Design & Technology Curriculum: Statement of Intent

Purpose of study

In Design and Technology our intent is to enable our students to develop the skills needed for designing and making through a range of inspiring, creative & practical activities. We provide opportunities for students to work in a range of contexts that reflect the real world. This allows students to consider how Design & Technology might be used to create the sort of society which they wish to live in now and in the future.

We understand that upon entry to KS3 our students have encountered a varied experience of Design & Technology. Therefore, the emphasis within our subject in Year 7 is to provide sufficient depth and breadth to enable students to acquire the essential knowledge and skills to progress through KS3.

We value character, competence and community in our curriculum:

- **Character:** Enabling students to develop the personal confidence, resilience, and motivation to be able to solve real and relevant problems in a way that is believable, considerate and meaningful to themselves and others. Equipping students with the tools to maintain a healthy body by learning how to cook meals that contribute to a balanced diet. Enabling students to develop safe working practices that make sure any risks identified are controlled to reduce impact upon themselves and others.
- **Competence**: Developing students' design fluency allowing them to use a variety of technical and transferrable skills that demonstrate their ability to re-engineer and innovate both today and in the future. Student's will develop the ability to explore the work of others and reflect on decisions that have been made to influence their own creative, technical and practical skills.
- **Community:** Inspiring students to become innovators who can make a positive influence on the world around them by using their creativity to shape, influence and improve a variety of situations. Students will learn how their understanding of different cultures, well-being, environmental, social & economic factors can impact upon themselves and others.

Core concepts and principles of progression

Our curriculum allows students to develop their knowledge and understanding of how to intervene in the natural and man-made worlds through:

- **Making without designing**
- **Designing without making**
- **Making and designing**

Our Design & Technology curriculum is planned to ensure that we develop both technological capability (by nurturing technical & transferrable skills) and technological perspective (by developing curiosity & inquiring minds). We encompass the 6 principles of D&T as a foundation for Design & Technology, equipping students with the iterative process essential principles of user, purpose, functionality, design decisions, innovation & authenticity.

User: Students will have opportunities to design for specific people and/or groups. They will learn how to present a clear idea of who they are designing and making products for. They will discover how to consider a user's needs, wants, values, interests and preferences.

Purpose: Students will investigate products to identify their primary and additional functions. They will evaluate the effectiveness of a products ability to perform a task.

Functionality: Students will be given opportunities through tasks such as reverse engineering to learn how products work. They will be able to reflect on a products successes and failures. A range of functioning products will be designed and/ or manufactured that meet the needs of a specific user group.

Design decisions: Students will develop an understanding of an analysis framework that they can use to make their own decisions about existing products and potential solutions. Students will draw links with D&T and the wider curriculum to make design decisions. They will have opportunities independently and as part of a team to evaluate the suitability of a design against its fitness for purpose.

Innovation: Through the use of scenarios and real-world contexts, students will learn how to innovate and create a range of solutions to a problem. To demonstrate their ability to problem solve, students will use a range of communication and practical skills to share designs that are original, functional and appealing.

Authenticity: We provide opportunities for students to work in a range of contexts that reflect the real world. This allows students to consider how Design & Technology might be used to create the sort of society which they wish to live in now and in the future.

We aim to support the growth and development of the Humber region by providing students an understanding of the local food industries and manufacturing & engineering sectors. We aim for students to have opportunities to work with local employers and FE providers to experience skilled trades within these areas throughout their KS4 pathway choice.

We offer two routes through KS4; Hospitality & Catering and Engineering.

In Hospitality & Catering, we aim to provide students with opportunities to understand and experience a range of hospitality & catering operations further developing their knowledge and understanding of issues related to nutrition and food safety.

In Engineering our contextual based approach allows students to apply and further develop their engineering knowledge and skills whilst demonstrating the ability to solve problems independently.

Aims/Outcomes

Through a carefully sequenced and ambitious curriculum our students will:

- Become complex problem solvers and innovators. They will understand how to use the iterative design process to critique and evaluate the work of others. They will use their understanding of other products to develop and test their own ideas.
- Students will become equipped with skills needed to work safely with a range of processes, equipment and tools. Through a range of activities they will apply these skills to produce high quality products that are fit for purpose from a range of materials.

- Develop a love of cooking. Students will be able to prepare and cook a range of dishes that can contribute towards a nutritionally balanced and healthy diet. They will consider how the seasonality and characteristics of ingredients affect how and when they are used in dishes.
- Develop the wider transferrable skills required of a capable citizen. They will become risk takers, innovators, independent, resourceful & enterprising. When innovating, students will show how they have become culturally aware. They will consider the well-being of the local community and wider world.