

Tick one box per statement: ☐ not yet ☐ nearly ☐ confident.

$$\frac{\partial}{\partial t} \left(\frac{\partial \mathcal{L}}{\partial \dot{\mathbf{q}}} \right) = \frac{\partial \mathcal{L}}{\partial \mathbf{q}}$$

1. Molecules, Diet, Transport and Health

1.1 Water, carbohydrates and food tests (statements 1.1–1.4, core practical 1)

☐☐☐ Water, carbohydrates and food tests (statements 1.1–1.4, core practical 1)

1.2 Lipids and ester bonds (statement 1.5) (1.5)

☐☐☐ Lipids and ester bonds (statement 1.5)

1.3 Heart, blood vessels and the cardiac cycle (statements 1.6–1.8) , (1.6–1.8)

□□□ Heart, blood vessels and the cardiac cycle (statements 1.6–1.8)

1.4 Haemoglobin and gas transport (statement 1.9)

□□□ Haemoglobin and gas transport (statement 1.9)

1.5 Atherosclerosis, blood clotting and CVD risk (statements 1.10–1.13, core practical 2)

☐☐☐ Atherosclerosis, blood clotting and CVD risk (statements 1.10–1.13, core practical 2)

1.6 Interpreting health-risk data and studies (statements 1.15–1.18)

☐☐☐ Interpreting health-risk data and studies (statements 1.15–1.18)

1.7 Diet, cholesterol and CVD treatments (statements 1.19–1.20)
(1.19–1.20)

☐ ☐ ☐ Diet, cholesterol and CVD treatments (statements 1.19–1.20)

1.8 Gas exchange surfaces and membrane structure (statements 2.1–2.2, core practical 3)

□□□ Gas exchange surfaces and membrane structure (statements 2.1–2.2, core practical 3)

1.9 Osmosis, diffusion and active transport (statements 2.4–2.5)

☐☐☐ Osmosis, diffusion and active transport (statements 2.4–2.5)

1.10 Amino acids, proteins and enzymes (statements 2.6–2.8, core practical 4)

☐☐☐ Amino acids, proteins and enzymes (statements 2.6–2.8, core practical 4)

1.11 DNA, replication and the genetic code (statements 2.9–2.12) DNA, (2.9–2.12)

☐☐☐ DNA, replication and the genetic code (statements 2.9–2.12)

1.12 Protein synthesis, mutations and screening (statements 2.13–2.18) , (2.13–2.18)

☐☐☐ Protein synthesis, mutations and screening (statements 2.13–2.18)

2. Cells, Development, Biodiversity and Conservation

2.1 Cell ultrastructure and microscopy (statements 3.1–3.7, core practical 5) (3.1–3.7, 5)

☐☐☐ Cell ultrastructure and microscopy (statements 3.1–3.7, core practical 5)

2.2 Meiosis, gametes and fertilisation (statements 3.9–3.13) , (3.9–3.13)

☐☐☐ Meiosis, gametes and fertilisation (statements 3.9–3.13)

2.3 Mitosis, the cell cycle and mitotic index (statements 3.14–3.16, core practical 6) , (3.14–3.16, 6)

☐☐☐ Mitosis, the cell cycle and mitotic index (statements 3.14–3.16, core practical 6)

2.4 Stem cells, specialisation and phenotype (statements 3.17–3.21) , (3.17–3.21)

☐☐☐ Stem cells, specialisation and phenotype (statements 3.17–3.21)

2.5 Plant cell structure, xylem and phloem (statements 4.1–4.6, core practicals 7–8) , (4.1–4.6, 7–8)

☐☐☐ Plant cell structure, xylem and phloem (statements 4.1–4.6, core practicals 7–8)

2.6 Plant products, mineral ions and drug testing (statements 4.7–4.13) , (4.7–4.13)

☐☐☐ Plant products, mineral ions and drug testing (statements 4.7–4.13)

2.7 Classification and measuring biodiversity (statements 4.14–4.18) (4.14–4.18)

☐☐☐ Classification and measuring biodiversity (statements 4.14–4.18)

2.8 Niches, Hardy–Weinberg and conservation (statements 4.19–4.21) , - (4.19–4.21)

☐☐☐ Niches, Hardy–Weinberg and conservation (statements 4.19–4.21)

3. Practical Skills in Biology I

I

3.1 Planning investigations (Unit 3 spec, planning section) (3 ,)

☐☐☐ Planning investigations (Unit 3 spec, planning section)

3.2 Implementation and measurements (Unit 3 spec, implementation section) (3 ,)

☐☐☐ Implementation and measurements (Unit 3 spec, implementation section)

3.3 Processing results, graphs and uncertainties (Unit 3 spec, processing section) (3 ,)

☐☐☐ Processing results, graphs and uncertainties (Unit 3 spec, processing section)

4. Energy, Environment, Microbiology and Immunity

4.1 Photosynthesis and chloroplast pigments (statements 5.1–5.8, core practical 10) (5.1–5.8, 10)

☐☐☐ Photosynthesis and chloroplast pigments (statements 5.1–5.8, core practical 10)

4.2 Productivity and energy transfer (statements 5.9–5.10) (5.9–5.10)

☐☐☐ Productivity and energy transfer (statements 5.9–5.10)

4.3 Ecosystems, populations and succession (statements 5.11–5.15, core practical 11) (5.11–5.15, 11)

☐☐☐ Ecosystems, populations and succession (statements 5.11–5.15, core practical 11)

4.4 Climate change evidence, causes and effects (statements 5.16–5.22, core practical 12) (5.16–5.22, 12)

☐☐☐ Climate change evidence, causes and effects (statements 5.16–5.22, core practical 12)

4.5 Evolution and speciation (statements 5.23–5.26) (5.23–5.26)

☐☐☐ Evolution and speciation (statements 5.23–5.26)

4.6 Culturing microorganisms and growth curves (statements 6.1–6.4, core practical 13) (6.1–6.4, 13)

☐☐☐ Culturing microorganisms and growth curves (statements 6.1–6.4, core practical 13)

4.7 Pathogens, infection routes and tuberculosis/HIV (statements 6.5–6.7) /HIV (6.5–6.7)

☐☐☐ Pathogens, infection routes and tuberculosis/HIV (statements 6.5–6.7)

4.8 Immune response, antigens and antibodies (statements 6.8–6.12) (6.8–6.12)

☐☐☐ Immune response, antigens and antibodies (statements 6.8–6.12)

4.9 Antibiotics and hospital-acquired infections (statements 6.13–6.15, core practical 14)
(6.13–6.15, 14)

☐☐☐ Antibiotics and hospital-acquired infections (statements 6.13–6.15, core practical 14)

4.10 Decomposition, PCR, DNA profiling and time of death (statements 6.16–6.20)
PCR, DNA (6.16–6.20)

☐☐☐ Decomposition, PCR, DNA profiling and time of death (statements 6.16–6.20)

5. Respiration, Internal Environment, Coordination and Gene Technology

5.1 Respiration, glycolysis to oxidative phosphorylation (statements 7.1–7.8, core practicals 15–16)
: (7.1–7.8, 15–16)

☐☐☐ Respiration, glycolysis to oxidative phosphorylation (statements 7.1–7.8, core practicals 15–16)

5.2 Muscles and movement (statements 7.9–7.11) (7.9–7.11)

☐☐☐ Muscles and movement (statements 7.9–7.11)

5.3 Cardiac and ventilation control (statements 7.12–7.15, core practical 17)
(7.12–7.15, 17)

☐☐☐ Cardiac and ventilation control (statements 7.12–7.15, core practical 17)

5.4 Homeostasis, feedback and thermoregulation (statements 7.14, 7.16–7.17)
(7.14, 7.16–7.17)

☐☐☐ Homeostasis, feedback and thermoregulation (statements 7.14, 7.16–7.17)

5.5 Kidney structure and osmoregulation (statements 7.18–7.21) (7.18–7.21)

☐☐☐ Kidney structure and osmoregulation (statements 7.18–7.21)

5.6 Gene switching and transcription factors (statement 7.22) (7.22)

☐☐☐ Gene switching and transcription factors (statement 7.22)

5.7 Neurones, nerve impulses and synapses (statements 8.1–8.7) , (8.1–8.7)

☐☐☐ Neurones, nerve impulses and synapses (statements 8.1–8.7)

5.8 Nervous organisation, receptors and habituation (statements 8.8–8.10) , (8.8–8.10)

☐☐☐ Nervous organisation, receptors and habituation (statements 8.8–8.10)

5.9 Plant responses and phytochrome (statements 8.11–8.12, core practical 18)
(8.11–8.12, 18)

☐☐☐ Plant responses and phytochrome (statements 8.11–8.12, core practical 18)

5.10 The brain, imaging and brain chemistry (statements 8.13–8.16) , (8.13–8.16)

☐☐☐ The brain, imaging and brain chemistry (statements 8.13–8.16)

5.11 Recombinant DNA technology and drug production (statements 8.17–8.19) DNA (8.17–8.19)

☐☐☐ Recombinant DNA technology and drug production (statements 8.17–8.19)

5.12 Genetically modified organisms, microarrays and bioinformatics (statements 8.20–8.21) , (8.20–8.21)

☐☐☐ Genetically modified organisms, microarrays and bioinformatics (statements 8.20–8.21)

6. Practical Skills in Biology II II

6.1 Planning A2 investigations (Unit 6 spec, planning section) A2 (6 ,)

☐☐☐ Planning A2 investigations (Unit 6 spec, planning section)

6.2 Implementation and measurement critique (Unit 6 spec, implementation section) (6 ,)

☐☐☐ Implementation and measurement critique (Unit 6 spec, implementation section)

6.3 Analysis, statistics and justified conclusions (Unit 6 spec, analysis section) , (6 ,)

☐☐☐ Analysis, statistics and justified conclusions (Unit 6 spec, analysis section)