

100 DAYS

of BIOLOGY

Revision

1. Draw and label a plant and animal cell. Describe the function of the cell organelles	2. How can is the magnification of a microscope calculated? How can the real size of a magnified image be calculated?	3. What is diffusion, osmosis and active transport?	4. Log in to Educake and complete 40 questions on topics 2 – Cells and control.	5. Describe the process of cell division by mitosis. Describe the life cycle of a virus.	6. Describe and explain the functions of the enzymes in the digestive system.	7. Watch the core practical video and make notes. Pearson Edexcel (9-1) GCSE Combined Science GCSE Biology - field work techniques	8. Describe the enzyme structure, the lock and key theory and what happens when an enzyme denatures.	9. Compare aerobic and anaerobic respiration in plants and animals.	10. Describe and explain the reflex arc. (Name the cells) Describe the structure of the brain.
11. Draw a single neurone and describe the adaptations for the cell to carry nerve impulses.	12. Describe the structure and function of DNA. Describe the stages of protein synthesis.	13. Watch the core practical video and make notes. Pearson Edexcel (9-1) – GCSE Combined Science and GCSE Biology – Looking at cells	14. Explain the terms: dominant, recessive, heterozygous, homozygous, allele, gene, genome, gamete, genotype and phenotype.	15. Complete 40 questions on Educake on topic 3 – Genetics	16. Describe how the probability of a characteristic being inherited can be predicted using a punnet square.	17. Describe and explain the 4 stages of natural selection.	18. Describe the symptoms and treatments for cholera, tuberculosis, chlamydia, HIV, chalaria ash dieback and malaria.	19. Watch the core practical video and make notes. Pearson Edexcel (9-1) GCSE Combined Science and GCSE Biology practical - pH and enzymes	20. What are the stages of genetic engineering? Compare the advantages and disadvantages of genetic modification.
21. Complete 40 questions on Educake on topic 4 – Natural selection and GM	22. What is a communicable disease and how can it be spread?	23. Describe the external body defences to prevent infection.	24. Describe and explain how lymphocytes and phagocytes work.	25. What is a placebo and a double-blind trial?	26. Complete 40 questions on Educake on topic 5 – Health, disease and developing medicines.	27. Describe and explain how vaccines work. Describe and explain the evidence for human evolution.	28. What are the stages of drug development?	29. What is a non-communicable disease? Give examples and identify their risk factors.	30. What is a stem cell? What are the advantages and disadvantages of adult stem cells and embryonic stem cells?
31. How do cancer cells form? What are the risk factors for cancer? How does cancer spread through the body?	32. What are the factors that affect the rate of photosynthesis? What is the equation for photosynthesis?	33. Describe how the structure of the leaf is adapted to maximise photosynthesis.	34. Complete 40 questions on Educake on topic 6 – Plant structures and their functions.	35. What is the structure and function of the xylem and phloem?	36. Why do plant roots need to absorb water and minerals using 2 different exchange methods?	37. What is transpiration and translocation?	38. Identify 6 hormones found in the body and describe their functions.	39. How do hormones help control the blood glucose levels?	40. Describe the origin and function of the hormones involved in the menstrual cycle.
41. Complete 40 questions on Educake on any paper 1 topic.	42. Compare the advantages and disadvantages of barrier, hormonal, surgical and chemical contraception methods.	43. Describe the symptoms and treatments of diabetes. Describe the structure and function of the eye.	44. Describe the adaptations of exchange surfaces to maximise exchange. Give examples of plant and animal exchange surfaces.	45. Describe the components of the blood and their functions.	46. Describe the structure of the heart.	47. Watch the video and take notes: All of Edexcel BIOLOGY Paper 1 in 30 minutes - GCSE Science Revision	48. Describe the structure of the 3 blood vessels.	49. What are the short-term effects of exercise on the body?	50. Complete the exam paper for biology (paper 1) – select the correct tier. Edexcel GCSE Combined Science Past Papers - Revision Science Or For separates: Edexcel Physics Past Papers - Revision Science

51. What are the biotic and abiotic factors?	52. Describe positive and negative impact of humans on biodiversity.	53. What is the effect of adrenaline on the body? Why is this important?	54. Describe the processes involved in the Carbon cycle.	55. Describe the stages of the water cycle.	56. Describe the stages of the Nitrogen cycle.	57. Write a method to investigate the distribution of weeds in a field.	58. What is the function of thyroxine in the body and how is it controlled?	59. Describe the structure and function of the respiratory system.	60. Describe the adaptations of 4 animal cells to carry out their function.
61. Identify the conditions in the body that are controlled by homeostasis.	62. What are the classification groups for all living organisms? How are monoclonal antibodies produced?	63. Compare and contrast a light microscope and an electron microscope.	64. Watch the core practical video and make notes Pearson Edexcel (9-1) GCSE Combined Science and GCSE Biology core practical - osmosis in potatoes	65. Describe the process of selective breeding.	66. Evaluate the treatments for coronary heart disease.	67. What is a transect and when should it be used? Explain the process of thermoregulation in mammals.	68. Complete 40 questions on Educake on topic 7 – homeostasis	69. Watch the core practical video and make notes. Pearson Edexcel (9-1) GCSE Combined Science & GCSE Biology core practical - light and photosynthesis	70. Describe the structure and function of the digestive system.
71. Watch the core practical video and make notes. Pearson Edexcel (9-1) GCSE Combined Science and GCSE Biology practical - rate of respiration	72. Complete 40 questions on Educake on topic 8 – exchange in plants and animals	73. Compare the 3 types of pathogens. Describe how urine is produced in the kidneys.	74. What are the genes that determine the sex of an offspring in humans? Describe the treatments for kidney failure.	75. Watch the core practical video and make notes. Pearson Edexcel GCSE Biology Core Practical - testing for starch, reducing sugars, protein and fats	76. Describe how to use a light microscope.	77. Describe how to extract a sample of DNA from a strawberry. What is sexual and asexual reproduction?	78. Watch the core practical video and make notes. Pearson Edexcel (9-1) GCSE Biology Core Practical - investigating the effects of antibiotics	79. How can the transmission of pathogens be reduced?	80. Complete 40 questions on Educake on topic 9 – Ecosystems and mineral cycles.
81. What is the word equation for aerobic and anaerobic respiration?	82. How are percentiles used to track growth and development?	83. What is a predator, prey, producer, consumer and omnivore?	84. Compare mitosis and meiosis.	85. What factors can affect the rate of transpiration in a plant?	86. What are the advantages and disadvantages of selective breeding?	87. Describe the causes and effects of eutrophication.	88. Explain how a root hair cell is adapted to carry out its function.	89. What is a stent and how does this treat CHD?	90. What is a fossil?
91. Watch the video and take notes: All of Edexcel BIOLOGY Paper 2 in 25 minutes - GCSE Science Revision	92. Complete 40 questions on Educake on any paper 2 topic.	93. Make a mind map of the topics from paper 2.	94. Complete the exam paper for biology (paper 4) – select the correct tier. Edexcel GCSE Combined Science Past Papers - Revision Science Or For separates: Edexcel Physics Past Papers - Revision Science	95. Complete the exam paper for biology (paper 4) – select the correct tier. Edexcel GCSE Combined Science Past Papers - Revision Science Or For separates: Edexcel Physics Past Papers - Revision Science	96. Complete the exam paper for biology (paper 4) – select the correct tier. Edexcel GCSE Combined Science Past Papers - Revision Science Or For separates: Edexcel Physics Past Papers - Revision Science	97. Complete the exam paper for biology (paper 1) – select the correct tier. Edexcel GCSE Combined Science Past Papers - Revision Science Or For separates: Edexcel Physics Past Papers - Revision Science	98. Make a mind map of the topics from paper 1.	99. Complete the exam paper for biology (paper 1) – select the correct tier. Edexcel GCSE Combined Science Past Papers - Revision Science Or For separates: Edexcel Physics Past Papers - Revision Science	100. Complete the exam paper for biology (paper 1) – select the correct tier. Edexcel GCSE Combined Science Past Papers - Revision Science Or For separates: Edexcel Physics Past Papers - Revision Science