

Online Catch Up Learning Guide

Subject - Physics

Key Stage 4 (AQA GCSE)

Year 9 and 10. Year 10 will be covering this content to build on learning on these topics done in Year 9 during lockdown

Term	Topics	Online learning resources
3	Physics is taught to Y9 and Y10 students in the third term by both of their science teachers, who will be teaching different aspects of the course. This content will be assessed in Paper 1 of the two physics exams. Teacher 1 • Energy (topic 6.1) • Electricity (topic 6.2) Teacher 2 • Particle model of solids, liquids and gases (topic 6.3) • Atomic structure and radioactivity (topic 6.4)	AQA Combined Science Specification https://www.aqa.org.uk/subjects/science/gcse/combined-science-trilogy-8464 The topic numbers refer to sections in this document • Energy (topic 6.1) https://classroom.thenational.academy/units/energy-c750 • Electricity (topic 6.2) https://classroom.thenational.academy/units/electricity-f083 • Particle model of solids, liquids and gases (topic 6.3) https://classroom.thenational.academy/units/particle-model-of-matter-a6d5 • Atomic structure and radioactivity (topic 6.4) https://classroom.thenational.academy/units/atomic-structure-d811 Required practicals – students need to be fluent with the How Science Works angle for a series of required practicals. These are usually done as class practical experiments with follow up lessons • AQA's glossary of the key words for the How Science Works aspect of the course https://filestore.aqa.org.uk/resources/science/AQA-SCIENCE-GCSE-SUBJECT-VOCAB.PD • A good recap of errors and uncertainties https://www.youtube.com/watch?v=LezXeEssD4g&list=PLAd0MSIZBSsGNWKdHJdQYIndKI3HZUrSB&index=12 • Required practicals that relate to the Paper 1 physics content. Each practical is well explained and sample results measured in the video. https://www.youtube.com/watch?v=MUY1o4ogCvw&list=PLAd0MSIZBSsGNWKdHJdQYIndKI3HZUrSB&index=1 https://www.youtube.com/watch?v=lvqu6JAbaKc&list=PLAd0MSIZBSsGNWKdHJdQYIndKI3HZUrSB&index=5 https://www.youtube.com/watch?v=loeRLKNeUsc&list=PLAd0MSIZBSsGNWKdHJdQYIndKI3HZUrSB&index=6 https://www.youtube.com/watch?v=m_3JrA-sDEg&list=PLAd0MSIZBSsGNWKdHJdQYIndKI3HZUrSB&index=8 https://www.youtube.com/watch?v=51mSWRfAsAw&list=PLAd0MSIZBSsGNWKdHJdQYIndKI3HZUrSB&index=9 https://www.youtube.com/watch?v=ksPfzUjMbBk&list=PLAd0MSIZBSsGNWKdHJdQYIndKI3HZUrSB&index=10

Year 11

Term	Topics	Online learning resources
1	One physics teacher will cover the Paper 2 content, recapping work from lockdown. After this, revision will cover Paper 1 (use the resources above) and Paper 2. Physics Paper 2 Forces and movement (Topic 5) Waves (Topic 6) Magnetism and Electromagnetism (Topic 7) Students studying the Single GCSE Physics will have extra content in Topics 1 – 7 (this is clearly signposted in the specification and ONA resources) plus an additional topic, Topic 8 Space.	AQA Combined Science Specification https://www.aqa.org.uk/subjects/science/gcse/combined-science-trilogy-8464 The topic numbers refer to sections in this document AQA Single GCSE Physics Specification https://www.aqa.org.uk/subjects/science/gcse/physics-8463 Physics Paper 2 - Forces and movement (Topic 5) https://classroom.thenational.academy/units/forces-6562 - Waves (Topic 6) https://classroom.thenational.academy/units/waves-4cef - Magnetism and Electromagnetism (Topic 7) https://classroom.thenational.academy/units/magnetism-bf8d Single GCSE Physics only - Space (Topic 8) https://classroom.thenational.academy/units/space-physics-only-a558 Required practicals – students need to be fluent with the How Science Works angle for a series of required practicals. These are usually done as class practical experiments with follow up lessons - AQA’s glossary of the key words for the How Science Works aspect of the course https://filestore.aqa.org.uk/resources/science/AQA-SCIENCE-GCSE-SUBJECT-VOCAB.PD - A good recap of errors and uncertainties https://www.youtube.com/watch?v=LezXeEssD4g&list=PLAd0MSIZBSsGNWKdHJdQYIndKI3HZUrSB&index=12 - Required practicals that relate to the Paper 2 physics content. Each practical is well explained and sample results measured in the video. https://www.youtube.com/watch?v=LFwio38EK9s&list=PLAd0MSIZBSsGNWKdHJdQYIndKI3HZUrSB&index=2 https://www.youtube.com/watch?v=J9-J0cFQCrE&list=PLAd0MSIZBSsGNWKdHJdQYIndKI3HZUrSB&index=4 https://www.youtube.com/watch?v=OY0IXHPo_nM&list=PLAd0MSIZBSsGNWKdHJdQYIndKI3HZUrSB&index=7 https://www.youtube.com/watch?v=QQCJeAqBumE&list=PLAd0MSIZBSsGNWKdHJdQYIndKI3HZUrSB&index=11 There is one required practical for the Single GCSE Physics course only – it fits within the content of Topic 6, Waves. https://www.youtube.com/watch?v=tqiqN3y1ze4&list=PLAd0MSIZBSsGNWKdHJdQYIndKI3HZUrSB&index=3

KEY STAGE 5

Unit	Online learning resources
1&2 Throughout the AS & A level courses, all of these resources would be beneficial for students to access	Kerboodle online platform: https://www.kerboodle.com/app Students are given login details to this platform so they could access the online material for the lessons in the form of electronic textbooks, SAQ and EOC question banks can be accessed and attempted as part of self-learning process. VIDLEARN Slides from the tutor: These are uploaded to the TEAMS as class material and any other slides used by the TUTOR's own slides are uploaded as well. IOP resources: Institute of Physics (IOP) offers some excellent Physics resources: These would assist in tackling definition-based questions. Namely TAP – Teaching Advanced Physics and these would be uploaded to teams as class materials and an associated posting Cambridge exam board resources: Bank of AS and A2 worksheets and associated Mark schemes would be uploaded to the TEAMS classroom materials. The content is available here. All students have a paper copy of this document. https://filestore.aqa.org.uk/resources/physics/specifications/AQA-7407-7408-SP-2015.PDF This site has clearly accessible resources tailored to the AQA course. This includes exam questions organised by topic which is incredibly useful https://www.physicsandmathstutor.com/physics-revision/a-level-aqa/ This is an excellent resource portal for searching and learning Exam board specific material and past paper questions topic by topic. Also a huge back catalogue of past papers – also papers from other exam boards, which should always be approached with a little caution but can be very useful. The key papers and resources to use are 'AS & A Level from 2015' AQA papers. https://www.physicsandmathstutor.com/past-papers/a-level-physics/ Good coverage of just about everything here https://www.youtube.com/channel/UCZzatyx-xC-DI_VVUVHYDYw