

15 things YOU can do to ensure success (Paper 1)

1. Sketch out an alpha decay and beta decay, and label with what each involves and what is fired off from the nucleus	2. Use sticky notes to label up key items in your house that help reduce heat loss, explaining how they do it.	3. Watch a youtube clip explaining conduction and radiation https://www.youtube.com/watch?v=tn1RrHbA5s	4. Explain how to calculate the efficiency of a system using a 5 step guide	5. Write down the top 10 most important facts to remember about energy transfer
6. Make a mind map listing all energy types with an example	7. Draw a table showing how ionising and penetrating alpha, beta and gamma are	8. Draw a diagram of the National Grid, labelling the role of transformers, the power cables and the producer and consumer in the system.	9. Draw a series circuit and a parallel circuit. State the rules for current and potential difference in each	10. Annotate a worked example to find the speed using the kinetic energy equation
11. Find a picture of a plug online and colour in the different wires, explaining what each does	12. Teach your parents what refraction and diffraction are	13. Write down the top 10 most important facts radioactivity	14. Draw a flow chart to explain how a fossil fuel power station produces electricity	15. Make a paint card for how a geothermal, solar cell, wave, tide and wind all produce electricity. (5 in total!)
16. Watch this video about specific latent heat https://www.youtube.com/watch?v=x7GZ2DXef84	17. Make a set of flash cards for the electronic components	18. Explain to your parents how work done and energy transferred are linked	19. Write down all the units for the physical quantities equation list.	20. Write the method you would need to follow to find the density of a regular and irregular object.

15 things YOU can do to ensure success (Paper 2)

1. Think about your journey to/from school and sketch the distance-time and speed-time graphs for it, annotating your motion at each stage	2. Draw a tug of war and label it about why the groups don't move and why one group will eventually win, focusing on the forces involved	3. Watch a youtube clip explaining Newton's laws of motion https://www.youtube.com/watch?v=kKKM8Y-u7ds	4. Make a mind map showing what would affect the thinking and braking distances of car – make it clear which one each factor affects	5. Define centre of mass
6. Check the difference between a scalar quantity and a vector quantity then give 3 examples of each.	7. Write a dummie's guide on how to complete the resolution of forces.	8. Revisit your work on the uses of electromagnets. Rewrite your explanations, highlighting improvements	9. Write the method to investigate how a spring extends when loaded with a force.	10. Explain how your radio works to your parents.
11. Draw a flow chart to explain how an image is made with an x-ray	12. Draw a bar magnet, straight wire and a solenoid and draw the magnetic field around each of them.	13. Teach your parents what refraction and diffraction are	14. Make a mnemonic for the waves in the electromagnetic spectrum.	15. Think of an analogy for how refraction occurs!