**Preparing for Transition from Key Stage 4 to Key Stage 5**

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| **Subject** | **Qualification** |
| **Engineering** | **L3 BTEC** |
| **Recommended Reading Materials** | **Recommended Websites**  |
| * Level 2 BTEC First in Engineering Student Book

(ISBN 9781446902431)* Level 3 Pearson BTEC National Engineering – Student book (ISBN 978-1-292-14100-8)

 | <https://qualifications.pearson.com/en/subjects/engineering.html> - Pearson[www.kupper.org.uk/engineering/](http://www.kupper.org.uk/engineering/) - Kupper<https://www.theiet.org> - IET sites[https://mathsmadeeasy.co.uk/gcse-maths-revision/ - MME](https://mathsmadeeasy.co.uk/gcse-maths-revision/)<https://www.bbc.co.uk/bitesize/examspecs/z9p3mnb> - BBC bitesize |
| **Preparation Tasks** | **Recommended Research**  |
| Watch these selections of YouTube clips on engineering principles and processesMetal Casting* <https://youtu.be/TVsJlWEzZY8>

Tap & Die; Making threads* <https://youtu.be/r6Ijd9o-C10>

Introduction to Milling* <https://youtu.be/HfIaISnqHOk>

Drill Press / Pillar Drills & Safety;* <https://youtu.be/yYenTisnkwY>
 | Metals and Properties<https://fractory.com/types-of-metal/><http://www.technologystudent.com/designpro/metals1.htm>Plastics and Processes [www.bpf.co.uk/plastipedia/processes/Default.aspx](http://www.bpf.co.uk/plastipedia/processes/Default.aspx)Electronics<https://www.youtube.com/playlist?list=PLL_nf1OmixTT8ZPpWYcxVEjsp33y0C0o9> |
| **Recommended trips or visits this Summer** |
| * Science Museum <https://www.sciencemuseum.org.uk/see-and-do/engineer-your-future>
* Design Museum <https://designmuseum.org>
* [London Transport Museum](https://www.ltmuseum.co.uk/) www.ltmuseum.co.uk
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| **Tasks to Complete** |
| Use the Preparation and Research sections to help you complete these tasks1. <http://www.technologystudent.com/pdfs/MATERL5.pdf>
2. <http://www.technologystudent.com/PDF3/pulley3.pdf>
3. <http://www.technologystudent.com/pdf17/metalt8.pdf>
4. <http://www.technologystudent.com/pdf17/metalt9.pdf>

 Print, collate and staple sheets on completion.**Further Tasks:**1. Think about all the different disciplines in Engineering then think about the different functions in each of these disciplines. Research what this different work might entail.
2. Find at least three famous Engineers that had an impact on the world and research what they built, made. (e.g. Isambard Kingdom Brunel)
3. Look around you and think how different things are designed, manufactured or built
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