	textiles puppets
3	food soup (chopping/peeling/grating)	mechanisms/control – pneumatics moving monsters	structures photograph frames
4	mechanisms – cams	textiles purses/money bags	food Devonshire splits (kneading)
5	food Mince pies (rubbing in)	control/electrical – intruder alarms	structures Baghdad houses
6	textiles DATA unit – CAD in textiles	food (shaping into evenly sized pieces) Glamorgan sausages	control/computing – K-nex

Assessment

For each unit, teachers choose one statement from the clickable progression document which they use to assess each child in their class. One designing, one making and one evaluating statement is used so children are assessed in each of the key areas. Teachers use their own judgement which area is most appropriate to assess for each unit.

SEND

All of our children have access to high quality teaching in design and technology and the approaches of cognitive and metacognitive strategies, explicit instruction, using technology and scaffolding are interwoven into our teaching along with adapting materials, equipment and resources.

Resources

The DATA (Design and Technology Association) Clickable Progression Framework