

Design Technology at Holy Name

Design Technology Curriculum Rationale

At Holy Name we are designers and technologists! We want our children to love design technology. We want them to have no limits to what their ambitions are and grow up wanting to be architects, graphic designers, chefs or carpenters. We want them to embody our core values. We believe that all of our children are **STARS** with the potential to shine. The design technology curriculum has been carefully crafted so that our children develop their design and technology capital (in line with National Curriculum milestones.) We want our children to remember their DT lessons in our school, to cherish these memories and embrace the DT opportunities they are presented with!

Curriculum Intent

Curriculum Aims

Holy Names Design and technology scheme of work aims to inspire pupils to become curious, creative and innovative thinkers with a broad understanding of how products are designed and made, in other words, to think like designers and engineers. The intention is for pupils to develop the confidence to identify problems, generate ideas, plan and create products and evaluate their outcomes. The scheme aims to raise pupils' awareness of how design and technology shape the way they live, work and interact with the world. It encourages pupils to become resourceful, enterprising individuals who have the skills to contribute to and improve the world around them. The scheme supports teachers in developing their subject knowledge and skills, enabling the delivery of engaging, well-informed lessons with confidence. The curriculum is designed to be both accessible and ambitious, ensuring all learners' full participation and potential achievement.

New Research and Developments

The standard, mixed-age and condensed D&T schemes are continually evaluated and refined through regular curriculum reviews, internal audits and feedback from subscribing schools. Updates are informed by the latest subject-specific research, changes to National curriculum guidance and developments in pedagogy. This ensures the curriculum remains current, effective and relevant.

Broad and Balanced Curriculum

The National curriculum for Design and technology sets out the importance of creativity through different contexts in the Technical knowledge strand, referring to structures, mechanisms and electrical systems. Cooking and nutrition are given their own heading.

To support this, Kapow Primary's D&T curriculum is organised into the following key areas:

Mechanisms/Mechanical systems.

Textiles.

Cooking and nutrition.

Electrical systems.

These areas are revisited across year groups to give pupils a broad and balanced experience of designing and making products using a range of materials, tools and technologies.

Progression

The D&T: Progression of skills and knowledge document provides an overview of the skills and knowledge covered in each phase and strand. It explains how D&T skills and knowledge are developed to support pupils in reaching key stage outcomes as outlined in the National curriculum.

New learning is weighted toward the start of each key stage, allowing ample opportunity for it to be revisited and applied in later years. As a result, knowledge accumulation may appear heavier in some year groups than others.

Spiral Curriculum

Kapow Primary's D&T scheme of work has been designed as a spiral curriculum with the following key principles in mind:

Cyclical – pupils return to the key knowledge and skills again and again during their time in primary school.

Increasing depth – each time a skill is revisited, it is covered with greater complexity.

Prior knowledge – pupils build upon previous foundations rather than starting again.

Progressing Through Practice

Building on the principles of a spiral curriculum, the D&T scheme supports pupils in developing from early understanding of materials and hands-on exploration to refining ideas, evaluating existing products and solving real-world problems.

Personal Development in DT

SMSC

The scheme supports Spiritual, Moral, Social and Cultural (SMSC) development by encouraging pupils to:

Explore different perspectives.

Reflect on ethical issues.

Collaborate with others.

Appreciate cultural diversity through subject-specific content.

British values

Lessons promote British values (democracy, the rule of law, individual liberty, mutual respect and tolerance) by incorporating activities that encourage debate, respect for differing opinions and an understanding of societal structures.

Cultural capital

Kapow Primary's D&T curriculum broadens pupils' experiences by introducing them to key designers, inventors, historical and cultural contexts, and a variety of design traditions. It ensures pupils gain the knowledge and skills needed to engage meaningfully with the designed world and contribute to society. This includes knowledge of the design cycle, a transferable skill applicable to many different disciplines beyond D&T.

Transitions from EYFS to KS1

Continuity of learning

Kapow Primary's D&T scheme aligns with the statutory EYFS (Reception) guidance.

Key themes and skills introduced in EYFS (Reception) are revisited and developed further in KS1, ensuring continuity and progression.

This transition is aided by the continuity of learning created by the curriculum strands, which run from EYFS to Year 6. Subject leaders can pinpoint how knowledge develops in EYFS (Reception) and how this creates the foundation for their learning in KS1.

Building on early experiences

Lessons build on curiosity, exploration and discussion, which are central to EYFS learning. As pupils move into Year 1, more structured activities are gradually introduced.

In KS1, oracy, questioning and storytelling help pupils transition from informal to more formal subject-based learning.

Development of key skills

The D&T scheme supports the progressive development of skills, such as observation, reasoning and problem-solving, which are introduced in EYFS and strengthened in KS1.

Adaptive teaching strategies ensure all learners are supported as they transition to more formal learning approaches.

Cross-curricular links

The D&T scheme aligns with EYFS Early Learning Goals, making links with communication and language, understanding the world and expressive arts to create a smooth transition.

It promotes independence and confidence, supporting pupils as they adapt to the expectations of KS1 learning.

Inclusion and diversity

Kapow Primary's D&T curriculum is designed to be inclusive and representative, ensuring all pupils see themselves reflected in the products, users and contexts they explore.

The scheme features a diverse range of design traditions, food cultures, materials and technologies from around the world and encourages pupils to design with empathy and respect to a variety of users.

This approach helps challenge stereotypes, broaden perspectives and celebrate design as a practical, creative and culturally rich human endeavour.

Curriculum Implementation

At Holy Name each year group starts with Mechanisms in the followed by Textiles/Electrical in the Spring term and Cooking and Nutrition in the Sumer term. In D&T, this centres on the iterative design process: designing, making, evaluating, and applying technical knowledge. The curriculum is carefully sequenced, so knowledge and skills build cumulatively across year groups. Prior learning is revisited and applied in increasingly complex contexts.

CPD

Kapow Primary supports teachers in delivering the D&T curriculum effectively through clear and informative CPD videos. These videos are designed to help teachers feel confident in their role by providing guidance on key concepts, teaching strategies and best practices.

Unit Structure

The D&T unit contains all the necessary lesson links, resources and information relevant to the unit being taught.

Information on the unit corresponds to all the relevant D&T key documents, including the Progression of skills and knowledge and Vocabulary progression.

The unit also links to useful resources and key documents, features units that build on knowledge or activate prior learning and outlines cross-curricular links.

The design cycle

It is important that pupils begin to 'think like designers and engineers' by considering how designers identify problems, generate ideas and create solutions to meet real-world needs.

Accordingly, Kapow Primary's D&T scheme uses the design cycle to support planning and making. This encourages pupils to ask design questions and learn how designers and engineers develop and refine their ideas through research, testing and evaluation.

Lesson Structure

Recap and recall

Each lesson begins with a short activity revisiting prior learning. This helps reinforce key knowledge, activate long-term memory and create connections between past and new learning.

Recap and recall activities are varied to keep the start of the lesson engaging and fun while still supporting active recall.

Attention grabber

A short, engaging activity designed to hook pupils into the new learning in the lesson.

This could be a thought-provoking question, a quick investigation or an interactive discussion to spark curiosity and enthusiasm for the topic.

Main event

The core part of the lesson, where pupils engage in activities that develop their understanding of the learning objective.

This includes a mixture of teacher modelling, guided practice and independent or collaborative tasks tailored to support all learners.

Wrapping up

A final reflective activity that consolidates learning.

This could involve reviewing the success criteria, discussing key learning or applying knowledge in a different context to assess understanding and encourage deeper thinking.

SEND

Kapow Primary's D&T scheme is designed to be fully adaptable for SEND pupils. Every lesson includes an adaptive teaching section, providing clear guidance on how activities can be modified to meet the needs of all learners.

Children learn in a variety of ways. As such, Kapow Primary's D&T lessons include a range of strategies to support and challenge every pupil, including:

Scaffolding – activities are designed with flexibility in mind, allowing for additional support or challenge where needed.

Multi-sensory approaches – lessons incorporate different elements to engage all learners.

Clear instructions and structured tasks – ensuring clarity and reducing cognitive load for pupils who benefit from additional support.

Opportunities for collaborative and independent learning – allowing pupils to work at their own pace while building confidence and independence.

By embedding adaptive teaching throughout, the scheme ensures that all pupils, regardless of their starting points, can access and succeed in their learning.

In addition, the step-by-step curriculum design supports pupils with SEND, avoiding sudden jumps in complexity at transition points and allowing for steady, manageable progression.

Knowledge retention

Knowledge organisers

Kapow Primary's *Knowledge organisers* are a structured document designed to support pupils' learning by clearly outlining the key knowledge, vocabulary and concepts covered in a unit of work.

Knowledge organisers serve as a reference tool for both teachers and pupils, helping to consolidate learning and support knowledge retention.

Essential knowledge at a glance – summarises the most important facts, concepts and skills that pupils need to learn for a particular unit.

Key vocabulary – provides a list of subject-specific terms with definitions to develop pupils' language and understanding.

Clear and visual layout – organised in a way that makes information easy to digest and revisit, often using diagrams, timelines or key images.

Support for retrieval practice – helps pupils engage in self-assessment, recall activities and revision, reinforcing long-term memory.

Teacher and pupil-friendly – acts as a quick reference for teachers when planning lessons and an accessible learning aid for pupils to develop independence in their studies.

Assessment During the Lesson

Formative assessment is embedded throughout Kapow Primary's D&T lessons to ensure that teachers can gauge pupils' understanding in real time and adapt their teaching accordingly.

Questioning – Lesson plans include targeted and open-ended questions to check understanding, promote critical thinking and address misconceptions.

Observation – Teachers are supported to observe pupils during tasks, noting how they approach activities, collaborate and apply design skills.

Discussion and peer interaction – Pair and group discussions are built into lessons, providing opportunities for pupils to articulate their thinking and for teachers to assess understanding through dialogue.

Lesson pauses – Plans include strategic pause points for checking comprehension, summarising learning and addressing any common errors before progressing.

Retrieval practice – Recap activities, such as short recall tasks and oral explanations, are embedded to reinforce prior knowledge and assess retention.

Use of success criteria – Success criteria are shared within lessons, allowing pupils to self-assess or peer-assess their work and reflect on their progress.

Short reflections in the Wrapping up – Lessons end with brief written or verbal reflections, enabling pupils to consolidate learning and teachers to gauge understanding.

Adapting Kapow Primary's D&T Scheme of Work

Mixed age

For schools with mixed-age classes, Kapow Primary offers structured long-term plans that ensure a coherent and progressive curriculum. These plans avoid content repetition while ensuring all pupils cover the full curriculum.

Condensed

Kapow Primary's Design and technology curriculum is designed to be taught half-termly.

For schools with limited curriculum time, Kapow Primary also offers a condensed scheme that maintains full National curriculum coverage while streamlining content to focus on the most essential knowledge and skills.

Cross-Curricular Learning

Kapow Primary's D&T scheme supports cross-curricular learning by making clear connections between subjects, helping pupils develop a broader understanding of key concepts and skills.

Cross-curricular links are explicitly highlighted: each unit includes identified cross-curricular connections, detailed in the unit hub and long-term plans.

These allow teachers to integrate learning across different subjects.

In addition, each lesson has a 'Cross-curricular links' section that shows the links to the National curriculum in other relevant subjects.

Curriculum Impact

Assessment

Formative

Kapow Primary's D&T lessons include ongoing assessment opportunities, such as questioning, retrieval practice and interactive activities.

These enable teachers to assess understanding in real time and adapt their teaching accordingly.

Summative

Each unit provides an Assessment quiz and Knowledge catcher, which allow teachers to measure pupils' understanding at key points.

These tools help gauge how well pupils have retained key knowledge and skills over time.

Evidencing Progress

Written Outcomes

Pupils demonstrate their learning and provide tangible evidence of progress through a variety of activities, including structured written work, annotated diagrams and creative responses.

Pupil voice

Lessons encourage discussion, reflection and verbal explanations. This allows teachers to capture pupils' understanding through questioning, class discussions and recorded responses, supporting a broader view of progress beyond written work.

Assessment spreadsheet

The Assessment spreadsheet helps track pupils' D&T attainment over time.

This tool allows teachers to record progress against learning objectives and assessment statements, making it easier to monitor development and identify areas for support.

Whole School Development

Teacher Confidence

The Kapow Primary D&T scheme is designed to boost teacher confidence and support whole-school improvement by providing high-quality, accessible resources that empower teachers to deliver engaging and effective lessons.

The scheme supports teacher confidence using:

Clear lesson plans and subject knowledge support – step-by-step guidance ensures teachers feel well-prepared, even if they are not subject specialists.

CPD videos – short, expert-led training videos help subject leaders develop their expertise and support their colleagues.

Adaptive teaching strategies – practical suggestions for differentiation ensure that teachers can confidently meet the needs of all learners.

Design Technology programmes of study: Key Stages 1 and 2

Purpose of study

Design and technology is an inspiring, rigorous and practical subject. Using creativity and imagination, pupils design and make 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 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.

Aims

The national curriculum for design and technology aims to ensure that all pupils:

- 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.

Attainment targets

By the end of each key stage, pupils are expected to know, apply and understand the matters, skills and processes specified in the relevant programme of study.

Subject Content – Nursery

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. Join different materials and explore different textures.

Subject Content - 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.

Subject content – Key stage 1

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].

When designing and making, pupils 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.

Subject content – Key stage 2

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, school, leisure, culture, enterprise, industry and the wider environment].

When designing and making, pupils 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 and nutrition

As part of their work with food, pupils should be taught how to cook and apply the principles of nutrition and healthy eating. Instilling a love of cooking in pupils will also open a door to one of the great expressions of human creativity. Learning how to cook is a crucial life skill that enables pupils to feed themselves and others affordably and well, now and in later life.

Pupils should be taught to:

Key stage 1

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

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.