# Design and Technology Policy 2025-2026

# Design and Technology Subject Leader: Miss N Reason

**“Manufacturing is more than just putting parts together. It's coming up with ideas, testing principles and perfecting the engineering, as well as final assembly.”** James Dyson

## Curriculum Intent Statement

At Owston Park Primary Academy, we provide a bespoke, knowledge-rich curriculum with the purpose of increasing the quantity and quality of what our children know, enabling them to develop a wealth of knowledge and cultural capital to draw upon and build upon throughout their lives. We believe that children need to see how what they are learning is connected to a body of greater knowledge and that knowledge across those bodies is interchangeable. Children need to understand about concepts, and how these concepts inter-relate. Curriculum literacy requires understanding of the meaning, use and justification of curriculum concepts through respecting individual subject traditions. We have created a curriculum based on distributed practise and regular testing which provides coherence and helps knowledge to move into long-term memory, to become declarative and procedural. Through its structure, defined by details not by titles, children are supported to navigate their way through a meaningful, inter-related curriculum rather than one which is random, based on tenuous skills progressions. Our curriculum is about addressing social injustice so that our children leave us with a love of locality, happiness, dignity and strong emotional literacy. They will leave us with the keys to unlock the powers of the powerful. The national curriculum ‘provides children with an introduction to essential knowledge that they need to be educated citizens.’ It introduces pupils to the best that has been thought, said and done and helps engender and appreciation of human creativity and achievement. At Owston Park we are keen also to emphasise to children the way in which ‘the best that has been thought and said and done’ impacts upon their own life, today, living in North Doncaster. We have a clear idea of what knowledge, words and concepts we want children to learn in each subject. Crucially we also know where the ‘horizontal’ and ‘vertical’ links are. Vertical links are those links WITHIN a subject year to year (the concept of ‘empire’ for example, or ‘warfare’ or ‘colonisation’). Horizontal links are those links ACROSS subjects within a year group (such as linking the study of Romans with a study of Christianity, the concept of settlements, the design of villages, the concept of leadership, Roman artwork etc). The impact of our curriculum will be seen not only in measurable attainment and progress, but in that Owston Park Primary Academy’s students are confident, enthusiastic and curious young people, who are equipped with the knowledge and skills they need to live a purposeful and fulfilling life.

# Curriculum Themes

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| **Knowledge Rich**<br>  <br>The basis of our curriculum is powerful knowledge – by teaching 'the best that has been thought, said and done', we open up our children's minds, ignite their curiosity and engender an appreciation of human creativity and achievement.<br><br>Key knowledge for each subject has been carefully considered by subject leaders alongside class teachers, and is codified in our bespoke Knowledge Organisers. | **Evidence based**<br>  <br>Our cumulative approach is rooted in neuroscience and educational research. We use regular retrieval practise to help to commit key knowledge to children's long term memory. 'Memory is the residue of thought' – the more we think about something, the more likely we are to remember it.<br><br>Our assessment reflects this, measuring the knowledge which children retain, so we can be confident that they've truly learnt it. | **Cumulative and coherently sequenced**<br>  <br>Children learn explicitly planned interconnected webs of carefully sequenced and discretely taught conceptual knowledge, which are revisited in subsequent contexts enabling children to build up networks of connected information as schema.<br><br>Discretely teaching conceptual knowledge means it becomes easier for children to add new information to existing schema, as new knowledge 'sticks' to prior knowledge. | **Depth for all**<br>  <br>All children receive quality first teaching. Content is not differentiated, so no knowledge is out of bounds for any child, because every student has an entitlement to access powerful knowledge which opens the door to a world beyond our own individual experiences.<br><br>New information is introduced in small steps, with lots of modelling and scaffolding, enabling children to build confidence. The culture at Owston Park celebrates mistakes and uses them as a teaching point. |
| **Vocabulary Rich**<br>  <br>Vocabulary is explicitly planned for and taught within each unit.<br>Vocabulary is the key to unlocking and understanding the knowledge.<br><br>Discussion and structured learning conversations are a key feature of wider curriculum lessons. | **Enrichment**<br>  <br><br>Our topics provide the opportunity to bridge our children's cultural capital deficit through enrichment – educational visits, visitors into school and topic launches.<br><br>The substance of the knowledge taught inspires awe and wonder. | **Community and Identity**<br>  <br>Our curriculum is built on meaningful local links to encourage our children to celebrate our rich heritage.<br><br>Parents are invited in at least once per term for topic landings to celebrate children's learning. | **Core skills developed**<br>  <br>Topics are underpinned by a key text which draws upon and builds schema to help contextualise the key knowledge which children have learnt.<br><br>Opportunities for extended writing are built into the curriculum. There are high expectations of core skills across the curriculum. |

# Design and Technology Intent, Implementation and Impact

| Intent | Implementation | Impact |
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| To develop the creative, technical and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world. | • Topic launches and landings hook children in to their learning, ensuring that DT is engaging and the children understand the relevance of what they're learning.<br>• A wide variety of enriching teaching approaches and resources are encouraged, e.g. through a combination of teacher led and exploration lessons where children get to test and review products. • The classroom environment is inviting and displays information relevant to children's learning, e.g. posters. | Children will enjoy learning about DT and be excited to learn.<br>Children will achieve age related expectations in DT.<br>Children will retain knowledge about relevant information.<br>Children will be enthused to find out more about DT, which could include independently under taking wider reading and research around a topic. |
| To 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 | • Enquiry based questions enable children to learn knowledge which they then apply, rather than just rote learning facts.<br>• Children learn to critique existing products through research, debating validity and reliability, and reaching their own conclusions, presenting their point of view succinctly, and by so doing, develop the skills of enquiry, analysis, interpretation and problem-solving.<br>• Children will be given the appropriate resources, equipment and time to develop a range of skills needed in order to produce a prototype.<br>• Vocabulary is explicitly taught in DT to enable children to develop an understanding of key concepts, which are covered in multiple year groups to ensure prior knowledge is being built on and is being developed, allowing for more complex skills to be used in the making process.<br>• Knowledge Organisers support learning through reviewing of skills and vocabulary. | Children will have a good understanding of the world beyond their local environment.<br><br>Children learn to value their own, and other people's products, and by considering how people lived in the past, they will develop a sense of how things have developed.<br><br>Work is of good quality and demonstrates pupils are acquiring knowledge, skills and vocabulary in an appropriate sequence.<br><br>Children can show their critical evaluation skills by answering essay style questions at an age appropriate level (both orally and written). |

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| To critique, evaluate and test their ideas and products and the work of others | • DT lessons are designed so children have ample time to evaluate and test existing products prior to designing their own. Our bespoke curriculum has been carefully designed to provide opportunities for children to revisit their design and build their prototype. Then once again they are encouraged to critique their own and their peers products.<br>• Where there are meaningful links to be drawn, e.g. how a product has been developed and why, cross-curricular learning enables children to deepen their understanding of how products have changed over time. | Children will be able to draw on prior learning to draw comparisons between different products.<br><br>Children will have a rich vocabulary that they can apply to the evaluation process.<br><br>Children will be able to relate to different time periods and how and why products have been developed throughout history. |
| To understand and apply the principles of nutrition and learn how to cook. | • Where appropriate DT lessons have a clear cross curricular link to history and foods from the past or Geography and foods from other countries.<br>• DT cooking lessons are taught explicitly detailing the principles of a healthy and balanced diet. | Children will be able to draw on prior experiences and lessons to apply the principles of nutrition.<br><br>Children will have a good understanding of the principles of health and hygiene whilst cooking and preparing food. |
| Develop Core skills. | • DT lessons provide opportunities for children to develop core skills - children are encouraged to use maths to draw detailed plans, literacy to read a variety of product reviews, to write an evaluation at each stage of the process.<br>• Children are encouraged to feedback, orally, on their own and others products giving reviews and evaluating them.<br>• Key technical vocabulary is taught explicitly. | Children's DT work reflects the same high expectations of core subject work.<br><br>Children are proud of their work – this is reflected in their presentation and the quality of their final showcase. |

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| To enable all children to receive the same quality of DT education, ensuring that children are supported where support is necessary and that all children are challenged and stretched within their learning. | In DT, this looks like:<br>• Common tasks which are open-ended and can have a variety of responses; • Setting tasks of increasing difficulty. Not all children complete all tasks, and additional resources are available to scaffold children's learning.<br>• Using classroom assistants to support children individually or in groups.<br>• Children may be taught in small groups for intervention, and vocabulary or technical knowledge and skills may be pre-taught to specific children for a keep up, not catch up approach.<br>• Collaborative, group and paired work, which necessitates discussion is used, regularly, wherever possible. Mixed ability groupings, enabling children to learn from their peers and engage in high quality conversation.<br>• The DT curriculum includes a range of activities that are engaging and interesting for all. | A large proportion of children reach age related expectations in DT.<br>SEN children and children working towards year group expectations feel supported and enjoy DT lessons.<br><br>Enrichment opportunities are subsidised for pupil premium and disadvantaged children. |

## THE FOUNDATION STAGE

Design and Technology is a significant part of the new EYFS framework, particularly now 'Creating with Materials' is explicitly taught as an element of Expressive Arts and Design. Children learn to safely use and explore a range of materials and tools. They are encouraged to create their own models explaining the process they have used to make them. Within continuous provision, children begin to explore a range of materials including feathers, lolly sticks, recycled materials and lots more and develop a range of ways to fix the materials together, evaluating which is the best for their model. The children have access to a creative area daily where they can access materials to develop their designing and making skills and they are encouraged to return and make improvements once they have evaluated their creations.

## TIME ALLOCATION

In order to ensure our curriculum is broad and balanced, we aim to teach every subject each term. We understand that time constraints may mean that lessons do not achieve an equal time allocation as this varies between year groups.

## PLANNING AND ASSESSMENT

The planning process at Owston Park Primary begins with the national curriculum and our curriculum drivers, to ensure that the topics we teach include the powerful knowledge – the best that has been thought, said and done – and are enhanced by our locality and our own unique heritage.

Our assessment system is based on a final 'showcase' piece from all of their learning that the children produce at the end of the term.

Formative assessment is an integral and continuous part of the teaching and learning process at Owston Park Primary and much of it is done informally as part of each teacher's day to day work. Teachers integrate the use of formative assessment strategies such as: effective questioning, clear learning objectives, the use of success criteria, effective feedback and response in their teaching and marking and observing children participating in activities. Planning may be annotated and those who need more support can be identified on plans through use of A.F.L. Findings from these types of assessment are used to inform future planning.

## MARKING & FEEDBACK -

Marking should always be focussed on the Learning Objective.

- Children are given opportunities to self-assess their learning against the Learning Challenge where possible, using the metacognition colours familiar to them.
- Feedback should perform 3 purposes; ensure children understand what they have done well; ensure children are clear about how to improve; ensure children make visible signs of improvement.
- Marking should always 'close the gap' and give an improvement suggestion; of which there are 4 types ○ a challenge prompt ○ a reminder prompt; ○ a scaffold prompt e.g. a questions or unfinished questions, steps to complete tasks ○ an example prompt
- Children to have opportunities to self and peer assess their work, when appropriate. This should be recorded.
- When the arrow icon is shown it indicates what the next step for the child will be or action to complete, either as a consolidation activity or an opportunity to extend learning.
- Wherever possible, the checking or marking of work will be done with the child who will be given the opportunity to ask questions and self-correct.

## INCLUSION

Our curriculum is planned so that all pupils can take part, enjoy learning and achieve their best, whatever their starting points or needs. We use adaptive teaching to support children with different abilities, interests and needs, making sure that everyone feels included and able to succeed. We celebrate diversity and encourage pupils to respect and learn from each other's differences. By removing barriers and providing the right support, we ensure every child has the opportunity to thrive and develop a love of learning.

## DIVERSITY

At Owston Park, we are committed to ensuring that our design and technology curriculum reflects the diversity of wider society and the world. Children learn about a broad range of designers, inventors, engineers, and makers, allowing them to recognise that innovation and problem-solving are shaped by many different voices and perspectives. We actively weave diversity through our DT teaching by:

- Exploring the lives and contributions of designers, inventors, and engineers from different ethnic, cultural, and social backgrounds.
- Studying products, materials, and technologies from around the globe, highlighting the interconnectedness of design and innovation.

- Promoting an understanding of how diverse communities have influenced both local and national developments in technology.
- Encouraging pupils to evaluate products critically, considering issues of representation, accessibility, sustainability, and differing viewpoints.
- Providing opportunities to challenge stereotypes and celebrate the achievements of underrepresented groups in design and engineering.

By embedding diversity into our curriculum, we aim to develop pupils' appreciation of global innovation and creativity, preparing children to become thoughtful, responsible, and forward-thinking designers in today's multicultural and technological world.

## MONITORING AND SUBJECT LEADERSHIP RESPONSIBILITIES

The subject leader's role is to empower colleagues to teach wider curriculum lessons to a high standard and support wider curriculum subject leaders in the following ways. Their role includes leading, managing, monitoring, motivating, training and guiding colleagues.

- Knowing the curriculum requirements of their subject throughout school, and using their knowledge of their subject to create road maps of the learning journey and assist teachers in developing knowledge organisers, ensuring that the content maintains fidelity with the national curriculum.
- Subject leaders monitor medium term plans and work alongside class teachers to ensure that pupils receive full coverage of the National Curriculum.
- Showcasing and raising the profile of their subject throughout school, e.g. through thematic days, displays etc.
- Monitoring their subject through book scrutinies, lesson observations, data analysis and pupil interviews to ensure comprehensive monitoring of wider curriculum subjects and to inform them of the quality of the wider curriculum provision across the school.
- Keeping up to date on current issues; disseminating relevant information and providing training for staff members (either directly or through other professionals).
- Identifying and acting on subject specific development needs of staff members with support from SLT - books are scrutinised by SLT throughout the term with a compliance check completed half termly and feedback is provided.
- Monitoring expectations, provision and attainment across the school and providing feedback to develop practice further in order to raise standards.
- Providing necessary equipment and maintaining it to a high standard, managing the subject budget effectively.

# WIDER CURRICULUM NON-NEGOTIABLES

- Topic launches to be an exciting, awe-inspiring event to engage and excite children. The classroom environment should reflect the topic, and classroom entrances should advertise the topic being taught. Key vocabulary should be displayed within the classroom, as should resources which support key knowledge e.g. timelines, diagrams.
- Learning objectives and titles to be present in children's books. The title should contain a context. The learning challenge should be highlighted in the corresponding colour according to the metacognitive level achieved.
- Vocabulary should be explicitly taught within the lesson.
- Presentation expectations in wider curriculum lessons to mirror expectations in core subjects.