Design Technology

Subject Leader: Mrs L.Arthur

ACHIEVE TEAM

Our Approach to Design Technology at Higher Failsworth Primary School

Intent

Our intent in teaching Design Technology at Higher Failsworth is to enable our children to be able to discuss ideas with each other and be able to present ideas and outcomes to an audience. Develop resilience and be able to complete a project through evaluation and re-evaluation. To be able to take considered risks To choose and use appropriate tools safely and effectively. To be able to work successfully together, to critique their own and each other's work in a constructive manner. To understand how key events and individuals in Design Technology have helped to shape the world. To learn basic skills of nutrition and to apply these as they learn to cook at a basic level.

Implementation

At Higher Failsworth Primary School, Design Technology is taught each term. Each child records their work, as the topic progresses, following a proforma that has been designed to show progression each year. Cross-curricular links are promoted to allow children to deepen their understanding across the curriculum including the use of technology. Teachers follow a clear progression of skills which ensures all pupils are challenged in line with their year group expectations and are given the opportunity to build on their prior knowledge.

Impact

The impact of this curriculum design will lead to outstanding progress over time across key stages relative to a child's individual starting point and their progression of skills. Children will therefore be expected to leave Higher Failsworth Primary School reaching at least age-related expectations for Design Technology. Our Design Technology curriculum will also lead pupils to be enthusiastic and creative designers,, evidenced in a range of ways, including pupil voice, their final pieces and written records. We ensure that children who are achieving well, as well as those who need additional support, are identified, and additional provision and strategies are planned in and discussed with class teachers. By celebrating the children's achievements through corridor displays and through the outcomes of whole school challenges we aim to inspire children to appreciate and become designers of the future.

Our Approach to Design Technology at Higher Failsworth Primary School

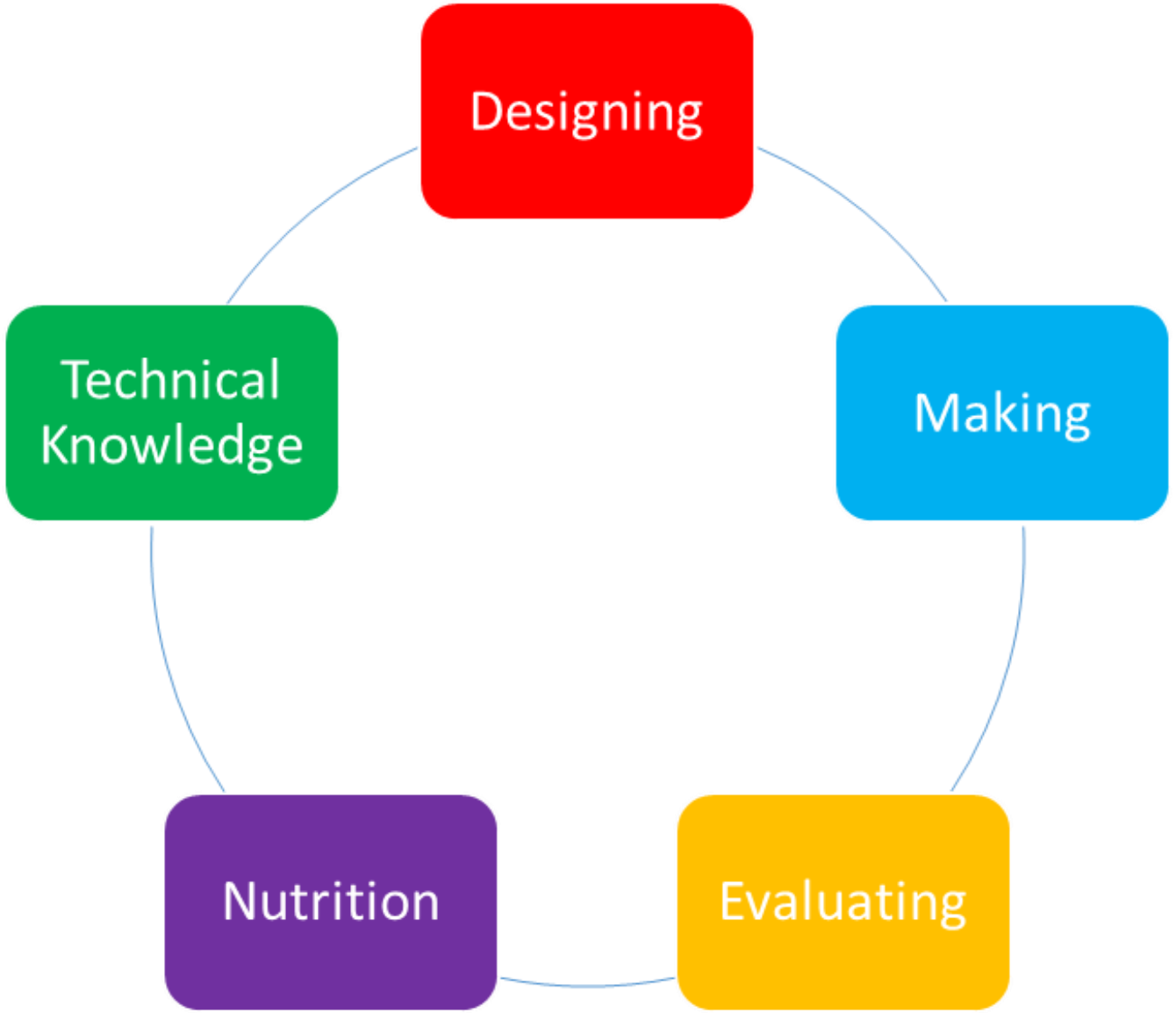
We want pupils at Higher Failsworth to be able to:

- Use creative, technical and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world.
- Build and apply a repertoire of knowledge, understanding and skills in order to design and make high-quality prototypes and products for a wide range of users.
- Critique, evaluate and test their ideas and products and the work of others.
- Understand and apply the principles of nutrition and learn how to cook.

We ensure our pupils receive:

- Progression across year groups
- A programme of learning opportunities for all pupils to gain the basic knowledge and understanding, which underpin design and technology
- Continuity and progression throughout the curriculum as they move through the school.
- The correct health and safety care during design and technology activities.

Design Technology - Threshold Concepts



EYFS Early Learning Goals for Design Technology

Three and Four-Year-Olds	Personal, Social and Emotional Development	• Select and use activities and resources, with help when needed. This helps them to achieve a goal they have chosen or one which is suggested to them.
	Physical Development	• Use large-muscle movements to wave flags and streamers, paint and make marks. • Choose the right resources to carry out their own plan. • Use one-handed tools and equipment, for example, making snips in paper with scissors.
	Understanding the World	• Explore how things work.
	Expressive Arts and Design	• Make imaginative and complex 'small worlds' with blocks and construction kits, such as a city with different buildings and a park. • Explore different materials freely, in order to develop their ideas about how to use them and what to make. • Develop their own ideas and then decide which materials to use to express them. • Create closed shapes with continuous lines, and begin to use these shapes to represent objects.

Reception	Physical Development	• Progress towards a more fluent style of moving, with developing control and grace. • Develop their small motor skills so that they can use a range of tools competently, safely and confidently. • Use their core muscle strength to achieve a good posture when sitting at a table or sitting on the floor.
	Expressive Arts and Design	• Explore, use and refine a variety of artistic effects to express their ideas and feelings. • Return to and build on their previous learning, refining ideas and developing their ability to represent them. • Create collaboratively, sharing ideas, resources and skills.

ELG	Physical Development	Fine Motor Skills	• Use a range of small tools, including scissors, paintbrushes and cutlery.
	Expressive Arts and Design	Creating with Materials	• Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. • Share their creations, explaining the process they have used.

Design Technology - Designing Skills

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
•Can they think of some ideas of their own? •Can they explain what they want to do? •Can they use pictures and words to plan?	•Can they think of ideas and plan what to do next? •Can they choose the best tools and materials? Can they give a reason why these are best? •Can they describe their design by using pictures, diagrams, models and words?	•Can they show that their design meets a range of requirements? •Can they put together a step-by-step plan which shows the order and also what equipment and tools they need? •Can they describe their design using an accurately labelled sketch and words? •How realistic is their plan?	•Can they come up with at least one idea about how to create their product? •Do they take account of the ideas of others when designing? •Can they produce a plan and explain it to others? •Can they suggest some improvements and say what was good and not so good about their original design?	•Can they come up with a range of ideas after they have collected information? •Do they take a user's view into account when designing? •Can they produce a detailed step-by-step plan? •Can they suggest some alternative plans and say what the good points and drawbacks are about each?	•Can they use a range of information to inform their design? •Can they use market research to inform plans? •Can they work within constraints? •Can they follow and refine their plan if necessary? •Can they justify their plan to someone else? •Do they consider culture and society in their designs?

Design Technology - Making Skills

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
•Can they explain what they are making? •Can they explain which tools are they using?	•Can they join things (materials/ components) together in different ways?	•Can they use equipment and tools accurately?	•Can they tell if their finished product is going to be good quality? •Are they conscience of the need to produce something that will be liked by others? •Can they show a good level of expertise when using a range of tools and equipment? •Do they work at their product even though their original idea might not have worked?	•Can they explain why their finished product is going to be of good quality? •Can they explain how their product will appeal to the audience? •Can they use a range of tools and equipment expertly? •Do they persevere through different stages of the making process?	•Can they use tools and materials precisely? •Do they change the way they are working if needed?

Design Technology - Evaluating Skills

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
•Can they describe how something works? •Can they talk about their own work and things that other people have done?	•Can they explain what went well with their work? •If they did it again, can they explain what they would improve?	•Can they explain what they changed which made their design even better?	•Have they thought of how they will check if their design is successful? •Can they begin to explain how they can improve their original design? •Can they evaluate their product, thinking of both appearance and the way it works? •Do they take time to consider how they could have made their idea better?	•Do they keep checking that their design is the best it can be? •Do they check whether anything could be improved? •Can they evaluate appearance and function against the original criteria?	•How well do they test and evaluate their final product? •Is it fit for purpose? •What would improve it? •Would different resources have improved their product? •Would they need more or different information to make it even better? •Does their product meet all design criteria? •Did they consider the use of the product when selecting materials?

Design Technology - Nutrition Skills

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
•Can they cut food safely? •Can they describe the texture of foods? •Do they wash their hands and make sure that surfaces are clean? •Can they think of interesting ways of decorating food they have made, eg, cakes?	•Can they describe the properties of the ingredients they are using? •Can they explain what it means to be hygienic? •Are they hygienic in the kitchen?	•Can they choose the right ingredients for a product? •Can they use equipment safely? •Can they make sure that their product looks attractive? •Can they describe how their combined ingredients come together? •Can they set out to grow plants such as cress and herbs from seed with the intention of using them for their food product?	•Do they know what to do to be hygienic and safe? •Have they thought what they can do to present their product in an interesting way?	•Can they describe what they do to be both hygienic and safe? •How have they presented their product well?	•Can they explain how their product should be stored with reasons? •Can they set out to grow their own products with a view to making a salad, taking account of time required to grow different foods?

Design Technology - Technical Knowledge Skills

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
•Can they make a structure/model using different materials? •Is their work tidy? •Can they make their model stronger if it needs to be?	•Can they measure materials to use in a model or structure? •Can they join material in different ways? •Can they use joining, folding or rolling to make it stronger?	•Do they use the most appropriate materials? •Can they work accurately to make cuts and holes? •Can they join materials?	•Can they measure carefully so as to make sure they have not made mistakes? •How have they attempted to make their product strong?	•Are their measurements accurate enough to ensure that everything is precise? •How have they ensured that their product is strong and fit for purpose?	•Can they justify why they selected specific materials? •How have they ensured that their work is precise and accurate? •Can they hide joints so as to improve the look of their product?

Design Technology - Long Term Plan 2022/2023

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 1	Textiles- puppets	ART	ART	Making bread	Axles and wheels. emergency vehicles	ART
Year 2	Weaving	ART	ART	Victorian Sponge Cake	Designing and making toys	ART
Year 3	Stone Age jewellery	ART	Bread making	ART	Purse making	ART
Year 4	Designing and creating a functional product - Roman shields	ART	Designing and creating a functional product using recycled materials	ART	Battery Operated Light	ART
Year 5	Moving Spaceman (Dancing Santas)	ART	ART	Longboat construction	Mayan masks,Mayan hot chocolate	ART
Year 6	ART	Marble run	ART	Shelters	ART	Sewing phone cases