

PERSONAL LEARNING CHECKLIST:

Component 2: Investigating an engineered product

LAA: understand materials, components and processes for a given engineered product

The following should be addressed to meet Assessment criteria:	Addressed		
	Fully	Almost	Not at all
<p>? = Clarify what you mean (sentence structure/examples) Sp = SPaG needs attention</p>			
L1P: Prologue/Introduction			
<ul style="list-style-type: none"> An overall introduction of the purpose of a brake system and the different types of brake systems (rim/brake/cantilever/calliper) 			
L1P: Features of the engineered product (brake system)			
<ul style="list-style-type: none"> What are 'features' of the brake system? (how does it works/what is it designed to do?) Research (print screen) an engineering drawing/s of your chosen brake system: annotate the drawing by identifying all of the components Identify the different parts of a bicycle brake system and know about their functions. 			
L1M: Limited Description of different types of processes and materials			
<ul style="list-style-type: none"> Describe an engineering process from each type. Name and describe the stages in manufacturing bicycle brake system, and the activities that happen at these stages. Describe engineering materials from each category and proprietary components. Name and explain the use of modern materials and their impact for bicycle brake system. 			
<ul style="list-style-type: none"> Explain what the difference is between the different processes and materials (Explain with examples to highlight your points) 			
L2P: Describing all processes and materials used to make an the engineered product			
<ul style="list-style-type: none"> Describe engineering processes used to make given engineered products. 			
<ul style="list-style-type: none"> Explain how each process works and what is involved in the manufacturing process 			
<ul style="list-style-type: none"> Describe engineering materials and proprietary components (NOTE: Proprietary parts are parts designed specifically for use with that particular bike. They are only made by that manufacturer, and they only sell them to dealers that carry that brand of bike) used in given engineered products 			
<ul style="list-style-type: none"> Explain the purpose (what it does) and the importance of each component 			
<ul style="list-style-type: none"> Describe the characteristics of each material (the reason it's a suitable choice) such as ductile, strength, corrosion resistant, lightweight etc 			
L2M: Explain why engineering processes and materials are used to make this engineered product			
<ul style="list-style-type: none"> Explain why engineering processes are used to make the engineered product in this case the chosen bicycle brake system. 			
<ul style="list-style-type: none"> Include the advantages and disadvantages of each process Understand and discuss how modern materials, new technologies and techniques are used, and their impacted when manufacturing bicycle brake systems. 			
<ul style="list-style-type: none"> Suggest an alternative process for each of the processes that you have described and consider factors such as it being more cost effective or environmentally friendly Explain about high volume material removal processes, and know about a range of other processes, used in the production of bicycle brake system. 			
<ul style="list-style-type: none"> Explain why engineering materials and proprietary components are used in given engineered products. (NOTE: Proprietary parts are parts designed specifically for use with that particular bike. They are only made by that manufacturer, and they only sell them to dealers that carry that brand of bike) 			
<ul style="list-style-type: none"> Include the advantages and disadvantages of each material Suggest an alternative material for each of the materials that you have described and consider factors such as it being more cost effective or environmentally friendly 			

L2D Evaluate engineering materials, proprietary components and processes used when making given engineered products.

• Judge the importance of the components on a brake system and the impact they have on the performance of the product/vehicle			
• Why does the manufacture choose to use proprietary components within the manufacture of the given product (brake system)			
• What is the impact of the manufacturing process/materials on the environment and could you suggest alternatives?			

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Name:	
Attempt No: 1	Attempt No: 2
Grade:	Grade:
Assessor Initials:	Assessor Initials:

Feedback:

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Additional Feedback: