

Revision for Biology: Paper 1

For knowledge organisers – see JSTC website: <https://www.jstc.org.uk/science>

Topic title	Brief content overview	Required practical	External Links
B1 Cell structure and transport	<ul style="list-style-type: none"> • The world of the microscope • Animal and plant cells • Eukaryotic and prokaryotic cells • Specialisation in animal cells • Specialisation in plant cells • Diffusion • Osmosis • Osmosis in plants • Active transport • Exchanging materials 	<p>Using a light microscope.</p> <p>Investigate the effect of a range of concentrations of salt or sugar solutions on the mass of plant tissue.</p>	<p>FreeSciencelessons on YouTube : Biology paper 1 cells playlist</p> <p>https://www.youtube.com/watch?v=HBZcpzr5B2g&list=PL9IouNCPbCxVU74eQtCcqbaQdYmwzAnIC</p> <p>BBC Bitesize</p> <p>https://www.bbc.co.uk/bitesize/topics/z2s8v9q</p>
B2 Cell division	<ul style="list-style-type: none"> • Cell division • Growth and differentiation • Stem cells • Stem cell dilemmas 		<p>FreeSciencelessons on YouTube: Biology paper 1 Cells playlist</p> <p>https://www.youtube.com/watch?v=HBZcpzr5B2g&list=PL9IouNCPbCxVU74eQtCcqbaQdYmwzAnIC</p> <p>BBC Bitesize</p> <p>https://www.bbc.co.uk/bitesize/topics/z2s8v9q</p>

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<p>B3 Organisation and the digestive system</p>	<ul style="list-style-type: none"> • Tissues and organs • The human digestive system • The chemistry of food • Catalysts and enzymes • Factors affecting enzyme action • How the digestive system works • Making digestion efficient 	<p>Use standard food tests to identify food groups. Investigate the effect of pH on the rate of reaction of amylase enzyme.</p>	<p>FreeSciencelessons on YouTube: Biology paper 1 organisation playlist https://www.youtube.com/watch?v=4ui4oSHHzA&list=PL9IouNCPbCxXGDt3ATU1xM_X_F8JghPCB</p> <p>BBC Bitesize https://www.bbc.co.uk/bitesize/topics/zwtcng8</p>
<p>B4 Organising animals and plants</p>	<ul style="list-style-type: none"> • The blood • The blood vessels • The heart • Helping the heart • Breathing and gas exchange • Tissues and organs in plants • Transport systems in plants 		<p>FreeSciencelessons on YouTube: Biology paper 1 organisation playlist https://www.youtube.com/watch?v=4ui4oSHHzA&list=PL9IouNCPbCxXGDt3ATU1xM_X_F8JghPCB</p> <p>BBC Bitesize https://www.bbc.co.uk/bitesize/topics/zwtcng8</p>

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	<ul style="list-style-type: none"> • Factors affecting transpiration 		
B5 Communicable diseases	<ul style="list-style-type: none"> • Health and disease • Pathogens and diseases • Preventing infections • Viral diseases • Bacterial diseases • Diseases caused by fungi and protists • Human defence • Responses 	Investigating the effect of antiseptics or antibiotics on bacterial growth.	<p>FreeSciencelessons on YouTube: Biology paper 1 infectious diseases playlist</p> <p>https://www.youtube.com/watch?v=QYWNXp36O48&list=PL9IouNCPbCxVQPNgqka5bSs-IWe3L6OD8</p> <p>BBC Bitesize</p> <p>https://www.bbc.co.uk/bitesize/topics/z9236yc</p>
B6 Preventing and treating disease	<ul style="list-style-type: none"> • Vaccination • Antibiotics and painkillers • Discovering drugs • Developing drugs 		<p>FreeSciencelessons on YouTube: Biology paper 1 infectious diseases playlist</p> <p>https://www.youtube.com/watch?v=QYWNXp36O48&list=PL9IouNCPbCxVQPNgqka5bSs-IWe3L6OD8</p> <p>BBC Bitesize</p> <p>https://www.bbc.co.uk/bitesize/topics/z9236yc</p>

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<p>B7 Non-communicable diseases</p>	<ul style="list-style-type: none"> • Non-communicable diseases • Cancer • Smoking and the risk of disease • Diet, exercise, and disease • Alcohol and other carcinogens 		<p>FreeSciencelessons on YouTube: Biology paper 1 infectious diseases playlist</p> <p>https://www.youtube.com/watch?v=QYWNXp36O48&list=PL9IouNCPbCxVQPNgqka5bSs-IWe3L6OD8</p> <p>BBC Bitesize</p> <p>https://www.bbc.co.uk/bitesize/topics/z9236yc</p>
<p>B8 Photosynthesis</p>	<ul style="list-style-type: none"> • Photosynthesis • The rate of photosynthesis • How plants use glucose • Making the most of photosynthesis 	<p>Investigate the effect of light intensity on the rate of photosynthesis</p>	<p>FreeSciencelessons on YouTube: Biology paper 1</p> <p>https://www.youtube.com/watch?v=rAJGnS_ktk4</p> <p>BBC Bitesize</p> <p>https://www.bbc.co.uk/bitesize/topics/zgws7p3</p>
<p>B9 Respiration</p>	<ul style="list-style-type: none"> • Aerobic respiration • The response to exercise • Anaerobic respiration • Metabolism and the liver 		<p>FreeSciencelessons on YouTube: Biology paper 1</p> <p>https://www.youtube.com/watch?v=ZKAaDbTP6Dc</p> <p>BBC Bitesize</p> <p>https://www.bbc.co.uk/bitesize/topics/zgws7p3</p>
<p>Required Practical</p>			<p>FreeSciencelessons on YouTube: Biology paper 1 Required practical play list</p> <p>https://www.youtube.com/watch?v=jBVxo5T-ZQM&list=PL9IouNCPbCxU6sNg_x5rvlsLwA6gNCVzi</p>