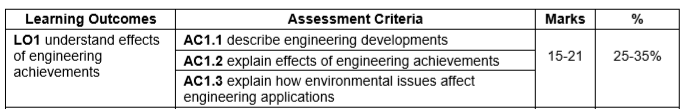
**Engineering sectors and achievements revision**

***What the exam board say:***

***This means you need to be able to:***

* Identify different sectors of engineering
* Describe what the sectors produce
* Explain how the sectors and products have developed
* Analyse how engineering affects the environment

***Learning intent:***

Understand how engineered products have changed over time and explain how these use modern technology and affect the environment.

***Success criteria:***

L2 Distinction: (**bold below**) Detailed explanations of products made and job roles within all engineering sectors. Clear explanation of the different environmental effects of engineering and how these can be minimised or improved.

L2 Merit: (underlined below) Descriptions of products made and job roles within all engineering sectors. Clear description of the different environmental effects of engineering and how these can be minimised or improved.

L2 Pass: (*italics below*) Identification of products made and job roles within all engineering sectors. Identification of the different environmental effects of engineering and how these can be minimised or improved.

[](https://www.google.co.uk/url?sa=i&url=https%3A%2F%2Funsplash.com%2Fs%2Fphotos%2Faeroplane&psig=AOvVaw1hge0ytcsrVQuJjcpdmv72&ust=1577277274755000&source=images&cd=vfe&ved=0CAIQjRxqFwoTCMDH4_ClzuYCFQAAAAAdAAAAABAD)***[](https://www.google.co.uk/url?sa=i&url=https%3A%2F%2Fwww.youtube.com%2Fwatch%3Fv%3DhI4VQux3qIo&psig=AOvVaw3a0stCGMSKVZnPeyTMxorO&ust=1577277317979000&source=images&cd=vfe&ved=0CAIQjRxqFwoTCMDEooamzuYCFQAAAAAdAAAAABAD)WAGOLL***: *In the aerospace sector of Engineering products are designed and manufactured to contribute to an object which flies e.g. a plane, helicopter, microlight etc*. Engineers currently are working to make aircrafts which are lighter and therefore more efficient to develop with customer demands, reduce running costs and have less of a negative effect on the environment through burning fuels. *The safety of aircrafts is very important and therefore exact components are needed to be produced, checked and maintained, such as elements within the engine.* **The sector has recently developed planes utilising solar energy through attaching solar panels to the wings as these have a high surface area, therefore not emitting fossil fuels which damage the ozone.**



1. ***Explain the engineering developments which have happened and allowed the products to develop as below:***

[](https://www.google.co.uk/url?sa=i&url=https%3A%2F%2Fwww.ebay.com%2Fp%2F113213814&psig=AOvVaw1RuXG_1dWgOzOciDGGwAQB&ust=1577277675412000&source=images&cd=vfe&ved=0CAIQjRxqFwoTCNj3sa-nzuYCFQAAAAAdAAAAABAD)

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[](https://www.google.co.uk/url?sa=i&url=https%3A%2F%2Fwww.argos.co.uk%2Fproduct%2F8477116&psig=AOvVaw0Rs_cJaCg5Dk4xSwj9qiMk&ust=1577277751873000&source=images&cd=vfe&ved=0CAIQjRxqFwoTCLjL6tWnzuYCFQAAAAAdAAAAABAD)[](https://www.google.co.uk/url?sa=i&url=https%3A%2F%2Fwww.vectorstock.com%2Froyalty-free-vector%2Fold-tv-set-vector-26160912&psig=AOvVaw2nKSzvOkNeTKFzQFjAfAoe&ust=1577277790050000&source=images&cd=vfe&ved=0CAIQjRxqFwoTCLiL-eWnzuYCFQAAAAAdAAAAABAO)

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1. [](https://www.google.co.uk/url?sa=i&url=https%3A%2F%2Fwww.nisbets.co.uk%2Fcaterlite-hotel-kettle%2Fcd275&psig=AOvVaw0uPUQccDBV_ZrjApoUN8Lz&ust=1577278115171000&source=images&cd=vfe&ved=0CAIQjRxqFwoTCKCAzIGpzuYCFQAAAAAdAAAAABAD)***Explain the engineering developments which have happened and allowed the products to develop as below:***

[](https://www.google.co.uk/url?sa=i&url=https%3A%2F%2Fwww.dreamstime.com%2Fstock-photo-old-kettle-isolated-white-background-image97774004&psig=AOvVaw1fSg_6GwW6bnzEooAo6G8B&ust=1577278038202000&source=images&cd=vfe&ved=0CAIQjRxqFwoTCLjZ8dyozuYCFQAAAAAdAAAAABAD)

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[](https://www.google.co.uk/url?sa=i&url=https%3A%2F%2Fshop.stanstedairport.com%2Fshop%2Ftechnology%2Fhealth-and-beauty%2Fhair%2Fdyson-supersonic-hair-dryer%2Fdix__245367%2F&psig=AOvVaw13U41N-pfTjS9HJDxRY2Ok&ust=1577278597700000&source=images&cd=vfe&ved=0CAIQjRxqFwoTCPD0hOyqzuYCFQAAAAAdAAAAABAD)[](https://www.google.co.uk/url?sa=i&url=https%3A%2F%2Fwww.ebay.co.uk%2Fitm%2FAncien-Seche-Cheveux-Sechoir-Moulinex-Orange-Authentique-Vintage-Fonctionne-%2F323788636310&psig=AOvVaw3oaSy5N_mzT0voBE5s5Ra-&ust=1577278556165000&source=images&cd=vfe&ved=0CAIQjRxqFwoTCLC-8NWqzuYCFQAAAAAdAAAAABAK)

1. ***Explain the engineering developments which have happened and allowed the products to develop as below:***



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[](https://www.google.co.uk/url?sa=i&url=https%3A%2F%2Fwww.roads.org.uk%2Fphoto%2Fold-signs&psig=AOvVaw3Ny4tJie9MPravgEHpmcPj&ust=1577439073126000&source=images&cd=vfe&ved=0CAIQjRxqFwoTCLivitGA0-YCFQAAAAAdAAAAABAD)[](https://www.google.co.uk/url?sa=i&url=https%3A%2F%2Fwww.thesun.co.uk%2Fmotors%2F3489375%2Fyellow-shapes-triangles-motorway-a-road-signs-meaning%2F&psig=AOvVaw01P1RNzCGamnmyMd1bAQKn&ust=1577439171212000&source=images&cd=vfe&ved=0CAIQjRxqFwoTCJDzz_6A0-YCFQAAAAAdAAAAABAD)

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[](https://www.google.co.uk/url?sa=i&url=https%3A%2F%2Fwww.ebay.co.uk%2Fitm%2FOld-Collectable-Vintage-Hoover-Vacuum-Cleaner-%2F223302855758&psig=AOvVaw2HwSn1YGqNONC8XdjdeUJt&ust=1577439248644000&source=images&cd=vfe&ved=0CAIQjRxqFwoTCLC0pqSB0-YCFQAAAAAdAAAAABAD)

1. [](https://www.google.co.uk/url?sa=i&url=https%3A%2F%2Fwww.apple.com%2Fshop%2Fbuy-ipad%2Fipad-pro%2F11-inch-display-64gb-space-gray-wifi&psig=AOvVaw3AQ8jk_pziT-liHC5HNLMC&ust=1577439387781000&source=images&cd=vfe&ved=0CAIQjRxqFwoTCKiK3uWB0-YCFQAAAAAdAAAAABAH)***Explain the engineering developments which have happened and allowed the products to develop as below:***



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|  |  |  |  |
| --- | --- | --- | --- |
| **Identify** the different types of power | | **Describe** how energy is created. | **Explain** the effect  (positives and negatives) |
| TIDAL POWER | [Image result for Tidal power"](https://www.google.co.uk/url?sa=i&url=https%3A%2F%2Fwww.energycentral.com%2Fc%2Fcp%2Fproblem-tidal-energy&psig=AOvVaw3utzdUKTjVnXVDCYrUydDA&ust=1577279031681000&source=images&cd=vfe&ved=0CAIQjRxqFwoTCNCEr7eszuYCFQAAAAAdAAAAABAD) |  |  |
| Solar power | C:\Users\mfawcett5\AppData\Local\Microsoft\Windows\INetCache\Content.MSO\42C7A3E2.tmp |  |  |
| Nuclear power | C:\Users\mfawcett5\AppData\Local\Microsoft\Windows\INetCache\Content.MSO\FC39CE40.tmp |  |  |
| Wind power | C:\Users\mfawcett5\AppData\Local\Microsoft\Windows\INetCache\Content.MSO\26618E4E.tmp |  |  |
| GEOTHERMAL POWER | [Image result for geothermal power"](https://www.google.co.uk/url?sa=i&url=https%3A%2F%2Fen.wikipedia.org%2Fwiki%2FGeothermal_power&psig=AOvVaw0am5SIqfWzxetkxMhBEiHJ&ust=1577279484605000&source=images&cd=vfe&ved=0CAIQjRxqFwoTCKib85CuzuYCFQAAAAAdAAAAABAD) |  |  |
| HYDROELECTRIC POWER | [Image result for hydro power"](https://www.google.co.uk/url?sa=i&url=https%3A%2F%2Fwww.energydigital.com%2Frenewable-energy%2Feaif-injects-5634mn-142bn-nachtigal-hydro-power-plant&psig=AOvVaw22_v3XH-QWRBIVfrA_kJ2G&ust=1577279238075000&source=images&cd=vfe&ved=0CAIQjRxqFwoTCKCcqpmtzuYCFQAAAAAdAAAAABAD) |  |  |
| FOSSIL FUEL POWER STATION | [Image result for fossil fuel power station"](https://www.google.co.uk/url?sa=i&url=http%3A%2F%2Fwww.takepart.com%2Farticle%2F2015%2F08%2F06%2Fpower-plant-emissions-27-year-low&psig=AOvVaw1u_iIa-fw_jS-nNUl6ibI0&ust=1577279539428000&source=images&cd=vfe&ved=0CAIQjRxqFwoTCMi_zaquzuYCFQAAAAAdAAAAABAO) |  |  |