Design and Technology

Intent

At Mapperley Plains Primary School we recognise that within Design and Technology we want our children to use 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 offer a Design and Technology curriculum which equips our children with key skills, knowledge and vocabulary motivated by our curriculum drivers:

- **Initiative -** We encourage our children to develop their independence, empowering them to act and be responsible for their own learning about which they can clearly state and explain their opinions.
- **Inclusivity -** We pride ourselves on being an inclusive school that cares for every individual child. In doing so, we promote and deliver a range of strategies to ensure that we value everyone. We want the children to recognise and celebrate diversity existing in our world, instilling pride in individuality.
- **Resilience -** We relentlessly focus on developing children who are resilient, who can adapt to and recover from tough or challenging situations. We encourage the children to try their best in all that they do.
- **Possibilities -** We encourage the children to build aspirations, identify talents and know possibilities for their future lives.

We ensure the curriculum is **Relevant and Memorable.** The unique needs of our children, along with our culture, climate and events shape our curriculum. When planning lessons, we consider the following: 'Because our children...we…'

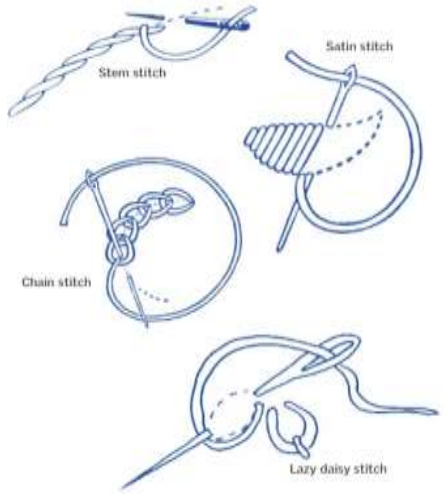
Our aim is to ensure that within Design and Technology the children leaving Mapperley Plains will:

- Allow 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.
- Expand design and technology vocabulary
- Encourage children to 'learn to think' creatively to solve practical problems both as individuals and through teamwork.
- Provide a broad, balanced and differentiated curriculum;
- Ensure the progressive development of design and technology concepts, knowledge and skills.

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Implementation

As a school, we follow our Progression Map for Design and Technology, devised from the Early Years Framework and National Curriculum Guidelines. We also use the Design and Technology Association 'Projects on a Page' from Years 1-6 to help ensure progression. This ensures all aspects, knowledge and skills of Design and Technology are taught across all year groups.



Types of Stitches from Year 5/6 Projects on a Page- Combining different fabric shapes

We ensure our children leave us not only with the skills needed for the next part of their journey, but with a rich body of knowledge both **substantive** (the factual knowledge for each subject) and **disciplinary** knowledge (the action taken within a subject to gain knowledge e.g. to know how to make part of a model move (slider, wheels) .

We have adopted a thematic approach to our curriculum. The particular 'theme' chosen is always relevant to the children and is designed to be exciting and engaging for that particular cohort. To prevent the creation of tenuous links, discrete subjects are taught where necessary.

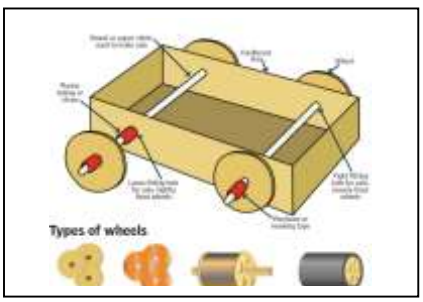
We start our themes with an exciting big question/ theme title to develop curiosity and help children to lead their own learning e.g. 'Why is Brazil in the news again?' or 'Why is the earth so awesome?'

To engage, immerse and 'hook' the children into a new topic, a special 'entry point' is usually planned, followed by an 'exit point, often involving parents which marks the end of the topic.



Where appropriate, we use artefacts and memorable experiences to enhance learning. This might include visitors, workshops and visits to excite and intrigue our children to find out more about events and people from the past.

To add to this experience, all classrooms have immersive environments and displays that provide a hook into learning and continue to engage the children.

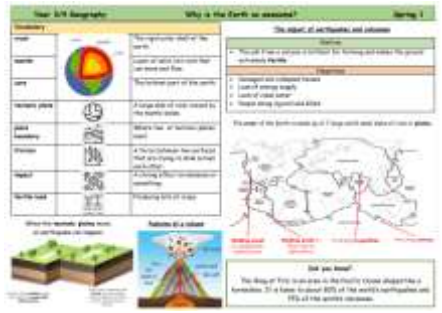


Different ways to fix wheels from Year 1/2 Projects on a Page- Wheels and Axles

Inspiring learners. Shaping futures.

Design and Technology

Currently being devised and developed for each subject overtime, as part of each topic, a Knowledge Organiser which includes essential sticky knowledge, is shared with both children and families. The Knowledge Organiser is used frequently in lessons to support with the transference of knowledge from the working memory into the long term memory. Key knowledge is re-visited as part of regular retrieval opportunities throughout the theme and across the year.



Currently live in Geography

Developing the use of the correct vocabulary in Design and Technology is crucial and so key vocab will be identified and listed for each unit of learning. This can be used to assess knowledge and enables pupils to express and communicate their understanding and knowledge clearly and effectively.

Ongoing formative assessment is used to ensure all lessons are relevant and supports with planning next steps. Children are given lots of opportunities to visit prior learning through low stakes mini-quizzes and other revisit tasks which allow teachers to measure their level of understanding. End of year assessments state whether children are working towards, expected or exceeding age-related expectations.

Each Subject Leader is given dedicated non-contact time to use the triangulation model of monitoring to quality assure teaching and learning. Subject Leaders monitor the subject across the school through a range of monitoring activities which might include: planning analysis, learning walks, book scrutiny, discussions with pupils, resource audits etc. Subject feedback is shared with teachers and school leaders.



Impact

Through the high quality teaching of Design and Technology, we will see:

- How to follow the design, make, evaluate process to meet a goal.
- Solving real life practical problems using innovation and creativity, both as an individual and as part of a group.
- Choosing from and using a growing range of tools and materials.
- Using and understanding richer technical vocabulary associated with DT.
- Preparing a range of healthy, varied and nutritious dishes.
- Children who are adding 'Sticky Knowledge' to their long-term memory and who are able to make links to prior learning and connections to other areas of the curriculum.
- Talk confidently about the skills and knowledge they have acquired. Work will display the range of topics covered and clear cross-curricular links.
- Children who will complete research independently to further their own enjoyment about the subject or topic.

- A school environment that is Design and Technology rich through use of the outdoor environment, displays, resources, vocabulary etc.
- Assessments and monitoring that show high standards in Design and Technology.

Design and Technology and SEND

For children with SEND, adaptations may be made in Design and Technology which are based on the child's individual needs. We ensure that children with SEND are appropriately challenged in Design and Technology by:

- Using teaching methods which match the needs of children.
- Chunking content into smaller steps and ensuring the curriculum is designed to reduce excessive or unhelpful demands on working memory.
- Ensuring adaptations are based on individual needs and aim to retain ambition for children with SEND.
- Understanding that, for children with more complex SEND needs, it may be appropriate to have different curriculum expectations.