



Getting Ahead – Pre-course Work

#ThinkBrock

Engineering Level 3 Extended Certificate (A Level Equivalent)

Welcome to **Engineering**. In preparation for the start of the course, please complete these tasks and have them with you to hand in during your first week of college in September.

These tasks should take you approximately four and a half hours to complete and are designed to give you an introduction to the subject, and the expectations we have for you to complete at least four and a half hours of independent study, per subject, per week.

Task 1 – Bass Drum Pedal Construction



A manufacturing company wants to start making base drum pedals.

Sketch the separate parts that make up the pedal. The sketches don't have to be perfect; we just need a rough idea of size and shape.

Explain how the mechanism works, why it returns to its starting position and why the beater (the bit that hits the drum) travels further than the drummer's foot.

What materials could be used for the various parts if the company wanted to make a 'High End' (expensive) pedal?

If the company wanted to make an 'entry level' (cheap) pedal, what materials could they use to save costs?

The pedals are being sold mainly to Thrash Metal bands. What do you think are the most likely parts to fail under prolonged use, and how could we make the pedal last longer under such extreme conditions?



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Getting Equipped

You will need the following:

- Notepad
- Pens and pencils
- Ruler
- Calculator