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| **Sir Harry Smith Community College Curriculum Map SUBJECT: Design & Technology YEAR 10 2022-23** | | | | |
| **Curriculum Intent:** To engage pupils in the broad range of theory topics and in creative practical work. Pupils will experience working with a range of materials, equipment and processes in order to acquire the skills and understanding necessary for successful year 11 study. | | | | |
| **School Values** | **Curriculum Focus** | **Term 1**  **Introduction to Wood and Plastic**  **Wood:** Framing Joints  **Plastics:** Alessi Fruit Bowl  **Paper and Board:** Alessi Packaging | **Term 2**  **Wood and Metal:** Dishes and Vessels  **Wood and Metal:** Bottle opener | **Term 3**  **Mixed Materials:** Sustainable Design  **NEA:** Non-examined assessment |
| **High Quality Learning Experience** | **Literacy Skills and Key Vocabulary** | Polymer  Thermoplastic  Thermosetting  Brief  Specification  Prototype  Manufacture  Assemble  Processes  Adhesive | Hardwoods, Softwoods  Manufactured Board, Plywood  Ferrous, Non-ferrous, Alloy  Annealing  Brazing  Planishing  Hardness  Toughness  Malleability  Ductility  Elasticity | Sustainability  Greenhouse effect  Pollution  Deforestation  Reduce  Refuse  Re-use  Repair  Recycle  Rethink |
| **Pursuit of Excellence** | **Knowledge and Skills** | **Practical lessons;**  Use of materials, tools and techniques in the manipulation of wood and plastic to develop skills and techniques.  **Theory Lessons;**  Design processes,  Research techniques,  Wood materials,  Plastic materials,  Paper and board,  Use of CAD/CAM,  Origins of materials. | **Practical lessons;**  Use of materials, tools and techniques in the manipulation of wood and metal and production of finished artefacts.  **Theory Lessons;**  Ferrous, non-ferrous metals and alloys,  Metal working processes,  Hardwoods, Softwoods and manufactured boards,  Design processes,  Sketching and drawing. | **Practical lessons;**  Use of materials, tools and techniques in the manipulation of mixed materials and production of finished artefacts with a focus on sustainability and green processes.  **Theory Lessons;**  Properties of materials,  Stock forms,  Selecting appropriate materials, processes and finishes,  The 6 Rs,  Energy, resources and sustainability  Ethical factors and social responsibility of designers.  **NEA;**  Preliminary coursework theme selection,  Identifying and investigating design possibilities. |
| **Subject specific pedagogy** | Practical demonstrations and student experiences.  Experimentation and evaluation with range of techniques.  Real world analogies and relationships.  Generating products based on an identifiable need – problem solving.  Theme based products. | Practical demonstrations and student experiences.  Experimentation and evaluation with range of techniques.  Real world analogies and relationships.  Identifying practical requirements or necessity for designed products. | Practical demonstrations and student experiences.  Experimentation and evaluation with range of techniques.  Real world analogies and relationships.  Investigating properties and suitability of materials to meet the design brief and specification.  Justification of design decisions. |
| **Extending the boundaries of learning** | **Cultural Capital and beyond the curriculum** | Health and safety in school and the workplace beyond.  Social and environmental impact of technology.  Global design influences.  Study the work of international designers.  Investigating products in the home.  Analysing product and postal packaging. | Health and safety in school and the workplace beyond.  Impact of design and technology in daily life. History, development and discovery leading to product development.  Investigating products in the home.  Engaging with a client. | Global impact of technology.  Local, national and global energy issues.  Local, national and global, interventions and planning.  Personal impact and responsibility. |
| **Achievement** | **Assessment** | Exam theory, techniques and practise, feedback and discussion.  Retention of knowledge, application of theory and processes through practical outcome.  Assess design skills, sketching, research skills, evaluating via unit portfolio of evidence.  Peer and self-assessment and action points.  Assessment objectives in line with AQA specification 8552, marking, recording and feedback. | Exam theory, techniques and practise, feedback and discussion.  Retention of knowledge, application of theory and processes through practical outcome.  Assess design skills, sketching, research skills, evaluating via unit portfolio of evidence.  Peer and self-assessment and action points.  Assessment objectives in line with AQA specification 8552, marking, recording and feedback. | Exam theory, techniques and practise, feedback and discussion.  Retention of knowledge, application of theory and processes through practical outcome.  Assess design skills, sketching, research skills, evaluating via unit portfolio of evidence.  Peer and self-assessment and action points.  Assessment objectives in line with AQA specification 8552, marking, recording and feedback. |
| **Valuing People** | **How our curriculum meets the needs of every individual** | Individual intervention and support for those who are not meeting their potential.  Design opportunities are varied and lead to individual outcomes.  Afterschool opportunities to support the curriculum for all students.  Open door policy and drop-ins for student questions. | Individual intervention and support for those who are not meeting their potential.  Design opportunities are varied and lead to individual outcomes.  Afterschool opportunities to support the curriculum for all students.  Open door policy and drop-ins for student questions. | Individual intervention and support for those who are not meeting their potential.  Design opportunities are varied and lead to individual outcomes.  Afterschool opportunities to support the curriculum for all students.  Open door policy and drop-ins for student questions. |