

STEAM Year 9 Engineering - Overview

You will

- Design and build a
- Learn about the transfer of motion using different mechanical systems.
- Learn about aerodynamics and structures
- Improve skills in Analysis, Accuracy and Creativity

STEAM SKILLS

Analysis
Creativity
Accuracy

Lesson Overview <ul style="list-style-type: none">• Motion and motion transfer• Aerodynamics and structures• Testing and modifying designs.• Accuracy and assembly of parts.	Key Words <p>Testing Modifications Aerodynamics Friction</p>
Suggested reading or support available Check your one note for support Youtube	Cross curricular Maths and Science in the testing and analysis of design strengths and weaknesses. SMSC Sustainability is key to our long term success, we will need to engineer a sustainable future to protect against climate change and other threats to our way of life. Literacy links

SUCCESS CRITERIA

Highlight your starting point for each skill in **PINK**, at the end of the project highlight where you think you got to in **BLUE**.

Grade Range	Analysis	Creativity	Accuracy
0	I presented no work.	I presented no work.	I presented no work.
1	<p>WWW: I can say what the task to be solved was.</p> <p>EBI: I need to understand the problem in more detail.</p>	<p>WWW: I can develop some ideas using existing examples and try to make my own changes to them.</p> <p>EBI: I need to make my designs my more my own and try to bring something new into them.</p>	<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>
4	<p>WWW: I can identify the task and individual problems to be solved with some help.</p> <p>EBI: I need to break the problem down into parts and describe how the parts are linked.</p>	<p>WWW: I can develop and show some fresh ideas and my examples are mostly developed by myself.</p> <p>EBI: I need to use other peoples examples and ideas more for inspiration than copying and develop my own style.</p>	<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>
6	<p>WWW: I can independently and accurately identify the various problems within the overall task.</p> <p>EBI: I need to make sure that I have carefully and in detail examined all possible parts of the problem.</p>	<p>WWW: I use examples only as a start point and can develop numerous different options from there. My final ideas clearly show my own personality and style.</p> <p>EBI: I need to try and produce alternative unique ideas that accurately meet the design requirements.</p>	<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>
8	<p>WWW: I can analyse the problem(s) thoroughly and can give a comprehensive and accurate description of each problem to be solved within the overall task.</p>	<p>WWW: I can develop multiple new ideas and options that accurately meet the design requirements. My solutions are highly innovative, unique and purposeful.</p>	<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>