

STEAM Year 7

DT Basic Skills

STEAM SKILLS

- Accuracy
- Understanding of tools
- Using failure to learn and grow

You will learn about:

- Select from and use specialist tools, techniques, processes, equipment and machinery precisely, including computer-aided manufacture.
- understand developments in design and technology, its impact on individuals, society and the environment, and the responsibilities of designers, engineers and technologists

<p>Lesson Overview</p> <ul style="list-style-type: none"> • Technical drawing - 2 Point perspective • Technical drawing – orthographic drawing • Reading and working from technical drawings - Working accurately • Workshop health and safety - Understanding of tools • Creative design task and analysis – ACCESSFM - Communication 	<p>Key Words</p> <ul style="list-style-type: none"> • Perspective • Orthographic • Accuracy • Safety • Creativity • Innovation
<p>Suggested reading or support available</p> <p>https://www.youtube.com/watch?v=8wM5-1iTQ3Q</p> <p>http://www.technologystudent.com/</p>	<p>Cross curricular</p> <p>Art links: Drawing skills and creative designing.</p> <p>Maths skills: marking out, measuring, converting from cm – mm.</p> <p>Science: Material Choices, Sustainability.</p> <p>SMSC: Sustainability, Material usage, Internet safety.</p> <p>Literacy links: Analysis - Annotation</p>

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Grade Range	Accuracy	Understanding of tools	Using failure to learn and grow
0	I presented no work.	I presented no work.	I presented no work.
1	<p>WWW: I have made an attempt to complete the task with some success.</p> <p>EBI: I need to try and take more time and care with my work to avoid mistakes.</p>	<p>WWW: I know which tools or software to select and can use them for basic tasks safely (with hand tools or computer software).</p> <p>EBI: I need to be able to choose the correct tools (hand tools or software) and understand the risks.</p>	<p>WWW: I can identify some basic errors and mistakes with my work.</p> <p>EBI: I need to reflect more on my mistakes and try to not repeat them.</p>
4	<p>WWW: I have completed the task with reasonable accuracy and have created a successful piece of work</p> <p>EBI: I need to make sure I have planned and prepared my work beforehand and take more care to avoid errors.</p>	<p>WWW: I can select the correct tools (hand tools or software) and know the risks of that tool.</p> <p>EBI: I need to expand my knowledge and features of different tools (hand and software).</p>	<p>WWW: I can identify some issues and mistakes and overcome them. I can reflect on the causes of mistakes and see why they happened.</p> <p>EBI: I need to think more carefully about past experiences\mistakes so that I do not make the same mistake again.</p>
6	<p>WWW: I have consistently completed tasks with care and with few mistakes resulting in a successful piece of work.</p> <p>EBI: I need to ensure my work is planned and prepared thoroughly to ensure I can complete a task without any errors.</p>	<p>WWW: I can make good choices in my selection of tools (hand tools and software) for safe and efficient use. I have a good understanding of their purpose.</p> <p>EBI: I need to expand my knowledge and purpose of a wider range of tools and equipment so I can work more effectively.</p>	<p>WWW: I managed to independently identify and fix issues and mistakes.</p> <p>EBI: I should refer to my past errors (looking at my past work) and attempt to resolve potential mistakes at the design stages.</p>
8	<p>WWW: I always complete the tasks with a high level of precision and accuracy and have produced a quality outcome which is both functional and elegant.</p> <p>EBI I should consider ways of producing every part of my work to a consistently high quality.</p>	<p>WWW: I know the pros and cons of different tools (hand tools and software) and can make clear decisions on which to use for safety and efficiency. I have an excellent understanding of how they work and their capabilities.</p> <p>EBI: I can expand my knowledge and understanding of tools (hand\machine and software tools) that are used in the real world.</p>	<p>WWW: I can shown and explain, using previous issues and mistakes, why my work or solutions will be more likely to succeed than in previous efforts.</p> <p>EBI: When testing a problem, I need to make sure that I also try to prove something doesn't work as well as what does work to gain a better understanding.</p>