

Science Department

Absence Learning Overview



The Queen Elizabeth
Academy

Year 10

Week Beginning	Topic	Seneca Links	Additional Resources
31/08/20	Atomic Structure, isotopes and radioactive decay	Phys 4.1.3 - Atoms and ions Phys 4.1.4 - Isotopes Phys 4.2.1 - 4.2.2. Radioactive Decay	https://www.bbc.co.uk/bitesize/guides/zpjb82/revision/1 GCSE Bitesize - Atomics Structure and Isotopes https://www.bbc.co.uk/bitesize/guides/z3tb8mn/revision/1 GCSE Bitesize Radioactive Decay
07/09/20	Types of decay, penetrating powers and irradiation and contamination	Phys 4.2.3 - Types of radioactive emission Phys 4.2.5 - Radioactive Decay Equations Phys 4.2.6 - Half Life Phys 4.2.7 - 4.2.8 - Uses and dangers of radiation	https://www.youtube.com/watch?v=nW0S1C6wVrg&list=P_L9louNCPbCxXTU7zSX4lvJDLrtCEmqEMU&index=5 Properties of types of radiation https://www.youtube.com/watch?v=zXw2cOSBB8E Half Life https://www.bbc.co.uk/bitesize/guides/z83dxfr/revision/1 Uses and Dangers of Radiation https://www.bbc.co.uk/bitesize/guides/zpkbv9g/revision/1 Sample Exam Questions - Combined Science
14/09/20	Aerobic and Anaerobic respiration, Response to exercise and metabolism	Bio 4.2.1 - Respiration Bio 4.2.2. - Exercise Bio 4.2.3 - Respiration: Hyper Learning	https://www.youtube.com/watch?v=Xp0o19gWX7E Respiration video https://youtu.be/9tEPGgELjL0 Anaerobic respiration in plants https://www.bbc.co.uk/bitesize/guides/zcyj97h/revision/4 Response to exercise https://www.youtube.com/watch?v=UOQYveYOMrs Metabolism Video https://www.bbc.co.uk/bitesize/guides/zcyj97h/test Sample Exam Style Questions
21/09/20	What is Resistance, Resistance Required Practical and V-I Characteristics	Phys 2.2.1 - 2.2.3 - Resistance, electrical work and Ohm's Law Phys 2.3.1 - 2.3.2 - Circuit diagrams and components, diodes, LDR's and Thermistors	https://www.bbc.co.uk/bitesize/guides/zgvq4qt/revision/3 Resistance https://www.youtube.com/watch?v=X9cAcsDmo8w Length of wire - Required Practical https://www.bbc.co.uk/bitesize/guides/zgvq4qt/revision/5 Circuit components https://www.youtube.com/watch?v=2TBS3oinmig Voltage-Current graphs
28/09/20	Power, energy transfers and using electricity domestically	Phys 2.4.1 - 2.4.4 - Domestic uses and electrical safety	https://www.bbc.co.uk/bitesize/guides/zw8n2nb/revision/1 Mains electricity and alternating current https://www.youtube.com/watch?v=2g8SusMrX_o Plugs, wires and National Grid video
05/10/20	Structure of Heart and Blood Vessels,	Bio 2.3.3 - Heart Bio 2.3.2 - 2.3.3 Arteries, Veins and Capillaries Bio 2.3.5 - 2.3.6 - Blood and Blood Cells	https://www.bbc.co.uk/bitesize/guides/zsnscrd/revision/1 Circulatory System https://www.youtube.com/watch?v=yT_FEJZNjpY Circulatory System Video
12/10/20	Lungs and Cardiovascular disease	Bio 2.3.4 - Circulatory System and Gas Exchange Bio 2.4.2 - Risk Factors Bio 2.4.3 - 2.4.4 - Heart Disease and Treating Heart Disease	https://www.bbc.co.uk/bitesize/guides/zpxv6yc/revision/4 Gas Exchange https://www.bbc.co.uk/bitesize/guides/zsnscrd/revision/8 Cardiovascular Disease https://www.youtube.com/watch?v=UN5BIPfMUkg Cardiovascular Disease video

19/10/20	Weight, work done and elasticity	Phys 5.2.1 - Gravity Phys 1.1.4 - Mechanical Work Done Phys 5.2.4 - Stretching a Spring	https://www.bbc.co.uk/bitesize/guides/z232k2p/revision/1 Gravity https://www.bbc.co.uk/bitesize/guides/z9hk3k7/revision/3 Work Done https://www.youtube.com/watch?v=JHEmPZ-YnrU Work Done by a force video
02/11/20	Work done in a spring, calculating elastic potential energy, kinetic energy	Phys 5.2.5 - Hooke's Law Phys 5.2.6 - Elastic Potential Energy	https://www.bbc.co.uk/bitesize/guides/z9hk3k7/revision/2 Hookes Law https://www.youtube.com/watch?v=8Z8jUW03z3s Elastic Potential Energy
09/11/20	Assessment week		
16/11/20	Changes of state, ionic bonding, properties of ionic bonding, simple covalent substances	Chem 2.2.1 - 2.2.4 - States of Matter, Changing State and Changing State Hyper Learning Chem 2.1.2 - 2.1.3 - Ionic Bonds and Ionic Compounds	https://www.bbc.co.uk/bitesize/guides/zwsdgdgm/revision/1 States of Matter https://www.bbc.co.uk/bitesize/guides/ztc6w6f/revision/1 Ionic bonds and Compounds https://www.youtube.com/watch?v=6DtrrWA5nKE Ionic Bonding https://www.youtube.com/watch?v=kShlflsvWbQ Ionic Compounds
23/11/20	Giant covalent substances, nanoscience, properties of metals and polymers	Chem 2.1.4 - Covalent and Metallic Bonds Chem 2.3.3 Metals and Giant Covalent Structures Chem 2.3.5 - 2.3.6 Carbon Structures: Diamond and Graphite and Graphene and Fullerenes Chem 2.3.7 - 2.3.8 - Nanotechnology and Surface Area to Volume ratio and Nanotechnology Uses	https://www.bbc.co.uk/bitesize/guides/z373h39/revision/1 Covalent Bonds https://www.bbc.co.uk/bitesize/guides/ztgyc6y/revision/1 Metallic Bonding https://www.bbc.co.uk/bitesize/guides/zgq8b82/revision/1 Giant Covalent Compounds https://www.youtube.com/watch?v=70dOzvhN-8M Nanoparticles https://www.youtube.com/watch?v=4ZEtS5qLOHs Allotropes of Carbon (Graphene and Fullerenes)
30/11/20	Describing wave types and wave equation, EM spectrum and uses of EM spectrum	Phys 6.1.2 - 6.1.3 - Transverse and Longitudinal Waves Phys 6.1.1 - Basics and Formula Phys 6.4.1 - 6.4.3 - Properties and EM waves	https://www.bbc.co.uk/bitesize/guides/z3vq4qt/revision/1 Transverse and Longitudinal Waves https://www.bbc.co.uk/bitesize/guides/zwkn2nb/revision/1 Properties of waves https://www.youtube.com/watch?v=Aucu7YshyQ0&t=43s Wave equation https://www.youtube.com/watch?v=7v2gs8rdQzU Electromagnetic Wave Spectrum https://www.youtube.com/watch?v=u5vkYjV1V1A&t=3s Properties of EM Waves
07/12/20	Wave speed string Required Practical, Wave speed ripple tank Required Practical, reflection and refraction	Phys 6.1.4 Ripple Tank Phys 6.2.1 - 6.2.2- Waves at a Boundary	https://www.bbc.co.uk/bitesize/guides/zwkn2nb/revision/4 Ripple Tank Required Practical https://www.youtube.com/watch?v=OY0IXHPo_nM&t=324s Ripple Tank Practical https://www.bbc.co.uk/bitesize/guides/z2jdxs/revision/1 Waves at a Boundary

14/12/20	Diffusion, active transport and osmosis	Bio 1.3.1 Diffusion Bio 1.3.2 Exchange Surfaces Bio 1.3.4 Active Transport Bio 1.3.3 Osmosis Bio 1.3.6 Grade 9 - Cell Transport	https://www.youtube.com/watch?v=LUPHohqIPTU Diffusion video https://www.bbc.co.uk/bitesize/guides/zs63tv4/revision/1 Diffusion https://www.bbc.co.uk/bitesize/guides/zs63tv4/revision/8 Active transport https://www.youtube.com/watch?v=AxXN-j6UzOY Active Transport https://www.bbc.co.uk/bitesize/guides/zs63tv4/revision/4 Osmosis https://www.youtube.com/watch?v=4Eq8rO3fABM Osmosis video
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Guide to logging onto Seneca:

Your teacher should have set up a class and emailed you a link to it. Add your account using your school email address and the same password you use to log in at school. Any issues, email your teacher.

Guide to using Educake:

Teachers will set homework and tests using Educake. You will have been using this for two years now. If you forget your details, email your teacher to reset them. There is also a section where you can make your own tests on a topic.