

Curriculum Map for year 9 (biology)

Look in your exercise books for the title of the previous lesson to work out the lesson(s) you are missing. For further accuracy, ask your classmates which lesson they are currently on in case of variations between classes.

Lesson number and title	Textbook pages (When using the textbook, make notes from the information <u>and</u> answer the questions) “D” stands for double science textbook “T” stands for triple science textbook	Remote learning links (if using the lesson from Oak National Academy, watch the video while making notes and complete the worksheet)
1 Animal and plant cells	B1.2 pages 6-8	https://www.bbc.co.uk/bitesize/guides/z9hyvcw/revision/3
2 and 3 Microscopes: Inc. Required practical: Looking at cells.	Page 7 (purple box on page 7 explains required practical)	1. Watch this video: https://www.youtube.com/watch?v=jBVxo5T-ZQM 2. Complete a virtual version of the practical using the below link.

		<p>https://science-practical-simulator.web.app/ Enter code: RM548 Click on 'Biology' Click on 'Microscopy': Follow the instructions to complete the virtual practical.</p> <p>3. Write up an explanation of the required practical including equipment list and instructions.</p>
4 Light and electron microscopes	B 1.1 - Pages 4 - 5	<p>Make a timeline that shows the major advances in the development of microscopes. Answer in terms of improvements in the resolution and magnification of microscopes, and how this has helped scientists understand more about cells. You can use the internet to help you.</p>
5 Magnification calculations		<p>https://classroom.thenational.academy/lessons/order-of-magnitude-calculations-75k34d?activity=video&step=2&view=1</p> <p>https://classroom.thenational.academy/lessons/using-the-microscope-and-magnification-equation-c5k66r</p>

6 Eukaryotic and Prokaryotic cells	B1.3 – pages 8-9	https://classroom.thenational.academy/lessons/prokaryotic-and-eukaryotic-cells-6cr6ae
7 Specialisation in animals and plant cells	B1.4 & B1.5 – pages 10-13	https://classroom.thenational.academy/lessons/specialised-cells-74r66c
8 Diffusion	B1.6 - pages 14-15	https://classroom.thenational.academy/lessons/diffusion-61jker
9 Exchanging materials	B1.10 – pages 22-23	https://classroom.thenational.academy/lessons/exchange-surfaces-and-surface-area-to-volume-ratio-60tp4r
10 Osmosis	B1.7 & B1.8 – pages 16-19	https://classroom.thenational.academy/lessons/osmosis-6wu3jd
11	Osmosis Required practical (The two links should take two lessons to complete).	https://classroom.thenational.academy/lessons/osmosis-required-practical-part-1-70r6cr
12	Osmosis Required practical	https://classroom.thenational.academy/lessons/osmosis-required-practical-part-2-6gtk0d
13 Active transport	B1.9 – pages 20-21	https://classroom.thenational.academy/lessons/active-transport-6mtk2r

14 B1 assessment	Pages 24-25	Complete the end of chapter questions on pages 24-25 for revision then contact your teachers for assessment instructions.
15 Cell division	B2.1 – pages 26-27	https://classroom.thenational.academy/lessons/cell-cycle-and-mitosis-60r30t
16 Growth and Differentiation	B2.2 – pages 28-29	
17 and 18 Stem cells and Ethics	B2.3 & 2.4 – pages 30-33	https://classroom.thenational.academy/lessons/stem-cells-and-the-use-of-stem-cells-69gkac
19 B2 assessment	Pages 34-35	Complete the end of chapter questions on pages 34-25 for revision then contact your teachers for assessment instructions.
20 Organisation and the digestive system	B3.1 & 3.2 - pages 36-39	1) Read pages 36-37 and answer question 1 on page 36. 2) Complete the online lesson below: https://classroom.thenational.academy/lessons/digestion-cn66c
21 The chemistry of food	B3.3 - pages 40-41	1) Watch this virtual lesson: https://classroom.thenational.academy/lessons/food-tests-61h3cd

		<p>2) Complete a virtual version of the practical using the below link: https://science-practical-simulator.web.app/ Enter code: RM548 Click on 'Biology' Click on 'Food tests': Follow the instructions to complete the virtual practical. 3) Draw a table to summarise the chemicals used and the colour changes for each positive test.</p>
22 Catalysts and enzymes	B3.4 - pages 42-43	<p>1) Read pages 42-42. 2) Watch this video: https://www.youtube.com/watch?v=VNX9UQ08fZ4 3) Answer the textbook questions.</p>
23 Factors affecting enzyme action (temperature)	B3.5 - pages 44-45	<p>1) Read pages 44-45. 2) Watch this video: https://www.youtube.com/watch?v=qq1foXnvJao 3) Answer questions 1 and 2 on page 45.</p>

24 Factors affecting enzyme action (pH)	B3.5 - pages 44-45	https://classroom.thenational.academy/lessons/ph-and-enzymes-part-1-cru3jt https://classroom.thenational.academy/lessons/ph-and-enzymes-part-2-75h3gr
25 Enzyme and pH required practical	B3.5 - pages 44-45	<p>Complete a virtual version of the practical using the below link:</p> <p>https://science-practical-simulator.web.app/</p> <p>Enter code: RM548</p> <p>Click on 'Biology'</p> <p>Click on 'Enzymes': Follow the instructions to complete the virtual practical.</p> <p>Write up an explanation of the required practical including equipment list, instructions, and a conclusion.</p>
26 How the digestive system works	B3.6 - pages 46-47	https://classroom.thenational.academy/lessons/digestive-enzymes-6dgkgr
27 Making digestion efficient	B3.7 - pages 48-49	https://classroom.thenational.academy/lessons/absorption-74v38e
B4 Blood and blood vessels	B4.1 & 4.2 - pages 52-55	https://classroom.thenational.academy/lessons/blood-and-blood-vessels-c8t62c

The Heart	B4.3 - p56-57	https://classroom.thenational.academy/lessons/the-heart-6ct3jd
Helping the Heart	B4.4 – p58-59	https://classroom.thenational.academy/lessons/heart-disease-61k68d
The Lungs	B4.5 - 60-61	https://classroom.thenational.academy/lessons/the-lungs-ccu3ge
Plant Tissues	B4.6 - p62-63	https://classroom.thenational.academy/lessons/plant-tissue-cnh32t
Transport in plants	B4.7 - p64-65	https://classroom.thenational.academy/lessons/transport-in-plants-6rr38c
Transpiration	B4.8 & 4.9 - p66-69	https://classroom.thenational.academy/lessons/investigating-transpiration-6tjk0r

Curriculum Map for year 10 Science (Biology)

Look in your exercise books for the title of the previous lesson to work out the lesson(s) you are missing. For further accuracy, ask your classmates which lesson they are currently on in case of variations between classes.

Lesson number and title	Textbook pages (When using the textbook, make notes from the information and answer the questions)	Remote learning links (if using the lesson from Oak National Academy, watch the video while making notes and complete the worksheet)
1 Aerobic Respiration	B9.1 - pages 134-135	https://classroom.thenational.academy/lessons/respiration-71jpce
2 The response to exercise	B9.2- pages 136-137	
3 Anaerobic respiration	B9.3 - pages 138-139	https://classroom.thenational.academy/lessons/anaerobic-respiration-cdgk6d
4 Metabolism and the liver	B9.4 - pages 140-141	https://classroom.thenational.academy/lessons/metabolism-6rw3gc

5 and 6 Revision for B8 Photosynthesis and B9 Respiration	B8 pages 132-133 B9 pages 142-143	Complete the end of chapter questions for both B8 and B9 for revision then contact your teachers for assessment instructions.
7 Health and Disease	B5.1 – pages 74-75	
8 Pathogens and Disease	B5.2 – pages 76-77	https://classroom.thenational.academy/lessons/infectious-disease-6wu3ce
9 and 10 Growing Bacteria in the lab and Preventing bacterial Growth (including required practical)	B5.3 and B5.4 – Pages 78 – 81	<ol style="list-style-type: none"> 1. Watch this video: https://www.youtube.com/watch?v=BkbLI2mAMP8 2. Complete a virtual version of the practical using this link. https://science-practical-simulator.web.app/ Enter code: RM548 Click on 'Biology' Click on 'Microbiology': Follow the instructions to complete the virtual practical and record the diameter of inhibition zone for your three antiseptics. 3. Write up an explanation of the required practical including equipment list and instructions.

11 Preventing Infections	B5.5 – pages 82-83	
12 and 13 Researching Diseases	B5.6, 5.7, 5.8	<p>Using your text books and the internet research the below list of diseases using these questions:</p> <ol style="list-style-type: none">1. What type of pathogen that causes the disease?2. How does the pathogen spread? (transmission)3. What are the symptoms of the disease?4. What complications can be caused by the disease?5. What treatments and/or prevention measures are there for the disease? <ul style="list-style-type: none">• Measles• HIV• Tobacco Mosaic Virus• Salmonella food poisoning• Gonorrhoea• Rose black spot• Malaria

14 Human defence responses	B5.9 – pages 90 - 91	
15 More about plant diseases	B5.10 - pages 92-93	https://classroom.thenational.academy/lessons/plant-diseases-and-deficiencies-part-2-cnjp6r
16 Plant defence responses	B5.11 - pages 94-95	https://classroom.thenational.academy/lessons/plant-diseases-and-deficiencies-part-1-61jpcd
17 Vaccinations	B6.1 - pages 98-99	https://classroom.thenational.academy/lessons/vaccines-70u6cc?from_query=vaccination+AND+is_sensitive%3Afalse
18 Antibiotics and Painkillers	B6.2 - pages 100-101	https://teachers.thenational.academy/lessons/antibiotics-6gv62c
19 Discovering drugs	B6.3 - pages 102-103	
20 Developing drugs	B6.4 - pages 104-105	https://classroom.thenational.academy/lessons/testing-drugs-part-1-6wwker https://classroom.thenational.academy/lessons/testing-drugs-part-2-60r32c

21 & 22 Making Monoclonal Antibodies and uses of monoclonal antibodies	B6.5 & B6.6 - pages 106-109	https://classroom.thenational.academy/lessons/monoclonal-antibodies-6djp2t?activity=intro_quiz&step=1
23 Non-communicable diseases	B7.1 - pages 112-113	https://classroom.thenational.academy/lessons/non-communicable-disease-75jk6r?from_query=non-commu++AND+is_sensitive%3Afalse
24 Cancer	B7.2 - pages 114-115	https://classroom.thenational.academy/lessons/cancer-c8rp8d?from_query=cancer+AND+is_sensitive%3Afalse
25 Risk factors and disease: Smoking	B7.3 - pages 116-117	
26 Diet, exercise and disease	B7.4 - pages 118-119	
27 Alcohol and other carcinogens	B7.5 - pages 120-121	
28 Assessment	B5, B6 and B7	Complete the end of chapter questions on pages 96-97 (B5), 110-111 (B6) and 122-123 (B7) for revision then contact your teachers for assessment instructions.

1 Types of reproduction	B13.1 – pages 196-197	https://classroom.thenational.academy/lessons/sexual-vs-aseexual-reproduction-ccb64t
2 Cell division in sexual reproduction (meiosis)	B13.2 – pages 198-199	https://classroom.thenational.academy/lessons/meiosis-and-fertilisation-60u3ed
3 The best of both worlds (Advantages and Disadvantages of sexual and asexual reproduction)	B13.3 – pages 200-201	https://classroom.thenational.academy/lessons/advantages-and-disadvantages-of-sexual-and-aseexual-reproduction-60w6ce
4 DNA and the genome	B13.4 – pages 202 - 203	https://classroom.thenational.academy/lessons/genes-dna-and-chromosomes-71gk6d
5 DNA structure and protein synthesis	B13.5 – pages 204-205	https://classroom.thenational.academy/lessons/protein-synthesis-68w62c

6 Gene expression and mutation	B13.6 – pages 206-207	https://www.bbc.co.uk/bitesize/guides/z9pkmsg/revision/10 https://www.youtube.com/watch?v=3jwDI7nYBPM Then make notes and answer text book questions.
7 The history of genetics	B15.1 – pages 234-235	https://classroom.thenational.academy/lessons/mendel-cnhtar
8 Inheritance in action	B13.7 – pages 208-209	https://classroom.thenational.academy/lessons/genetic-inheritance-higher-c5jk4t
9 More about genetics	B13.8 – pages 210-211	https://classroom.thenational.academy/lessons/sex-determination-crup8t
10 Inherited disorders	B13.9 – pages 212-213	https://classroom.thenational.academy/lessons/inherited-disorders-part-1-higher-c8u6ad
11 Screening for genetic disorders	B13.10 -pages 214-215	https://classroom.thenational.academy/lessons/inherited-disorders-part-2-64up8r
12 Variation	B14.1 - pages 218-219	https://classroom.thenational.academy/lessons/variation-and-natural-selection-part-1-ccv3at

13 Evolution by Natural Selection	B14.2 - pages 220-221	https://classroom.thenational.academy/lessons/variation-and-natural-selection-part-2-cmwk8d
14 Theories of Evolution	B15.2 - pages 236-237	https://classroom.thenational.academy/lessons/darwin-and-wallace-chh62c
15 Accepting Darwin's ideas	B15.3 - pages 238-239	
16 Evolution and Speciation	B15.4 - pages 240-241	https://classroom.thenational.academy/lessons/speciation-6rtkad
17 Evidence for Evolution: Fossils	B15.5 and B15.6 - pages 242-245	https://classroom.thenational.academy/lessons/evidence-for-evolution-part-1-crw3cd
18 Evidence for Evolution: Antibiotic Resistant Bacteria	B15.8 - pages 248-249	https://classroom.thenational.academy/lessons/evidence-for-evolution-part-2-6thk8d
19 Extinction	B15.6 and B15.7 - pages 244-247	https://classroom.thenational.academy/lessons/evolution-and-extinction-cnk3gd
20 Classification	B15.9 pages 250-251	

21 New Systems of Classification	B15.10 - pages 252-253	https://classroom.thenational.academy/lessons/classification-ccup2c
21 Selective breeding	B14.3 - pages 222-223	https://classroom.thenational.academy/lessons/selective-breeding-71hk0e
22 Genetic Engineering	B14.4 - pages 224-225	https://classroom.thenational.academy/lessons/genetic-engineering-part-1-64v3gt
23 Ethics of Genetic Engineering	B14.7 - pages 230-231	https://classroom.thenational.academy/lessons/genetic-engineering-part-2-cngkgd
24 Cloning	B14.5 - pages 226-227	https://classroom.thenational.academy/lessons/cloning-crrked
25 Adult cell cloning	B14.6 - pages 228-229	

Curriculum Map for year 11 Double Science (Biology)

Look in your exercise books for the title of the previous lesson to work out the lesson(s) you are missing. For further accuracy, ask your classmates which lesson they are currently on in case of variations between classes.

Lesson number and title	Textbook pages (When using the textbook, make notes from the information and answer the questions)	Remote learning links (if using the lesson from Oak National Academy, watch the video while making notes and complete the worksheet)
1 Principles of homeostasis	B10.1 - pages 135-135	
2 The structure and function of the human nervous system	B10.2 - pages 136-137	https://classroom.thenational.academy/lessons/the-nervous-system-6rt64e

3 Investigating Reaction times	Required practical, purple box on page 137	https://classroom.thenational.academy/lessons/required-practical-reaction-time-part-1-74vkgd https://classroom.thenational.academy/lessons/required-practical-reaction-time-part-2-71jkgt
4 Reflex actions	B10.3 pages 138-139	https://classroom.thenational.academy/lessons/reflex-arcs-6hhp4r
5 Principles of hormonal control and the control of blood glucose levels	B11.1 and B11.2 - pages 142-145	https://classroom.thenational.academy/lessons/hormonal-responses-cgr3ed https://classroom.thenational.academy/lessons/controlling-blood-sugar-levels-higher-71k32c
6 Diabetes	B11.3 - pages 146-147	https://classroom.thenational.academy/lessons/diabetes-chj6ad
7 The role of negative feedback	B11.4 - pages 148-149	https://classroom.thenational.academy/lessons/negative-feedback-higher-6dh62r
8 Human reproduction and control of the menstrual cycle	B11.5 and B11.6 - pages 150-153	https://classroom.thenational.academy/lessons/hormones-in-reproduction-higher-cdhket

9 Artificial control of fertility and Infertility treatments	B11.7 and 11.8 - pages 154-157	https://classroom.thenational.academy/lessons/contraception-chh3ct https://classroom.thenational.academy/lessons/artificial-control-of-fertility-higher-cgu6ac
10 Revision and assessment	B10 and B11	Complete the end of chapter questions on pages 140-141 (B10) and 158- 159 (B11) for revision then contact your teachers for assessment instructions.

Curriculum Map for year 11 Triple science (Biology)

Look in your exercise books for the title of the previous lesson to work out the lesson(s) you are missing. For further accuracy, ask your classmates which lesson they are currently on in case of variations between classes.

Lesson number and title	Textbook pages	Remote learning links
	(When using the textbook, make notes from the information <u>and</u> answer the questions)	(if using the lesson from Oak National Academy, watch the video while making notes and complete the worksheet)

1 Variation	B14.1 - pages 218-219	https://classroom.thenational.academy/lessons/variation-and-natural-selection-part-1-ccv3at
2 Evolution by Natural Selection	B14.2 - pages 220-221	https://classroom.thenational.academy/lessons/variation-and-natural-selection-part-2-cmwk8d
3 Theories of Evolution	B15.2 - pages 236-237	
4 Accepting Darwin's ideas	B15.3 - pages 238-239	https://classroom.thenational.academy/lessons/darwin-and-wallace-chh62c
5 Evolution and Speciation	B15.4 - pages 240-241	https://classroom.thenational.academy/lessons/speciation-6rtkad
6 Evidence for evolution: fossils	B15.5, B15.6 and B15.7 - pages 242 - 247	https://classroom.thenational.academy/lessons/evidence-for-evolution-part-1-crw3cd
7 Evidence for evolution: antibiotic-resistant bacteria	B15.8 - pages 248 - 249	https://classroom.thenational.academy/lessons/evidence-for-evolution-part-2-6thk8d
8 Classification	B15.9 - pages 250-251	https://classroom.thenational.academy/lessons/classification-ccup2c

9 New systems of classification	B15.10 - pages 252 - 253	https://www.bbc.co.uk/bitesize/guides/z9mcqhv/revision/2
10 Selective breeding	B14.3 - pages 222 - 223	https://classroom.thenational.academy/lessons/selective-breeding-71hk0e
11 Genetic engineering	B14.4 - pages 224 - 225	https://classroom.thenational.academy/lessons/genetic-engineering-part-1-64v3gt
12 Ethics of genetic engineering	B14.7 - pages 230 - 231	https://classroom.thenational.academy/lessons/genetic-engineering-part-2-cngkgd
13 and 14 Cloning and Adult Cell Cloning	B14.5 and B14.6 - 226 - 229	https://classroom.thenational.academy/lessons/cloning-crrked
15 Assessment	B13, B14 and B15	Complete the end of chapter questions on pages 216-217 (B13), 232-233 (B14) and 254-255 (B15) for revision then contact your teachers for assessment instructions.
16 Principles of homeostasis	B10.1 - pages 146-147	
17 The structure and function of	B10.2 - pages 148-149	https://classroom.thenational.academy/lessons/the-nervous-system-6rt64e

the human nervous system		
18 Investigating Reaction times	Required practical, purple box on page 149	https://classroom.thenational.academy/lessons/required-practical-reaction-time-part-1-74vkgd https://classroom.thenational.academy/lessons/required-practical-reaction-time-part-2-71jkgt
19 Reflex actions	B10.3 - pages 150-151	https://classroom.thenational.academy/lessons/reflex-arcs-6hhp4r
20 The Brain	B10.4 - pages 152-153	https://classroom.thenational.academy/lessons/the-brain-64rk4c
21 The Eye	B10.5 - pages 154-155	https://classroom.thenational.academy/lessons/the-eye-61h64e
22 Problems with the eye	B10.6 – pages 156 - 157	https://classroom.thenational.academy/lessons/correcting-vision-68w3at
23 Principles of hormonal control and the control of blood glucose levels	B11.1 and B11.2 - pages 160-163	https://classroom.thenational.academy/lessons/hormonal-responses-cgr3ed https://classroom.thenational.academy/lessons/controlling-blood-sugar-levels-higher-71k32c
24 Diabetes	B11.3 - pages 164-165	https://classroom.thenational.academy/lessons/diabetes-chj6ad

25 The role of negative feedback	B11.4 - pages 166-167	https://classroom.thenational.academy/lessons/negative-feedback-higher-6dh62r
26 Human reproduction and control of the menstrual cycle	B11.5 and B11.6 - pages 168-171	https://classroom.thenational.academy/lessons/hormones-in-reproduction-higher-cdhket
27 Artificial control of fertility and Infertility treatments	B11.7 and 11.8 - pages 172-175	https://classroom.thenational.academy/lessons/contraception-chh3ct https://classroom.thenational.academy/lessons/artificial-control-of-fertility-higher-cgu6ac
28 Plant hormones and responses (Required Practical 8)	B11.9 – pages 176 - 177	https://classroom.thenational.academy/lessons/required-practical-plant-hormones-part-1-cgrkje https://classroom.thenational.academy/lessons/required-practical-plant-hormones-part-2-6mu3ct
29 Using plant hormones	B11.10 – pages 178-179	https://classroom.thenational.academy/lessons/plant-hormones-ctj3ct

30 Controlling body temperature	B12.1 – pages 182-183	https://classroom.thenational.academy/lessons/regulating-body-temperature-68v38e
31 Removing waste products	B12.2 – pages 184 -185	https://classroom.thenational.academy/lessons/water-balance-6cu3ec
32 The human kidney	B12.3 – pages 186-187	https://classroom.thenational.academy/lessons/the-kidney-6ww3ct
33 Dialysis and kidney transplants	B12.4 – pages 188-189	https://classroom.thenational.academy/lessons/kidney-failure-69gpct
34 Revision and assessment	B10, B11 and B12	Complete the end of chapter questions on pages 158-159 (B10), 180-181 (B11) and 192-193 (B12) for revision then contact your teachers for assessment instructions.