

Hatch Warren Junior School – DT Curriculum

Our vision for DT

At Hatch Warren Juniors, we aim to teach design and technology using creative and practical activities which create enthusiasm and enjoyment for the children. Pupils are taught to use research to help them make innovative and appealing products inspired by real-life knowledge and examples. They are also taught to make and evaluate their designs in a way that fosters creativity, resilience, collaboration and independent learning. Finally, we believe that DT offers our pupils the chance to be inspired, believe in their abilities, persevere and achieve whilst being creative and having fun in a safe environment.

Intent:

Learning in DT is underpinned by our school vision and the aims of the National Curriculum. Teachers planning is also undertaken following the structure provided by The Design and Technology Association.

We aim to develop a mastery of the following skills:

- Designing, making and evaluating products
- Developing and planning solutions
- Communicating ideas within a group
- Explaining their ideas and reasonings
- Working with tools to make products
- Evaluate processes and products
- Appropriate and safe use of technical equipment, tools and resources

While following these principles we will develop their knowledge of:

- Textiles and the properties and purpose of materials
- Structures and ways to combine materials to develop / enhance their properties
- Mechanical systems, including pulleys and gears
- Computer control and electrical circuits
- Use of computer aided design to design products
- Healthy diet, sustainability of food, where food comes from and associated cooking techniques to create healthy meals which are mindful of food miles

Develop an understanding of the following;

- **How to conduct research and develop design criteria**
- **Using sketches and diagrams to communicate ideas**
- **How to select appropriate tools to build their products**
- **How to select appropriate materials**
- **Safety issues associated with tools and cooking**

Implementation:

How do we help children commit this knowledge and these skills into their long term memory?

What is our approach to the delivery of DT?

When teaching DT units, we follow the five stages of:

1. Design brief
2. Research
3. Design
4. Make
5. Evaluate

These five stages are shown in the DT cycle (shown below) which is within children's DT books and referred to within planning so that children are aware of what part of the process they are at.

The children are given a design brief at the beginning of the unit which details the end user and the purpose of the product to help them to research and design their own product. Opportunities are then given for research about the product, which may include real-life models or background information about the product. Then, children use a range of design techniques and the research to inform designing their product, whilst considering their knowledge of material properties and functions. During the making stage, children are taught the skills required to make their product and given opportunities to practise these skills before making their final product. Children are encouraged to evaluate during the making stage and adapt their original ideas if required to ensure that the product is made to the highest possible standard. Lastly, children are encouraged to reflect on the process and their final product and to evaluate their skills and the product against the original design brief. They are encouraged to consider what they like about their product and how they would improve it if they made it again.

Throughout the DT cycle, both individual and group opportunities are provided to allow for the development of collaboration and team work skills.

Retrieval practice is applied within planning to help children to implement the knowledge and skills learnt throughout their DT journey at Hatch Warren Juniors.

Every year group also completes a food technology unit associated with healthy eating and / or cooking so children can recognise the importance of healthy eating and where food comes from.

Teachers are encouraged to keep photographic evidence of the resulting products and food. This helps children to complete their own self-assessment of their final product. Children consider the different elements of their final product against the original design brief and their execution of the assessed skills. Teachers then complete their own assessment of the same criteria as the children, which they do on the same self-evaluation sheet so both teachers and pupils are aware of the assessment.

The DT cycle:

Design brief

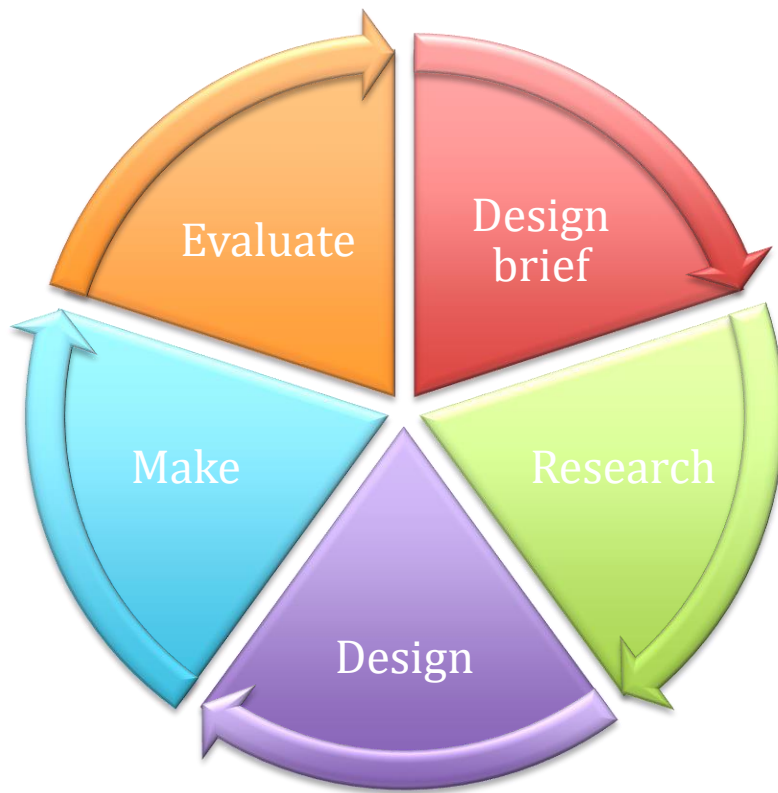
- Provide a meaningful context with which the children will begin to design a product. This could be to design a product for a specific user or to solve a given problem.
- Where possible, make links to other curriculum areas to support cross-curricular learning opportunities.

Research

- Provide opportunities for meaningful research into the products which are already 'on the market'.
- Where possible, i.e. when looking at torches, allow opportunities for children to look at real life torches and disassemble them to consider how they work, or taste food to understand how ingredients can be used.

Design

- Use a range of designing techniques to support children in the development of ideas.
- Consider their knowledge of materials / products whilst designing.
- Encourage them to use the ideas gained through research to support this.
- Develop designs through: drawing, computing (CAD), and technical drawing.



Make

- Children will be specifically taught the new technical knowledge required for their product.
- Children will be given opportunities to make their final product. This may be individually or as part of a group, depending on the task.
- Children will be encouraged to adapt their original ideas where required.
- Products will be made to the highest standard possible, ensuring that the end product is the best it can be. Therefore, children will be reminded that all aspects of the making process should be neat / tidy / clean / etc. to create the final product.

Evaluate

- Children will be encouraged to consider their final product and assess it against their original design brief.
- They will challenge their original ideas and discuss changes made during the design and making processes.
- They will consider how their final product could be improved if made again.
- They will be encouraged to think carefully about the positive aspects of their designs and products and the skills they have learned in making them.

Version for children's books:

The DT cycle:

