# Technology Year 7 Curriculum Overview

| What is the Year 7 Technology curriculum aiming to achieve? | | |
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| What do we want our Year 7 Technologists to be like? | How are we building on prior learning? | How can parents/carers support their child's learning? |
| • Conduct themselves safety in all workshops.<br>• Understand contexts for design.<br>• Be able to use appropriate materials and equipment.<br>• Be able to use programmable components to solve problems.<br>• Develop drawing techniques. | • Enhance workshop experience practice.<br>• Build confidence with a range of hand tools and machinery.<br>• Introduce new drawing techniques.<br>• Develop CAD skills. | • Trips to interactive museums or events like 'The Big Bang Fair'<br>• Look out for design and creative competitions and TV programs.<br>• When completing homework 'go the extra mile'<br>• Encourage students to enjoy designing – have fun make mistakes and learn from them. |

| How are we organising the Year 7 Technology curriculum? | | | | | | |
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| | Autumn 1 | Autumn 2 | Spring 1 | Spring 2 | Summer 1 | Summer 2 |
| Topics | Baseline test – net development | Dye sublimation mug design<br>Robot introduction X 2 lessons | Amplifier Component recognition Soldering safely and accurately | Phone stand & amplifier casing | Communication Challenge Task | LEGO MINDSTORMS Robots |
| Threshold Concepts | Construct nets understanding 3D shapes (geometry) | Manipulate images using more advanced tools in Photoshop | Create a working circuit. Understand component uses | Create files suitable for use with the laser cutter | Be able to draw complex shapes in 3d using the crating method. | Confidently code a robot using sensors to complete tasks |
| Skills | Accurate cutting and folding. Quality construction. | Graphic design<br>Product analysis<br>Specification<br>Target market<br>CAD skills | Soldering<br>Fault finding<br>Quality Control | CAD software<br>CAM (laser cutter)<br>Creating high quality products | Generating isometric views | Robotics<br>Programming<br>Sensors<br>Teamwork |
| Enrichment within the curriculum | Students will have the opportunity to look at a number of different career-based topics which will enthuse them to further study the subject, for example, students will have the opportunity to work as a product designer. | | | | | |
| Cross curricular links | • Mathematics is used in measuring and marking out materials as well as in coding calculations<br>• Drawing and designing links with art<br>• Coding ICT<br>• Science links with electrical components. | | | | | |
| Extra-curricular opportunities | Students will have the opportunity to take part in a Robotics club which leads them to be entered into the Tomorrows Engineers EEP Robotics Challenge and compete nationally. | | | | | |

| What are the intended outcomes of the Year 7 Technology curriculum? | | | | | | |
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| | Autumn 1 | Autumn 2 | Spring 1 | Spring 2 | Summer 1 | Summer 2 |
| Opportunities to show progress (Assessments) | Baseline test | Creativity and communication of designs.<br>End project assessment | Assessed on accuracy, effort and presentation. | Understanding how and electrical circuit works. Being able to identify components and their purpose<br>Being able to solder safely and effectively.<br>Quality and accuracy (innovation) of practical outcomes | | Robotic challenge practical assessment on written code |
| Impact on personal development (SMSC) | Design and Technology opens up a wide range of opportunities to explore issues from the world around us and come up with some design solutions. Students are encouraged to work together to complete their projects and be mindful of the products they create and the impact they have on society from a moral and ethical perspective. Student will be learning how to communicate ideas and problem solve. | | | | | |
| Preparation for the next stage of education | Year 7 Design and Technology will provide a solid foundation level of skills for students to build on as they move up through the school. It will increase students' confidence in their own abilities of designing and communicating ideas and manufacturing. Studying Design and Technology is a great introduction to the world of design and problem solving. | | | | | |