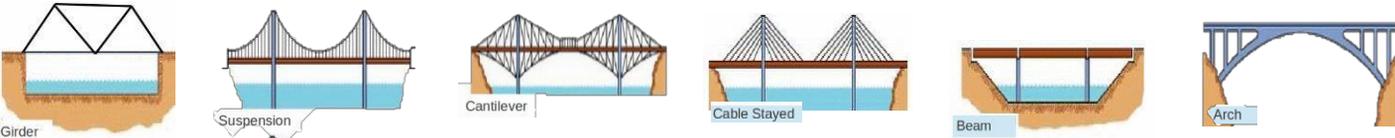


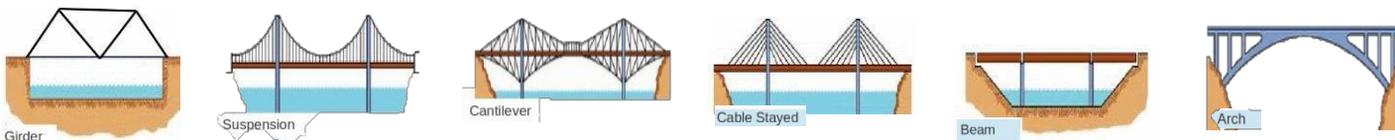
A Level Physics Bridging Project

Task 1 – Get organised!



Make sure you have the following items and bring them with you to your first lesson:

- Clear 30cm ruler
- Scientific calculator
- Lever arch ring binder folder
- Set of 10 extra-wide dividers for your folder
- Pad of A4 lined/squared paper
- Pens (black x2, green x1, purple x1)
- Pencil (x2) *[plus a sharpener, if you chose not to use a mechanical pencil]*
- Rubber
- Protractor



Task 2 – Keep your head above water!

A level Physics is a big jump up from GCSE. To give yourself the best start to A Level, you need to make sure that you do not forget the knowledge and skills you have acquired whilst studying for your GCSEs.

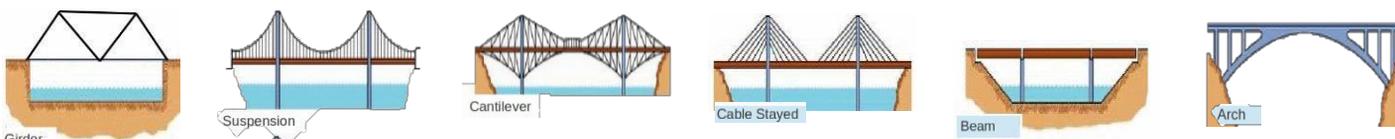
- Purchase the book "Head Start to A-Level Physics" [Publisher: CGP. ISBN: 9781782942818]
 - it is available on Amazon.
- Memorise** the quantity symbols, units, unit abbreviations, prefix meanings and prefix symbols on page 1. **You will be tested** on this during your first week of lessons.
- Work through Sections 1 and 2 of this book (pages 2-22), completing the questions at the bottom of each page.

Your work must be laid out clearly. Each set of answers should be given an underlined title which includes the page number of the questions

e.g. Resolving Vectors, Page 5

After each set of questions, in green pen, self-assess your work using the answers at the back of the book. Bring these to your first lesson.

Keep a list of any topics/questions you struggle with.



Task 3 – Listen Physics, Think Physics, Talk Physics!

Before you know it, you will be thinking about your post-18 options. It will be the biggest decision of your life so far – whether to go on to work or further study, and which area of either is best for you. Whatever you choose, you will go through a series of applications and interviews. To do well, it is really important that you have an appreciation of your subject outside the context of school and exams.

Physics is the basis of many exciting technological developments that are happening now. Many of these technologies are aimed at addressing climate change. A great example is Hyperloop that might revolutionise long distance transport and dramatically reduce carbon emissions. These links will give you an understanding of the technology from a few different perspectives. There's a lot more information to be found on the internet. Have look and see what you can find.

<https://en.wikipedia.org/wiki/Hyperloop>

<https://physicsworld.com/a/from-hype-to-hyperloop/>

<https://www.youtube.com/watch?v=pxbbWba9jZ0>

<https://www.youtube.com/watch?v=I8sOxSa3j3g>

<http://forums.xkcd.com/viewtopic.php?t=118055>

<https://xkcd.com/1904/>

<https://www.ph.ed.ac.uk/news/2017/students-build-hyperloop-prototype-for-engineering-competition-17-09-04>

CRITICAL REFLECTION FRAMEWORK

This framework is here to support you in identifying and developing options of what to write. There are no right or wrong responses but you may find "The what?", "So what?" and "Now what?" helpful.

The what?

A brief description, your own words, of what Hyperloop is (or will be).

So what?

What are the potential implications of Hyperloop? How might it change society? How likely is it to be successful? What are the main technical challenges?

Now what?

Has this interested you? What else would you like to know about?

Task 4 – Sign up to Seneca and Isaac Physics

These are really useful resources for revision. You should make sure you have set up logins for them and familiarised yourself with using them over the summer.

Seneca – go to <https://www.senecalearning.com> and join the A Level Physics – Year 12 class with class code: 3j0nc9nfax

Isaac Physics – go to <https://isaacphysics.org/> and use this link to join the class <https://isaacphysics.org/account?authToken=CACJR9>

Optional Extras

You have a long Summer ahead you – in case the above is not enough...

Check out "Essential Maths Skills for A-Level Physics"
Publisher: CGP
ISBN:9781782944713

Download the TED Talks app or visit the TED Talks website. Listen to some talks on Physics. Send me a link to any you find really interesting.

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