Intent, Implementation and Impact of Design and Technology at Hatch Ride

At Hatch Ride, we follow the Kapow Curriculum which is a creative and thematic approach to learning, mapped to the Primary National Curriculum to ensure comprehensive coverage of national expectations. Our teaching of design technology provides a rich menu of exciting and motivating learning activities to engage and inspire learning and build progress in essential skills.

INTENT

- **Skill Development and Progression**: The curriculum ensures that students develop essential skills over time, from understanding simple mechanisms and structures to applying sophisticated design thinking and technical knowledge.
- **Encouraging Creativity and Innovation**: Children are encouraged to explore, experiment, and use their imagination to design and create functional products. The aim is to foster curiosity and innovation.
- **Real-world Application**: Children engage in designing and making projects that solve real-life problems, enabling them to apply their learning in practical contexts.
- **Building Critical Thinking and Problem-Solving Skills**: The curriculum encourages children to analyse needs, plan, test, evaluate, and improve their designs.
- **Inclusivity and Accessibility**: The scheme is carefully structured to cater to a wide range of abilities. All children can engage with the curriculum at their own level, with differentiated activities and support.
- **Cross-curricular Integration**: D&T projects link to other areas of the curriculum, such as science (materials, forces), mathematics (measurement, geometry), and history (designers, inventions), making learning more meaningful and interconnected.

EYFS

In Design Technology, the aim is to introduce children to the world of making and designing. We want children to experience the joy of turning ideas into reality. They will learn how to use tools and materials to create simple objects and structures. The focus will be on developing their problem-solving skills, creativity, and an understanding of how things are built. We want children to feel empowered as they design, make, and evaluate their own projects.

IMPLEMENTATION

Curriculum

The main areas for our DT curriculum are:

- Design
- Make
- Evaluate
- Technical Knowledge
- Cooking and Nutrition

Each year, children have 5 or 6 units of work where they respond to design briefs and scenarios that develop their skills in six key areas:

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

Lessons incorporate a range of teaching strategies from independent tasks, paired and group work including practical hands-on, computer-based and inventive tasks.

EYFS

All EYFS learning is linked to the interests of the children – below are examples of Design and technology in action within continuous provision and across the year:

- Structures – Junk modelling/dough/outdoor/loose parts – use and explore a range of materials, tools and techniques. Scissor skills, joining and problem solving
- Cooking and nutrition – making soup, stir-fry, Christmas pudding – chopping and preparing safely. Where food comes from and tasting
- Textiles – threading and weaving to create using different materials
- Structures – properties of materials through water play

Assessment and Monitoring

Teachers assess students' progress in D&T not only by evaluating the final product but also through observing their design process, problem-solving skills, and ability to adapt and refine their ideas. Formative assessments help identify when a child needs additional support or when they are ready to move on to more challenging tasks.

Differentiation, Support and Challenge

- Emphasis on Practical Learning: D&T is inherently hands-on, allowing students to learn through doing. This tactile approach is particularly beneficial for children who may struggle with more abstract forms of learning, as they can see and feel the results of their decisions.

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- The units studied make use of various materials and resources, which can be adapted to meet the specific needs of the learners. For example, children who need additional support may use templates, pre-cut pieces, or digital design tools to help visualise and build their designs.

- Children with more advanced understanding are encouraged to explore more complex challenges, integrate advanced technologies, or tackle environmental or sustainability issues in their designs.

IMPACT

What will this look like at Hatch Ride?

Skill Progression:
In Key Stage 1 (Years 1 and 2), children start with basic design and making skills. They learn how to use simple tools, identify different materials, and construct basic models. Activities focus on understanding design processes through simple problem-solving tasks.
In Years 3 and 4, children develop more advanced skills such as designing with moving parts, using more complex tools (e.g. scissors, glue guns, or simple hand drills), and understanding the properties of materials. They also begin to consider user needs in their design projects, such as creating products that are both functional and aesthetically pleasing.
In Years 5 and 6, children are expected to apply their knowledge of mechanisms, structures, and electrical systems to create working models. They refine their designs based on evaluation, and work more independently to tackle open-ended challenges. They also explore more complex areas like digital technologies, CAD and sustainability in design.

Creativity and Innovation:
By allowing children to design and make their own products, the units of work nurture innovation and creativity. Over time, children develop confidence in experimenting with new ideas and trying out different approaches to problem-solving. By Year 6, children are able to confidently design and build a product from start to finish, applying their creativity to find unique solutions.

Critical Thinking and Problem-Solving:
D&T encourages children to think critically, plan systematically, and evaluate their designs. As they progress, children become increasingly adept at identifying problems, coming up with solutions, testing their designs, and refining their work. These skills translate not only to other areas of learning but also to life skills.

Cultural and Real-World Awareness: Throughout the curriculum, children are introduced to famous designers, engineers, and innovators from different cultures and time periods. This gives them a deeper appreciation for how design has shaped the world around them, from everyday

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household objects to cutting-edge technology.

Collaboration and Communication: Many D&T projects involve group work, which fosters collaboration, communication, and team-building skills. By working together on design briefs, students learn to share ideas, listen to others, and combine their skills to create successful projects.

Pride and Achievement: Designing and making a product that works and serves a purpose brings a sense of pride and accomplishment. Over time, students see the tangible results of their efforts and develop a sense of ownership over their designs. This contributes to greater self-confidence and a sense of success.

EYFS

By the end of Reception and Nursery, children will have:
Mastered basic skills in using tools and materials to create simple objects and structures.
Developed problem-solving skills through practical challenges, like creating a toy that moves or building a strong structure.
Learned how to make designs work by experimenting and adjusting their ideas, showing persistence and resilience.
Gained an understanding of simple mechanics, such as how wheels turn or how to join materials together securely.