Year 11 AQA Combined Sciences (Synergy) Revision - Science faculty

Revision night – Week 1 Monday

Resources provided to support your child

As you are aware there are no published revision guides for the AQA Synergy course at present. Revision guide are available but come with a synergy map so they can navigate through the book.

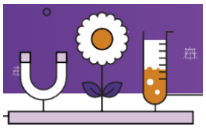
We have also set pupils up with a bespoke account for the revision tool SENECA.

https://www.senecalearning.com/

An E-book which is the text we use in school can be found on the kerboodle AQA GCSE Sciences 9–1 website.

https://www.kerboodle.com

BBC bitesize is also a very useful website as it is in the AQA synergy format and has a lot of useful resources.



https://www.bbc.co.uk/bitesize/examspecs/zw488mn

Your child should also have made flashcards with all the equation and SI units that they need for the course.

Ways to support your child

Encourage the use of a revision timetable, with all subjects equally accounted for, and make sure they stick with it. Ask them to tell you what topics that they have been studying on Seneca or show you flash cards that they have made using BBC bitesize.

Use the equation flashcards for your child and quiz them on memorising the equations and the SI units.

Holiday work

Xmas holidays your child was given a required practical booklet to complete which involved watching videos and making notes about all the required practicals for the course. The answers to the exam questions have been also provided this month. Please check that this has been completed and the exam style questions have been self-assessed. It is very important that the pupils remember that the practical's also form part of the exam.

Exam practice is essential for success. Your child will be provided with exam papers to complete over the half term holiday. Please make sure this is completed to the highest standard. A mark scheme will be available after the half term holiday which will be on class charts so you can support your child with marking this work. Pupils can then discuss problem areas with their class teachers.

Other useful resources:

https://mathsmadeeasy.co.uk/gcse-science-revision/gcse-combined-science-aqa-past-papers/ This is full of past papers. Student can also use combined trilogy papers for revision as well as the synergy papers.

https://www.youtube.com/channel/UCqbOeHaAUXw9Il7sBVG3_bw/videos -excellent video resources for all areas of science to help understanding of harder concepts.

https://www.youtube.com/channel/UCBgvmal8AR4QIK2e0EfJwaA - lots of videos and revision resources.

Finally we are as passionate as you about getting the best out of your child and have every confidence that they will be successful in the summer. We thank you for all your support.

The science faculty.

Synergy equations

Equation number	Word equation	Symbol equation
1	weight = mass × gravitational field strength (g)	$W = m\ g$
2	work done = force × distance (along the line of action of the force)	$W = F\ s$
3	force applied to a spring = spring constant × extension	$F = k\ e$
4	distance travelled = speed × time	$s = v\ t$
5	acceleration = $\frac{\text{change in velocity}}{\text{time taken}}$	$a = \frac{\Delta v}{t}$
6	resultant force = mass × acceleration	$F = m\ a$
7 HT	momentum = mass × velocity	$p = m\ v$
8	kinetic energy = 0.5 × mass × (speed)^2	$E_k = \frac{1}{2} m\ v^2$
9	gravitational potential energy = mass × gravitational field strength (g) × height	$E_p = m\ g\ h$
10	power = $\frac{\text{energy transferred}}{\text{time}}$	$P = \frac{E}{t}$
11	power = $\frac{\text{work done}}{\text{time}}$	$P = \frac{W}{t}$
12	efficiency = $\frac{\text{useful output energy transfer}}{\text{total input energy transfer}}$	
13	efficiency = $\frac{\text{useful power output}}{\text{total power input}}$	
14	wave speed = frequency × wavelength	$v = f\ \lambda$
15	charge flow = current × time	$Q = I\ t$
16	potential difference = current × resistance	$V = I\ R$
17	power = potential difference × current	$P = V\ I$
18	power = (current)^2 × resistance	$P = I^2\ R$
19	energy transferred = power × time	$E = P\ t$