Y10 Mock Exams – Revision

Subject	Assessment Length	Student overview	Revision resources
English Language			
Mathematics			
Science	2 exams of 90 minutes each	Paper 1: Synergy 1- Life and environmental processes. Topics covered: “Building blocks”- this topic includes: **States of matter**, density, gas pressure and temperature, changes of state, latent heat and specific heat capacity, pure substances and mixtures. Pages 4-21 of the Life sciences textbook available on kerboodle. **Cells:** cell structures and functions (animal and plant cells, bacterial cells). Movement of molecules- diffusion, active transport and osmosis, differentiation and stem cells. Cell division including mitosis and meiosis. Pages 32-53 of the Life sciences textbook available on kerboodle. **Atomic structure**-scientific models of the atom, sub-atomic particles, isotopes, electronic structures. Pages 22-31 of the Life sciences textbook available on kerboodle. **Waves-** The properties of waves, electromagnetic spectrum- uses and dangers of each type of wave, reflection and refraction. Pages 54-72 of the Life sciences textbook available on kerboodle. Systems in the body: Aerobic and anaerobic respiration, exchanging materials, the blood, blood vessels, the heart, breathing and gas exchange, the chemistry of food, how the digestive system works, the human nervous system, reflex actions, principles of hormonal control, the role of negative feedback. Pages 74 - 104 of the Life sciences textbook available on kerboodle.	Students can log on to kerboodle http://live.kerboodle.com/secondary.common/Login.aspx This is an online resource where students can access a digital copy of the textbook and other useful resources. They will need to use a login: Essentially- all lower case: USERNAME: first letter of first name then surname PASSWORD: same as username (students can change it once they have logged in) Organisation code: AF3 (capital letters) Any issues with login, please refer them to their science teacher. Other useful websites: http://www.bbc.co.uk/education/subjects/zrkw2hv http://www.docbrown.info/gcsescience.htm (AQA 9-1) Search for mygcsescience for additional video tutorials. Paper revision resources can also be supplied by their science teacher on request.

		Lifestyle and health: Non-communicable diseases, smoking and the risk of disease, diet and exercise and disease, alcohol and carcinogens, helping the heart, replacing the heart, homeostasis, control of blood glucose levels, treating diabetes, human reproduction, hormones and the menstrual cycle, contraception and **(infertility treatment Higher tier only).** Pages 132 -161 of the Life sciences textbook available on kerboodle. Plants and photosynthesis, meristem structure, plants structures, transpiration, chlorophyll and other pigments, translocation, plant diseases Paper 2: Synergy 2- Physical sciences. Topics covered “Building blocks for understanding”. This topic includes: The developments of the periodic table, electronic structures and the periodic table. Physical and chemical trends in group 1, group 7 and group 0 (describing and explaining them). It also includes atoms, elements and compounds, chemical equations, relative masses and moles, concentrations of solutions, **equations and calculations, from masses to balanced equations (Higher tier only)** Pages 4-30 of the Physical sciences text book available on kerboodle. Interactions over large and small distances: Forces and energy changes, vectors and scalars, resultant forces, mass and weight, energy and work done, Hooke’s law. Pages 32-53 of the Physical sciences textbook available on kerboodle. Structure and bonding Ions and ionic bonding, giant ionic structures, covalent bonding, structure of simple molecules, bonding in metals. Pages 54-71 of the Physical sciences textbook available on kerboodle. Magnetism and electromagnetism Magnetic fields, electromagnetism, the motor effect.	

		Pages 72-80 of the Physical sciences textbook available on kerboodle.	
Biology	90 mins	**Students will be examined on everything that they have covered since year 9. This includes:** **Cell organisation-** covering cell structure and transport including: the use of the microscope, animal and plant cell structure and function, bacterial cell structure and function, specialised plant and animal cells, diffusion, osmosis and active transport, exchange of materials. Cell division including mitosis and meiosis, stem cells and differentiation of cells. Use pages 2 – 35 of the biology textbook available on kerboodle. **Organisation and the digestive system:** Tissues and organs, the human digestive system, the chemistry of food, catalysts and enzymes, factors affecting enzyme action, making digestion efficient. Use pages 36-51 of the biology textbook available on kerboodle. **Organising animals and plants**: the heart, helping the heart, the blood, blood vessels, breathing and gas exchange. Tissues and organs in plants, transport systems in plants, evaporation and transpiration, factors affecting transpiration. Use pages 52-71 of the biology textbook available on kerboodle. **Disease and bioenergetics:** Communicable diseases, health and disease, pathogens and disease, growing bacteria in the lab, preventing bacterial growth, preventing infections, viral diseases, bacterial diseases, diseases caused by protists and fungi. Human defence mechanisms against infection, plant diseases and plant defence mechanisms. Use pages 74-97 of the biology textbook available on kerboodle. **Preventing and treating disease** Vaccination, antibiotics and painkillers, discovering	Students can purchase revision guides and workbooks from the finance office priced £5.50 for them both or £2.75. You can also buy this using parent pay. Students should be looking at pages16-80 of their biology revision guide. Students can also log on to kerboodle http://live.kerboodle.com/secondary.common/Login.aspx This is an online resource where students can access a digital copy of the textbook and other useful resources. They will need to use a login: Essentially- all lower case: USERNAME: first letter of first name then surname PASSWORD: same as username (students can change it once they have logged in) Organisation code: AF3 (capital letters) Any issues with login please refer them to their science teacher. Other useful websites: http://www.bbc.co.uk/education/subjects/zrkw2hv http://www.docbrown.info/gcsescience.htm (AQA 9-1) Search for mygcsescience for additional video tutorials. Paper revision resources can also be supplied by their science teacher on request.

		drugs, developing drugs, making and using monoclonal antibodies. Use pages 98-111 of the biology textbook available on kerboodle. Non-communicable diseases, cancer, smoking and the risk of disease, diet and exercise and disease, alcohol and other carcinogens. Use pages 112-123 of the biology textbook available on kerboodle.	
Chemistry	90 mins	**Atoms, bonding, and moles.** Topics which will be included on the test are: Atoms, equations, separating mixtures, fractional distillation and paper chromatography. History of the atom, structure of the atom, ions, atoms and isotopes, electronic structures. Pages 4-18 of the chemistry textbook available on kerboodle. Also the development of the periodic table, electronic structures and the periodic table, describing and explaining physical and chemical trends in groups 1, 7 and 0. Pages 22-35 of the chemistry textbook available on kerboodle. Additionally states of matter, ions, ionic compounds and ionic bonding, covalent bonding, giant covalent bonding and allotropes of carbon, fullerenes and graphene, bonding in metals, giant metallic structures, nanoparticles and applications of nanoparticles. Pages 62-78 of the chemistry textbook available on kerboodle. Chemical calculations: Relative masses and moles, equations and calculations, balanced equations, yield, atom economy, expressing concentration, titrations, titration calculations, volumes of gases. Pages 62-78 of the chemistry textbook available on kerboodle. Chemical changes:	Students can purchase revision guides and workbooks from the finance office priced £5.50 for them both or £2.75. You can also buy this using parent pay. Students should be looking at pages16-59 of their chemistry revision guide. Students can also log on to kerboodle http://live.kerboodle.com/secondary.common/Login.aspx This is an online resource where students can access a digital copy of the textbook and other useful resources. They will need to use a login: Essentially- all lower case: USERNAME: first letter of first name then surname PASSWORD: same as username (students can change it once they have logged in) Organisation code: AF3 (capital letters) Any issues with login please refer them to their science teacher. Other useful websites: http://www.bbc.co.uk/education/subjects/zrkw2hv http://www.docbrown.info/gcsescience.htm (AQA 9-1) Search for mygcsescience for additional video tutorials. Paper revision resources can also be supplied by their science teacher on request.

		The reactivity series, displacement reactions, extracting metals, salts from metals and salts from insoluble bases, neutralisation and the pH scale, strong and weak acids. Pages 84-101 of the chemistry textbook available on kerboodle. Electrolysis What is electrolysis? The extraction of aluminium, electrolysis of aqueous solutions. Pages 102-111 of the chemistry textbook available on kerboodle. Energy changes Exothermic and endothermic reactions, using energy transfers from reactions, bond energy calculations, and chemical cells and batteries fuel cells. Pages 112-122 of the chemistry textbook available on kerboodle.	
Physics	90 mins	Topics taught in **energy** are: Changes in energy stores, conservation of energy, energy and work done, gravitational potential energy, kinetic energy and elastic energy stores, energy dissipation, energy and efficiency, electrical appliances, energy and power, specific heat capacity and heating and insulating buildings. Use pages 2-47 of the physics textbook available on kerboodle. **Electricity** topics include current and charge, potential difference and resistance, and series and parallel circuits. Use pages 48-52 and 58-60 of the physics textbook available on kerboodle. Particle model of matter topics include particle motion in gases	Students can purchase revision guides and workbooks from the finance office priced £5.50 for them both or £2.75. You can also buy this using parent pay. Students should be looking at pages16-50 of their physics revision guide. Students can also log on to kerboodle http://live.kerboodle.com/secondary.common/Login.aspx This is an online resource where students can access a digital copy of the textbook and other useful resources. They will need to use a login: Essentially- all lower case: USERNAME: first letter of first name then surname PASSWORD: same as username (students can change it once they have logged in) Organisation code: AF3 (capital letters) Any issues with login please refer them to their science teacher.

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History			
Geography			
GCSE RE			
GCSE PE			
Music			
Food Preparation			
Product Design			
Business			
Computer Science			
Engineering			
IT			