

## Year 7 – Homework Tasks – BRIO CAD Project

Please complete the homework tasks when they are set by your class teacher



No.	Task outline	Teacher initials/comments
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<b>Task 1</b>  All about CAD and CAM	Using your own words, explain what CAD and CAM are. Explain how they are used in school and in industry. What sort of products are designed using CAD/CAM?  <b>EXTENSION: Find pictures of CAM machines such as a laser cutter, 3D printer and a CNC router.</b>	
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<b>Task 2</b>  CAD and CAM good and bad	-Using your prior knowledge and the internet to help you present a sheet showing at least five advantages and five disadvantages of CAD/CAM.  -Consider presentation, ICT skills and SPAG.  <b>EXTENSION: Explain some of the many ways we use CAD/CAM in school, within the D&amp;T department.</b>	
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<b>Task 3</b>  Robots in the real world	-You need to find and neatly present 3 pictures of existing robots that are used in the real world (not SciFi!)  - Explain at least 3 features of the robots you have found out about – what do they do, how are they powered and how do they sense the world?  <b>EXTENSION: What are the 3 rules of robotics according to Isaac Azimov? Can you think of more rules?</b>	
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<b>Task 4</b>	Consider your design for your final 'BRIO' toy. Draw this as a 3D isometric image. Remember that you will start with a 'Y' shape to construct this and your wheels will be ellipses, instead of circles.  <b>EXTENSION: Render your design using colour, tone and shade to make it look as realistic as possible. Annotations (labels) on your design will also help your communication.</b>	
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