Heptonstall Junior and Infant School
Design and Technology Policy

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Introduction

This policy outlines the teaching, organisation and management of design and technology taught at Heptonstall Primary School.

At Heptonstall, we aim to provide all children with a range of activities that will help them investigate, plan, make and evaluate. Undertaking design and technology activities in school will give our children opportunities to use a range of materials and processes, and to work independently or as part of a team. We would hope that these activities undertaken would support them in the wider world.

The school's policy for D&T is based on the Primary Curriculum, which has been statutory since September 2014. The implementation of this policy is the responsibility of all teaching staff.

Intent

At Heptonstall Primary School, we believe that design and technology should be taught in all year groups to prepare children to be independent, work in teams and become creative problem-solvers.

We teach design and technology each half term linked to the national curriculum objectives for that year group. We also teach Design and Technology during our topic lessons when an objective lends itself well to that learning focus.

Children at Heptonstall are encouraged to be creative whilst designing products with a purpose for the correct audience.

We link these objectives with topics they are learning to have strong cross-curricular links such as, cooking and nutrition which we link to healthy food choices.

As a school, we monitor the progression of design and technology in individual pupil books, which evidences the teaching and learning and follows them throughout school. Design and technology is also monitored through observations and pupil interviews to ensure children enjoy their learning whilst making good or better progress.

Implementation:

Planning

At Heptonstall teachers plan lessons around the National Curriculum objectives to build-up skills in each year group by building on previous learning. If all content is taught appropriately for each year groups, the children will build on this as they move through school.

The subject leader provides an overview and a log term plan of what should be taught and when. These are split into five Design and Technology weeks and one cooking unit for each year group. They are selected to match other curriculum areas to encourage cross-curricular links where possible so these skills can be applied to other areas of the curriculum. Where appropriate, children will have their own 'Must Knows' to ensure they

have retained knowledge and skills at a secure level before moving on too quickly and having gaps in their learning.

Teachers at Heptonstall plan using this overview to create inspiring and practical lessons whilst covering the National Curriculum objectives. They plan to include creativity and imagination whilst children design and make products that solve real and relevant problems within a variety of contexts considering their own and other's needs, wants and values.

		Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Acorns	Cycle A	Mechanisms: Making a moving story book	Textiles: Puppets	Mechanisms: Making a moving Monster	Extended Project/Seasonal EYFS Project	Smoothies	Structures: Constructing a windmill
	Cycle B	Mechanisms: Fairground Wheel	Structures: Baby Bear's Chair	Textiles: Pouches	Extended Project/Seasonal EYFS Project	Mechanisms: Wheels and Axles	Balanced Diet
Sapling	Cycle A	Mechanical Systems: Pneumatic Toys	Digital World: Wearable Technology	Eating Seasonally	Structures: Constructing a Castle	Textiles: Cushions OR Egyptian Collars	Electrical Systems: Electrical Poster
	Cycle B	Mechanical Systems: Making a Slingshot Car	Digital World: Mindful Moments Timer	Adapting a Recipe	Structures: Pavilions	Textiles: Fastenings	Electrical Systems: Torches
Oak	Cycle A	Textiles: Stuffed Toys	Electrical Systems: Doodlers	Structures: Bridges	Digital World: Monitoring Devices	Mechanical Systems: Making a Pop-up Book	Developing a Recipe
	Cycle B	Electrical Systems: Steady Hand Game	Textiles: Waistcoats	Structure: Playgrounds	Digital World: Navigating the World	Mechanical Systems: Automata Toys	Come Dine with Me

To support our design and technology teaching in school, teachers produce 'Knowledge Organisers' to help children understand key facts and vocabulary linked to their topic. Each teacher integrates these facts and vocabulary when teaching design and technology. These are tailored to cover the National Curriculum objectives whilst building on skills from previous years. Teachers liaise with other teachers and colleagues to ensure prior knowledge is drawn upon and used as a foundation for future learning.

Pupils 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.

Practical experiences, at the heart of this subject, need to foster positive attitudes towards overcoming problems, working collaboratively and developing a flexibility of approach. The subject serves to reinforce the notion that we do not always work towards pre-ordained solutions.

We plan various experiences to develop their skills in the curriculum area to prepare them for the real world. We also take advantage of any opportunities to visit our local community or wider community to see what is happening around us.

Staff meetings and informal professional discussions across the trust are used to develop the design and technology curriculum and to ensure consistency of knowledge, skills, approach, and of standards.

In the EYFS, DT long term plans start in Reception and sequence specific knowledge and skills embedded into engaging topics to benefit the children's

knowledge and understanding in DT and prepare them for a deep understanding further up school. The long term plans then continue right up until year 6.

In the EYFS, DT aspects of the children's work are related to the objectives set out in the Early Learning Goals (ELGs), as outlined in Development Matters. By providing learning opportunities throughout the EYFS academic years children will develop the skills in the above areas to make them 'curriculum ready' for DT when they enter Year One. In EYFS teachers ensure they plan to specifically support the area 'Expressive Arts and Design' as this has the greatest link to the subject DT.

In EYFS, each half-term is planned after analysing the Gap Strength Analysis from the term before to see what gaps need plugging to ensure every child makes sufficient progress. Experience based play is then planned to support children meeting these statements before they leave the EYFS, ensuring they have the foundation skills to progress through the subject in Years 1-6.

Teaching

The design and technology curriculum is delivered by class teachers. In all classes, work is differentiated to challenge every child to match their own needs. Children work in a range of groupings including whole class, small groups, pairs and independently. Where appropriate, children are supported by teaching assistants.

The majority of design and technology work is completed in purple books. Work is also shared on Dojo and displayed on the DT curriculum display board. You can also find design and technology learning on our website in the tab title 'Design and Technology'.

Design and Technology teaching is taught each half term. Teachers will integrate more design and technology teaching throughout the school year if it lends itself well to a topic.

The topics chosen during the design and technology or cook units are planned to encourage children to acquire knowledge and skills to secure a specialised capability in design and technology. They will facilitate a design and make experience; pupils have the opportunity to explore their creative potential by applying their existing skills. Pupils will also evaluate and assess the advantages and disadvantages of a range of other products in terms of their design elements. This could be achieved through observation, handling, testing or disassembly.

EYFS:

In early years' design and technology, the teachers will begin to develop the children's knowledge and skills that they will build on throughout their school years, such as developing their skills of imagination, experimenting and creativity to learn about the real world around them.

This is directly linked to the EYFS framework 'Expressive Arts and Design'. The children learn about experiments with media and materials finding out about their properties and modifying and manipulating them. It explores sounds, patterns, movement and different tools and techniques.

At Heptonstall, we help the children to be creative and encourage attitudes of curiosity and questioning about skills and techniques.

We encourage the children to build on their interests so they lead on to create amazing inventions or to have the confidence to make choices and build on their own ideas which will hopefully help them to retain their ideas and skills ready for key stage 1.

Key Stage 1:

The teaching of design and technology in Key Stage 1 is to build on their prior knowledge to develop their experience and understanding of expressive arts and design. Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making.

They should work in a range of relevant contexts for example, the home and school, gardens and playgrounds, the local community, industry and the wider environment. They should begin to use language to talk about what they plan to create, how they have made it and to evaluate their product. Most of the learning about design and technology should be done through research, the use of first-hand practical experiences and discussions.

Key Stage 2:

The teaching of design and technology in Key Stage 2 is to build on their prior knowledge and skills taught in Key Stage 1. They should continue to use a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making.

They will continue to work in a range of relevant contexts for example, the home and school, gardens and playgrounds, the local community, industry and the wider environment.

They will continue to use language to talk about what they plan to design, make and to evaluate their product and use their technical knowledge to support their learning. Most of the learning about design and technology should continue to be done through research, the use of first-hand practical experiences and discussions.

Cooking will be taught in one unit throughout the year building on teaching in Key Stage 1. They will start to apply the principles of a healthy and varied diet and start to cook a range of savoury dishes using a range of skills and techniques. Students will be encouraged to continue researching where food comes from and start to understand seasonality building up to understanding where food is grown, reared, caught and processed.

Design and Technology Vocabulary

Teachers build on previous design and technology knowledge, vocabulary and skills to enhance their learning. The quality and variety of language that pupils hear and speak are developed through modelling from class teachers.

Class teachers use the Knowledge Organisers to teach key vocabulary linked to their design and technology focus.

The children should use design and technology language to talk about what they are designing and communicate their ideas to a range of audiences in a variety of ways. Teachers ensure that pupils build secure foundations by using discussion to probe and remedy their misconceptions.

Resources

Within the allocated budget for design and technology, resources will be renewed, updated and increased to enable staff to maintain a comprehensive range of learning experiences.

It is the design and technology leader's responsibility to check all equipment is maintained to a safe standard and organised accordingly. It is the responsibly of all staff to ensure that equipment borrowed is treated with respect and returned correctly with care.

Health and Safety

Pupils will be taught to use design and technology equipment safely when using it during practical activities. Teachers should reduce risks through encouraging responsible behaviour and use good practise to avoid hazardous situations developing.

Risk assessments are completed for all tools and are stored on the schools shared drive for all staff members to access. The cooking risk assessment is also displayed in the kitchen for access when cooking with children.

Teachers, teaching assistants and the subject leader will check equipment regularly and report any damage, taking defective equipment out of action.

All staff will refer to current safety practises, regulations and safeguarding requirements.

Inclusion:

Each child will be allowed the same opportunities, regardless of ethnic group, age, gender and ability, social circumstances or special educational needs (SEN) in the development of their design and technology education to make the greatest progress possible.

We will identify which pupils or groups are under achieving in design and technology and take steps to improve their attainment.

Able pupils are identified through teacher observations and challenged to their full ability in every design and technology lesson. It is our aim that a wide range of activities will be planned and organised that will stimulate our pupils' interests and instil a love for design and technology.

All children will have equal access to resources however where children have a degree of physical or behavioural difficulties in the making of products they should be encouraged to participate in such activities with help from others.

Pupils with Special Educational Needs receive support from their class teacher to undertake appropriate tasks/projects matched to their needs and ability. All pupils will generally work in mixed ability groups, with individuals making a valued contribution to the overall process. This promotes self-reliance, self-esteem and a collaborative attitude.

Monitoring

All teachers are responsible for monitoring their year group for design and technology. They will assess children's work by monitoring the children within the lesson and supporting or challenging them where necessary.

The teacher monitors the work and uses this to inform future planning. Written or verbal feedback is given to the child to help guide their progress. Children are encouraged to judge their own work and assess themselves against the objectives. The teacher uses all of this information to determine whether a catch up session or intervention is needed before the next lesson.

The design and technology leader is responsible for improving the standards of teaching and learning in design and technology by monitoring and supporting colleagues in continuing professional development (CPD) whilst attending design and technology related training to pass on to other staff members and develop own CPD as a leader.

The design and technology lead monitors progress in design and technology through lesson observations, book scrutinies, learning walks, pupil interviews and discussions with staff.

The subject leader is also responsible for purchasing and organising resources.

Impact

Assessment and Feedback

Assessment for learning is continuous throughout the planning, teaching and learning cycle. Each child has their own design and technology book, where work is recorded.

Children throughout the school are also assessed using the strategies below:

- Observation of children working.

- Observing the design, make and evaluation processes.
- Questioning, talking and listening to children
- Considering work, materials or investigations produced by children together with discussion about this with them.

<u>All of these assessment methods are combined to give the teacher an overall judgment.</u>

All teachers use assessment grids to monitor the progression in design and technology. They update the objectives each half term to monitor the children and provide immediate intervention where necessary.

Effective monitoring is often done while a task is being carried out through discussion between children and teacher.

Pupils' achievements can be assessed in a variety of ways. These include direct observation, discussion and questioning of pupils as well as by evaluation of the finished product itself.

Teachers should collect evidence of individual, group or class work for assessment purposes, chosen from the following formats: Pupils' annotated sketches / plans / drawings; photos / videos of pupils 'at work'; specific assessment assignments to evaluate a particular capability; photos / videos of part or completely finished work (products); children's own written / verbal evaluations of their tasks / activities; appraisal / evaluation of the finished article.

At the end of the year a teacher assessment judgement is made based on the whole year. This will also benefit the next teacher, as they will know exactly where the children are and what their gaps are.

Teachers use their judgments to decide where children are for each objective. They can judge whether they are beginning, secure or above for each objective for design and technology.