Stubbins Primary School
Policy for Design Technology

At Stubbins School, children are at the centre of everything we do.
We aim to give our children the best possible opportunities and learning experiences, enabling them to reach their full potential. We aim to ensure that the children in our care are equipped for life-long learning as responsible citizens in an ever-changing, diverse local and world-wide community.
We believe that everyone has the capacity to become great if they have the courage to challenge themselves. By nurturing creativity, enjoyment & ambition; this policy supports our responsibility to make this happen.

Intent

At Stubbins Primary school, we aim to provide all children with a broad and balanced curriculum which prepares them for life beyond primary education. We encourage children to use their creativity and imagination, to design and make products that solve real and relevant problems within a variety of contexts, considering their own and others' needs, wants and values. We support our children in becoming critical thinkers, forward planners and effective problem solvers. We also teach our children to be able to work as capable individuals and as part of a valuable, productive team. Resilience is a key theme running through our DT curriculum, and the children are encouraged to become innovators and risk takers. Our Design and technology scheme of work enables pupils to meet the end of key stage attainment targets in the National curriculum and the aims also align with those in the National curriculum. EYFS (Reception) units provide opportunities for pupils' to work towards the Development matters statements and the Early Learning Goals.

The school aims to;

- develop the 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.

Implement

At Stubbins, we follow the Kapow Design and Technology scheme of work and our curriculum map for DT. We have carefully selected units to ensure gradual progression towards the National curriculum end of key stage attainment targets and to cover all of the four strands shown below in enough detail.

- Design
- Make
- Evaluate
- Technical knowledge

Cooking and nutrition is given a particular focus and we have made this one of our six key areas that pupils revisit throughout their time in primary school:

- Cooking and nutrition
- Mechanisms/ Mechanical systems
- Structures
- Textiles
- Electrical systems (KS2 only)
- Digital world (KS2 only)

Some key areas appear less frequently than others, for example Textiles, and this is deliberate. The National curriculum statements below show that working with textiles is only a small element of the 'Make' strand and many of the making techniques covered in our textiles units are also covered with a range of materials in other units, such as the use of templates, modelling, measuring and marking out, cutting, shaping and joining. Similarly in Year 2, the coverage of key areas is deliberately imbalanced as there are two Mechanisms units. This is because there is strong progression between the Y1 Structures: Constructing a windmill and the Y2 Mechanisms: Fairground wheel and then again with the Y2 Mechanisms: Making a moving monster. To omit one of these units would negatively impact on the progression.

Our scheme has a clear progression of skills and knowledge within these strands and key areas across each year group. Our Progression of skills shows the skills and knowledge that are taught within each year group and how these skills develop to ensure that attainment targets are securely met by the end of each key stage.

Through Kapow primary's design and technology scheme, pupils respond to design briefs and scenarios that require consideration of the needs of others, developing their skills in the six key areas. Each of our key areas follows the design process (design, make and evaluate) and has a particular theme and focus from the technical knowledge or cooking and nutrition section of the curriculum. The Kapow Primary scheme is a spiral curriculum, with key areas revisited again with

increasing complexity, allowing pupils to revisit and build on their previous learning. Lessons incorporate a range of teaching strategies from independent tasks, paired and group work including practical hands-on, computer-based and inventive tasks. This variety means that lessons are engaging and appeal to those with a variety of learning styles. Differentiated guidance is available for every lesson to ensure that lessons can be accessed by all pupils and opportunities to stretch pupils' learning are available when required. Knowledge organisers for each unit support pupils in building a foundation of factual knowledge by encouraging recall of key facts and vocabulary.

We to teach D&T through a variety of creative and practical activities in order to give children the knowledge, understanding and skills needed to engage in an iterative process of designing, making and evaluating. They are given opportunities to work in a range of relevant contexts such as at home and school, in gardens and playgrounds, within the local community, surrounding industry and in the wider environment.

EYFS

In the Early Years Foundation Stage we provide opportunities for children to:

- 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;
- make use of props and materials when role playing characters in narratives and stories.

KS1

- 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 ICT
- 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
- explore and evaluate a range of existing products
- evaluate their ideas and products against design criteria
- 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.
- use the basic principles of a healthy and varied diet to prepare dishes
- understand where food comes from.

KS2

- use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose and 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
- 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
- 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
- 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.
- 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.

Resources

- The Design & Technology subject leader will order D&T resources towards the end of each term for specific topics and units of work. A request for alternative or additional resources can be made at this time.
- The resources are stored in the back store cupboard (in the hall) and should be returned after use. This store cupboard should remain organised at all times.
- D&T files will be ordered by the subject leader when needed.
- Teachers will have access to supporting materials from the subject leader, for example exemplar pieces of work and photographs. The subject leader is also available to help with planning.
- Tools and equipment such as glue guns, tools and sewing resources are safety checked annually and replaced when required.

Impact

Our Kapow Primary Design and technology curriculum will allow pupils to leave school equipped with a range of skills to enable them to succeed in their secondary education and be innovative and resourceful members of society. Children will:

➔ Understand the functional and aesthetic properties of a range of materials and resources.

➔ Understand how to use and combine tools to carry out different processes for shaping, decorating, and manufacturing products.

➔ Build and apply a repertoire of skills, knowledge and understanding to produce high quality, innovative outcomes, including models, prototypes, CAD, and products to fulfil the needs of users, clients, and scenarios.

➔ Understand and apply the principles of healthy eating, diets, and recipes, including key processes, food groups and cooking equipment.

➔ Have an appreciation for key individuals, inventions, and events in history and of today that impact our world.

➔ Recognise where our decisions can impact the wider world in terms of community, social and environmental issues.

➔ Self-evaluate and reflect on learning at different stages and identify areas to improve.

➔ Meet the end of key stage expectations outlined in the National curriculum for Design and technology.

➔ Meet the end of key stage expectations outlined in the National curriculum for Computing.

Assessment

Stubbins uses assessment to enable staff to understand what pupils have learnt before, what they need to learn now and what they will learn next. The impact of our design technology curriculum can be constantly monitored through both formative and summative assessment opportunities. Each lesson includes guidance to support teachers in assessing pupils against the learning objectives. Children are encouraged to make personal assessments of their own work through evaluating activities and identifying what they need to do to improve. The subject leader will collect selected examples of children's work, when monitoring.

Inclusion

Teachers set high expectations for all pupils in design technology. They will use appropriate assessment to set ambitious targets and plan challenging work for all groups, including:

- More able pupils
- Pupils with low prior attainment
- Pupils from disadvantaged backgrounds
- Pupils with special educational needs (SEN)
- Pupils with English as an additional language (EAL)

Lessons will be planned to ensure that there are no barriers to every pupil achieving. Teachers will plan lessons so pupils with SEN and/or disabilities can study design technology, wherever possible, and ensure that there are no barriers to every pupil achieving. Teachers will also take account of the needs of pupils whose first language is not English. Lessons will be planned so that teaching opportunities help pupils to develop their English, and to support pupils to take part in design technology. Talented or more able children will challenged through more demanding tasks such as more open-ended design briefs, exploring and combining a range of materials in their work and carrying out independent research.

Intervention in design & technology will take the form of small group work, led by the teacher or teaching assistant. This would usually take place within the DT lesson itself and will allow the child to be directly led by the adult. For all children to produce their best, teachers will adapt lessons to suit the needs of learners by:

- changing the demands of a task;
- limiting choices;
- providing greater teacher intervention, small group work and teaching assistant support;
- ensuring manipulative skills needed are manageable;
- selecting appropriate tools and equipment;
- pre-teaching skills;
- accessing knowledge organisers.

Links to other policies

This subject policy links to the following policies and procedures:

- Curriculum policy
- Assessment policy
- Marking policy
- SEND policy

Signed: *C Rawcliffe*	Signed: Pending governor approval
Subject Leader's name: C Rawcliffe	Governor link name: Keir Dawson
Date: May 2023	Proposed Review date: May 2026