Brixham College: Year 10 BIOLOGY

Lesson	Summary of content	Time
1	**Plant and animal cells** CGP biology 9 – 1 Read pages 23 – 24 Copy Fig 1 and make notes Copy fig 2. And make notes Answer Q pg 24	**Sept-Oct**
2	**Photosynthesis** CGP biology 9 – 1 Read pages 144-145 Make notes on photosynthesis, including the word and symbol questions. Answer Q on pg 145	
3 and 4	Required practical: **Investigate the effect of light intensity on the rate of photosynthesis of pondweed** CGP biology 9 – 1 Read pages 153 – 154 Copy Fig 1 and make notes Copy Fig 5 and 6 and make notes (HT only) Answer Q pg 151	
5	**Limiting factors** CGP biology 9 – 1 Read pages 148 – 149 Copy Fig 1-4 and make notes Answer Q pg 149	
6	**Uses of glucose** CGP biology 9 – 1 Read pages 146 – 147 Make notes on what glucose is used for. Answer Q pg 147	
7	**Structure of a leaf** CGP biology 9 – 1 Read pages 83 – 84 Make notes on leaf structure Answer Q pg 84	
8	**Stomata and guard cells** CGP biology 9 – 1 Read pages 88– 89 Copy Fig 3 and make notes on guard cells and investigating guard cells and stomata Answer Q pg 89	**Nov-Dec**
9	**Xylem and phloem** CGP biology 9 – 1 Read pages 85 – 86 Copy Fig 1 and 3 and make notes	

	Answer Q pg 86	
10	**Prokaryotic and eukaryotic cells** CGP biology 9 – 1 Read pages 23 and make notes on prokaryotic and eukaryotic cells Copy Fig. 5 and make notes on bacterial cells Answer Q pg 24	
11	Required practical: **Use a light microscope** CGP biology 9 – 1 Read pages 25 – 26 Make notes on how to prepare a slide Copy fig 2. What is the genome? Answer Q	
12	**IAM triangle** CGP biology 9 – 1 Read pages 27 – 29 Make notes on magnification and converting between units	
13	**Electron microscopes** CGP biology 9 – 1 Read pages 27 – 29 Make notes on the electron microscope and estimating size and area of cell structures. Answer Q pg 29	
14	**Specialised cells** CGP biology 9 – 1 Read pages 30-32 Copy Fig 1-8 and make notes Answer Q	
15	**Stem cells** CGP biology 9 – 1 Read pages 38 – 40 Make notes on stem cells – what they are and how they are used. Answer Q on pg 40	
16	**Go over test + Chromosomes, genes and DNA** CGP biology 9 – 1 Read pages 204 – 205 Copy Fig 1 and make notes Copy fig 2. What is the genome? Answer Q	**Dec-Jan**
17	**Mitosis** CGP biology 9 – 1 Read pages 35- 37 Copy Fig 1 and fig 3 Make notes and answer Q	
18 and 19	**Sexual reproduction and Meiosis** CGP biology 9 – 1	

	Read pages 206 – 209 Copy Fig 1 on page 208 and make notes on meiosis Answer Q	
20 and 21	**Diffusion** CGP biology 9 – 1 Read pages 45 - 47 Copy example 1 and figure 2 and make notes on diffusion and the rate of diffusion Answer Q	
22	**Diffusion and single celled organisms.** Calculate and compare surface area to volume ratios. CGP biology 9 – 1 Read pages 54 - 57 Copy example 1 and 2 and make notes on why exchange surfaces are needed.	
23	Explain how the small intestine and lungs in mammals, and roots and leaves in plants, are adapted for exchange of substances. CGP biology 9 – 1 Read pages 58 -61 Make notes/ copy diagrams and answer Q	
24	**Osmosis theory** CGP biology 9 – 1 Read pages 48 – 49 Copy diagrams fig 1 and fig 2 and make notes / answer Q	**February**
25 and 26	**Osmosis _investigate the effect of salt solution on the cells of plant tissue.** CGP biology 9 – 1 Read pages 49 – 51 Copy diagrams fig 3 and write a method for this experiment Plot a graph using results on page 50 Answer Q	
27	**Active transport and root hair cells and the small intestine** CGP biology 9 – 1 Read pages 52-53 Copy diagrams fig 1 and fig 2 and make notes / answer Q Create a revision summary of transport methods – page 53	
28 and 29	**Required practical 4: Use qualitative reagants to test for carbohydrates, lipids and proteins. – Revision was covered in Year 9** **Create a revision poster for the 3 food tests** CGP biology 9 – 1 Read pages 118 - 119 Draw diagrams and learn the test off by heart	

30	Digestive system demo – recap KS3 knowledge about functions of parts of digestive system. CGP biology 9 – 1 Read pages 114 -115 Draw and label the diagram of the digestive system Create a story of the journey of a food through the digestive system	**March**
31	**Small intestine structure and function** CGP biology 9 – 1 Read page 59 Draw and label the diagram of the small intestine Describe how the small intestine is adapted	
32-33	**Revision and recap of learning so far** Create revision cards on: **3 – 4 lessons!** **-Cell division – mitosis and meiosis** **- Diffusion** **-Osmosis** **-Active transport** **-Digestion** **-Food tests**	
34	**Enzyme basics** CGP biology 9 – 1 Read page 109 - 111 Make notes, copy fig 1 , 3 and 4 Answer Q	
35	**Human digestive enzymes** CGP biology 9 – 1 Read page 115 - 116 Copy Fig 2, 3 ,4 and 5. Make notes and answer Q	**April**
36	**Bile and its role in digestion** CGP biology 9 – 1 Read page 116 – 117 Copy Fig 7. Make notes and answer Q Answer Q	
37 and 38	**Required practical 5: investigate the effect of pH on the rate of an amylase enzyme** CGP biology 9 – 1 Read pages 112 – 113 Copy Fig 1 Write a method Calculate the rate of reaction	

39	**Aerobic respiration** – testing for CO_2 and water. Learn off by heart the word and chemical equation. CGP biology 9 – 1 Read page 150-160 Make notes and answer Q	
40	**Anaerobic respiration in humans, plants and yeast** CGP biology 9 – 1 Read page 161- 162 Makes notes and answer Q Compare aerobic and anaerobic respiration	
41	**Effect of exercise on the HR and breathing rate**. HT ONLY _ OXYGEN DEBT CGP biology 9 – 1 Read page 163 – 164 Copy Fig 1 Make notes and answer Q	
42	**Metabolism** CGP biology 9 – 1 Read page 165 Make notes Answer any exam style Q pages 168 - 169 Mark your answers page 323	**May**
43 – 44	Revision and Recap of learning so far – All of units 4.1 – 4.4. Unit 4.1 = Cells Pages 23 – 64 Unit 4.2 = Lungs, heart, digestion and enzymes- Pages 66- 80 and 95 – 122	
45-46	Revision and Recap of learning so far – All of units 4.1 – 4.4. Unit 4.3 =Infectious disease – Pages 124 – 142 This was last covered in Year 9 so spend time revising this!	**June**
47-48	Revision and Recap of learning so far – All of units 4.1 – 4.4. Unit 4.4= respiration and plants- Pages 144 – 165 and 83 - 87	
49	Classification KPCOFGS Carl Linnaeus and Carl Woese CGP biology 9 – 1 Read page 248 - 250 Make notes and answer Q	
50 – 51	**Required practical 7: measure the population size of a common species in a habitat. Use sampling techniques to investigate the effect of a factor on the distribution of this species.** CGP biology 9 – 1 Read page 265- 268 Write a method describing how to estimate number of daisies in a field Write down how to calculate the mean, median and mode	

	What is a transect? Copy fig 4 and make notes	
52	**Competition and food chain and food webs** CGP biology 9 – 1 Read page 255 257 Make notes and answer Q on page 257	**July**
53	**Biotic and abiotic factors**. CGP biology 9 – 1 Read page 258 260 Make notes and answer Q on page 257	
54- 55	**Adaptations + Extremophiles** CGP biology 9 – 1 Read page 261 - 262 Make notes and answer Q on page 257	