

## Technology Intent

Our ethos as a Technology department is that we are a faculty where curious, inquisitive minds are developed into independent, confident, resilient problem solvers who are not afraid to take risks; this is embodied into our everyday teaching where we strive to provide an inclusive curriculum that prepares and develops our students into the designers, engineers, architects, engineers and chefs of the future. The Design and Technology curriculum at Salford City Academy has been designed to develop the student's practical, problem solving and designing skills. Our long-term aim is to produce thinking, adaptable young adults capable of taking his / her place in a changing society.

**Key stage 3 students will study both Design and Technology and Hospitality and Catering. In Key stage 4 students will choose from a set of guided options including Construction, Childcare, Hospitality & Catering and Design and Technology.**

**The Technology curriculum is underpinned by the following curriculum principles and further discussion about each discipline is elaborated below.**

**Entitlement:** All students have the right to learn what is in the SCA Technology curriculum.

**Coherence:** Taking the National Curriculum as its starting point, our curriculum is carefully sequenced so that powerful knowledge builds term by term and year by year. We make meaningful connections within subjects and between subjects.

**Mastery:** We ensure that foundational knowledge, skills and concepts are secure before moving on. Students revisit prior learning and apply their understanding in new contexts.

**Adaptability:** The core content – the 'what' – of the curriculum is stable, but we bring it to life in our local context, and teachers adapt lessons – the 'how' – to meet the needs of their own classes.

**Representation:** All students see themselves in our curriculum, and our curriculum takes all students beyond their immediate experience.

**Education with Character:** Our curriculum is intended to spark curiosity and to nourish both the head and heart. It includes the taught subject timetable as well as spiritual, moral, social and cultural development, our co-curricular provision and the ethos and 'hidden curriculum' of the school.

## Design and Technology

In Key Stage 3 the learning is embedded through practical application in focused practical tasks forming skills boards for all material areas, or design and make activities. They will study the history of design and its impact on society, in year 8 students will study emerging global designers. In year 9 the students partake in the Design Museums Design Ventura competition; The Ventura project gives the students the opportunity to work alongside professional designers to develop a marketable product. They will also undertake a project focusing on the United Nations' Sustainable Development Goals with a focus on the local area. At Key Stage 4 learning is embedded through the development of knowledge and skills over time. The Design and Technology curriculum aims to provide students with the opportunity to design using professional design and manufacturing processes, students will have the opportunity to design using CAD - 2D Design, Google Sketch Up and Fusion 360, CAM - laser cutter, micro routers and 3D printing. Learning will be project based and final outcomes will be user centred, giving a realistic foundation to the world of design, problem solving and manufacturing. The curriculum has been planned in order to develop their skills and they will be able to use with some accuracy, common hand tools, machine tools and CNC machinery. They will be able to identify common timbers, polymers, metals and select materials demonstrating an understanding of material properties. They will be able to identify methods used in shaping and joining materials and identify the forces acting on structures, applying this knowledge through application.

## Hospitality and Catering

Hospitality and Catering provides learners with a core depth of knowledge and a range of specialist and general skills that will support their progression to further learning and employment. Food is a vital part of our daily lives and is essential for life. As our students progress and become adults their lives become busy and all-consuming at times, it is easy to choose food which has been pre prepared. However, it is more nutritious and often cheaper to cook simple, delicious food. Students at Salford City Academy will build on prior knowledge and understanding of nutrition, healthy eating, food preparation, hygiene, cooking techniques, and sensory characteristics. We plan and prepare lessons at SCA to reflect upon student's local environment and support them in the wider world. This gives our students vital life skills that enable them to feed themselves and others affordably and nutritiously, now, and later in life. We give students opportunities to visit local Hospitality and Catering establishments, in order to embed their learning. Students will enhance their understanding, appreciation and acceptance of people from a variety of cultural backgrounds through the preparation of food from different countries, religious beliefs and Special dietary requirements, by providing nutrition dishes for local primary schools using the SCA food truck and SCA events, such as awards evenings. Through our hospitality and catering curriculum we ensure our students are equipped with the skills and knowledge to lead healthy lives by showing them how to prepare balanced meals as part of a healthy diet. Our curriculum lays a foundation for all students to experience a variety of food, learn cooking skills, learn about healthy eating, consumer awareness and food safety. This enables them to become more independent and to be able to make informed choices now and in the future. Level 1/2 Vocational Award in Hospitality and Catering at KS4 provides an opportunity to learn about issues related to social, moral, and environmental problems with a core focus on nutrition and food safety and how they affect successful hospitality and catering operations. Students will also have the opportunity to develop a range of transferable skills of problem-solving, organisation and time management, planning and communication. All of which these key skills work toward solving real life problems. The learning undertaken at SCA will enable our students to consider the needs of individuals and the wider environment. Students will embark on real world issues and use prior and existing knowledge that they have gained from theoretical and practical studies, of each assessment criteria to develop a suitable solution.

### **Construction**

The Construction Curriculum at KS4 allows students to study BTEC Construction and the Built Environment. The qualification is the same size and level as a GCSE and is aimed at everyone who wants to find out more about construction and the built environment. It will give students the opportunity to learn about one of the most important sectors in the UK economy. Students will study the following three compulsory units, covering the fundamental knowledge, skills and understanding required for construction technology and design: construction technology, scientific and mathematical application for construction, construction, and design. Students will build on the knowledge gained in the compulsory units by studying one further unit called 'exploring carpentry and joinery principles and techniques. This unit provides students with an opportunity to develop a wider understanding and appreciation of a specific aspect of the construction industry and includes practical work. This qualification will enable students to develop a theoretical and practical knowledge of the built environment alongside some practical skills. It will also enable students to engage with the mathematical and scientific principles that underpin the construction industry, and to explore the impact of design through research and the application of their own ideas in response to a design brief. This qualification will allow students to progress to further vocational study at level 3, such as a BTEC National in Construction and the Built Environment, or Engineering, or academic study such as A levels. The broad content may help successful learners enter a range of apprenticeships, for example in craft trades or built environment design.

### **Childcare**

This Level 2 Technical Award in Child Development and Care provides learners with the opportunity to gain a vocational qualification that gives a basic introduction to the sector. Designed to meet the needs of learners from the age of 14 years. Includes the knowledge and understanding of child development and well-being necessary for working with children in a variety of childcare settings. It is aimed at a range of learners who wish to be introduced to childcare and development of children aged 0-5 years. Provides learners an insight into their preferred learning styles and assists in developing their ability to study across curriculum. It provides students an insight into how to work effectively in a workplace environment and what is expected of them.

## **Aspire**

As a department we are very proud of our extensive Aspire provision. The programme has been designed to further enhance the students' knowledge through Catering and Technology clubs. Through the Aspire Programme students are entered into national and international competitions such as LEGO Mindstorms - this will further develop the students, not only through their knowledge of design, technology, and programming, but also socially and morally through group and team identity.