Technology Curriculum Intent

Design Technology is where curious, inquisitive minds are developed into independent, confident, resilient problem solvers who are not afraid to take risks. Through an inclusive curriculum in Engineering and Hospitality & Catering, we strive to prepare and develop the designers, architects, engineers and chefs of the future.

The Design and Technology curriculum at The Irlam and Cadishead Academy has been designed to develop the student's practical problem solving and designing skills. Our long-term aim is to produce creative thinking, adaptable young adults capable of contributing and shaping society.

Designing, **making** and **evaluating** are key components of the Technology curriculum.

- **Designing**: researching, planning, generating ideas, communication, modelling, presenting.
- **Making**: using specialist equipment, selecting materials/ingredients.
- **Evaluating**: testing, analysing, consulting, assessing impacts.

The curriculum for Design and Technology aims to ensure that all pupils can:

- Develop the creative, technical and practical expertise needed to perform everyday tasks.
- Confidently and successfully participate in an increasingly technological world.
- Build and apply a repertoire of knowledge, understanding and skills to design and make high-quality prototypes and products for a wide range of users.
- Critique, evaluate and test their ideas, products and the work of others.
- Understand and apply the principles of nutrition, whilst learning how to prepare and cook a range of healthy meals.

Technology schemes of learning and lessons are sequenced to support students' progression in these areas over the course of study, which has been constructed based on the following principles.

Principles

Entitlement: All students learn the knowledge and develop the skills in the ICA Technology curriculum. This supports all students to progress and develop their expertise in the different Technology disciplines. The technology curriculum will provide students with the skills and knowledge to confidently develop and produce products in a variety of materials. In Cooking and Nutrition, the students will develop a love of cooking through focused practical lessons producing products with a local and international focus.

Coherence: The ICA Technology curriculum is a progression model and carefully sequenced in-line with the National Curriculum so that powerful knowledge and an expertise in skills is built over time. The fundamentals of the National Curriculum of design, make, evaluate and technical knowledge will embed the skills and knowledge needed to design and make a variety of products, building on previous learning to develop products of increasing complexity as they progress through the key stages. A similar model is followed in Cooking and Nutrition, where the students will develop their practical preparation and making skills to produce food products that will build on previous learning and develop knowledge of various nutrients and ingredients whilst making dishes of increasing complexity.

Students begin developing their knowledge and skills in designing, making and evaluating in Year 7 where they start with units on Design Skills in Design Technology and Healthy Eating in Cooking and

Nutrition. This progresses as students develop their experience and competency in these aspects of technology as they progress through programmes of study during Key Stage 3. Units within each individual year group build on the designing, making and evaluating knowledge and skills from previous units and the programme for each year across Key Stage 3 does the same by building on the previous year's programme. This focus continues through to Technology Key Stage 4 options.

Engineering KS4 students at ICA will apply maths and science to solve real-world problems. This involves an understanding of the different disciplines of engineering and how they have shaped the products and projects of the modern world. Students will be able to read and produce technical drawings, select appropriate materials (along with tools and machinery) and know how to carry out a practical task. Students will be expected to work in a safe manner, in line with current health and safety legislation.

Hospitality & Catering KS4 students will build on prior knowledge and understanding of nutrition, healthy eating, food preparation, hygiene, cooking techniques, and sensory characteristics.

Mastery: Schemes of learning ensure that knowledge, skills, assessment and a consideration of misconceptions are addressed strategically. We ensure that knowledge and skills are secure before moving on. Through interleaving and spaced repetition students revisit prior learning to embed it into their long-term memory and apply their knowledge and skills to new situations. Technical knowledge and making skills develop and improve through each key stage providing the knowledge and skills to independently produce products using a variety of different materials and media or combine ingredients to develop and adapting their own recipes.

Adaptability: The core knowledge and skills of the curriculum are consistent across the curriculum. Teachers ensure that all students can access these effectively by removing barriers to the curriculum for classes and individual students. The variety and specificity of these adaptations ranges from provision for SEND students to appropriate challenge for all. The technology curriculum is inclusive where every student has the same opportunity to succeed.

Representation: Technology is universal, and the curriculum has been designed to ensure that all students see themselves in it. The selection of topics, resources, examples and project briefs recognise context and take all students beyond their immediate experience. The skills developed within technology at ICA provides transferable skills for our students for life in Salford and beyond.

Learning is embedded through the practical application of focused practical tasks, to learn and develop skills using a range of materials and techniques. Students will design and manufacture products that meet the requirements of a design brief, which include; a wooden jigsaw, pencil box and desk tidy using sustainable materials. In Cooking and Nutrition, they will understand the source, seasonality and characteristics of a broad range of ingredients with a focus on the local environment, providing the knowledge and skills that enables pupils to feed themselves and others affordably and well, now and in later life. We are culturally diverse, therefore lessons are prepared to reflect upon student's local communities and food from around the world.

Education with Character: Our curriculum is intended to spark curiosity and enjoyment. Spiritual, moral, social and cultural development are intertwined with subject specific knowledge and skills and the Technology Aspire provision provides opportunities for students to pursue their passions. We have successful Aspire clubs including a DT club, which is a design and make focused club.