

Design & Technology at AJK

The Design & Technology Curriculum at AJK

Design and Technology is not taught as a distinct subject discipline on our regular timetable. We know how important it is that students have the opportunity to use their creativity and imagination to design solutions to real world problems as well as to be able to critically evaluate designs in the world around them. Our art and design curriculum provides many opportunities for this, but we also deliver some additional aims through other subject disciplines and drop down timetable experiences.

| Curriculum aims | AJK Curriculum Location |
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| Design | |
| Use research and exploration, such as the study of different cultures, to identify and understand user needs | <p>Art and design curriculum:</p> <ul style="list-style-type: none"> - Research and study of different artists, including a range of cultures and genres - Opportunities to present research to peers - Unit on city of the future design delivered to Y8s. - Product design unit – sustainable architecture models. <p>Drop down timetable days: “Theatre design” - students design and create props and costumes for a play studied in drama.</p> |
| Identify and solve their own design problems and understand how to reformulate problems given to them | <p>Art and design curriculum:</p> <ul style="list-style-type: none"> - Unit on city of the future design delivered to Y8s. - Product design unit – sustainable architecture models. |
| Develop specifications to inform the design of innovative, functional, appealing products that respond to needs in a variety of situations | <p>Art and design curriculum:</p> <ul style="list-style-type: none"> - Dream catcher unit – design and create dream catchers. - Textiles unit – shoe design. |
| Use a variety of approaches [for example, biomimicry and user-centred design], to generate creative ideas and avoid stereotypical responses | <p>Art and design curriculum:</p> <ul style="list-style-type: none"> - Students use a variety of approaches to generate ideas. Exposure to a range of artists and designs and encouraged to think outside the box. - Study of Neri Oxman as inspiration for nature & science design style. - Unit on sustainable architecture models (planning to include biomimicry and user-centred design in this unit) |
| Develop and communicate design ideas using annotated sketches, detailed plans, 3-D and mathematical modelling, oral and digital presentations and computer-based tools | <p>Art and design curriculum:</p> <ul style="list-style-type: none"> - Annotated sketches and detailed plans used regularly. - Mathematical modelling used. - Oral presentations are built into units where students explain their design briefs to peers |
| Make | |
| Select from and use specialist tools, techniques, processes, equipment and machinery precisely, including computer-aided manufacture | <p>Art and design curriculum:</p> <ul style="list-style-type: none"> - Regular use of clay making tools, scalpels and cutting tools, specialist paints. |
| Select from and use a wider, more complex range of materials, components and ingredients, taking into account their properties | <p>Art and design curriculum:</p> <ul style="list-style-type: none"> - Plaster casting and moulding – students learn about the properties of alginate. |

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| | <p>-</p> <p>Drop down timetable days: “Many hands make light work / All hands on deck” – plaster casting, designing and finishing hand models.</p> |
| Evaluate | |
| Analyse the work of past and present professionals and others to develop and broaden their understanding | <p>Art and design curriculum:</p> <ul style="list-style-type: none"> - In all units of the art and design curriculum |
| Investigate new and emerging technologies | <p>Art and design curriculum:</p> <ul style="list-style-type: none"> - Study of Olafur Eliasson installations using solar technology. |
| Test, evaluate and refine their ideas and products against a specification, taking into account the views of intended users and other interested groups | <p>Art and design curriculum:</p> <ul style="list-style-type: none"> - Unit on sustainable architecture models <p>Drop down timetable days: “Theatre design” - students design and create props and costumes for a play studied in drama.</p> |
| Understand developments in design and technology, its impact on individuals, society and the environment, and the responsibilities of designers, engineers and technologists | <p>Art and design curriculum:</p> <ul style="list-style-type: none"> - Unit on sustainable architecture models - Study of Olafur Eliasson & Neri Oxman |
| Technical knowledge | |
| Understand and use the properties of materials and the performance of structural elements to achieve functioning solutions 90 Geography | <p>Drop down timetable days:</p> <ul style="list-style-type: none"> - “Theatre design” - students design and create props and costumes for a play studied in drama. - “Many hands make light work / All hands on deck” – plaster casting, designing and finishing hand models. |
| Understand how more advanced mechanical systems used in their products enable changes in movement and force | <p>Art and design curriculum:</p> <ul style="list-style-type: none"> - Teaching of structure and strength in architecture maquettes within sustainable architecture design unit. Includes links to history of architecture. |
| Understand how more advanced electrical and electronic systems can be powered and used in their products [for example, circuits with heat, light, sound and movement as inputs and outputs] | <p>Art and design curriculum:</p> <ul style="list-style-type: none"> - Olifur Eliasson solar powered technology installations with artistic and functional purpose. <p>Science curriculum:</p> <ul style="list-style-type: none"> - Study of circuits, including related practical |
| Apply computing and use electronics to embed intelligence in products that respond to inputs [for example, sensors], and control outputs [for example, actuators], using programmable components [for example, microcontrollers]. | <p>Drop down timetable days:</p> <ul style="list-style-type: none"> - “STEM in action” |
| Cooking and nutrition | |
| Understand and apply the principles of nutrition and health | <p>PE Curriculum:</p> <ul style="list-style-type: none"> - Y8 PE theory unit on diet and nutrition |
| Cook a repertoire of predominantly savoury dishes so that they are able | <p>Drop down timetable days:</p> <ul style="list-style-type: none"> - “Healthy cooking and eating” |

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| to feed themselves and others a healthy and varied diet | |
| Become competent in a range of cooking techniques [for example, selecting and preparing ingredients; using utensils and electrical equipment; applying heat in different ways; using awareness of taste, texture and smell to decide how to season dishes and combine ingredients; adapting and using their own recipes] | |
| Understand the source, seasonality and characteristics of a broad range of ingredients. | |