

# Year 8 PLC's

PLC No.	Topic 7: Waves and Space
83	Identify key features of a wave from a wave diagram.
84	Describe the amplitude and frequency of a wave from a diagram or oscilloscope picture.
85	Use drawings of waves of describe how sound waves change with volume or pitch.
86	Describe the properties of different longitudinal and transverse waves.
87	Use the wave model to explain reflection, absorption and transmission of a wave.
88	Explain observations where sound is reflected, transmitted or absorbed by different media.
89	Use ray diagrams to describe how light passes through lenses and transparent materials.
90	Explain observations where coloured light are mixed or objects are viewed in different lights.
91	Describe the appearance of planets or moons from diagrams showing their position in relation to the Earth and Sun
92	Describe how seasons are formed.
93	Explain why places on Earth experience different daylight hours and amounts of sunlight during the year.

PLC No.	Topic 8: Earth and Atmosphere
94	Identify and describe the different layers of the Earth
95	Compare and contrast igneous, metamorphic and sedimentary rocks
96	Outline the different stages of the rock cycle
97	Describe how the Earth's Atmosphere has developed over time.
98	Explain why the atmosphere of the Earth developed over millions of years.
99	Compare and contrast finite and infinite resources
100	Outline the key stages of the carbon cycle
101	Explain the causes of global warming and climate change.
102	Suggest the consequences of global warming and climate change.
103	Describe what a polymer is and how they can be formed.

PLC No.	Topic 9: Photosynthesis and Respiration
104	Describe aerobic respiration.
105	Recall the equation for aerobic respiration.
106	Describe anaerobic respiration.
107	Compare the products of aerobic and anaerobic respiration.
108	Explain how respiration in yeast can be used for baking and brewing.
109	Describe how plants obtain resources for photosynthesis.
110	Use a word equation to describe photosynthesis in plants and algae.
111	Suggest what the limiting factors of photosynthesis are.
112	Explain how you can test for photosynthesis in leaves of plants.
113	Suggest reasons for particular adaptations of leaves, roots and stems.
114	Compare the movement of carbon dioxide and oxygen through the stomata in the day and night.

PLC No.	Topic 10: Energy Changes
115	Explain what happens in an endothermic and exothermic reaction.
116	Draw energy level diagrams for endothermic and exothermic reactions.
117	Calculate bond energies for a range of reactions.

PLC No.	Topic 11: Electricity
118	Name circuit symbols used to represent components in a circuit.
119	Draw series and parallel circuits.
120	Create circuits that measure voltage and current.
121	Explain how current and voltage change in series circuits.
122	Explain how current and voltage change in parallel circuits.
123	Calculate resistance using $V=IR$
124	Describe how parallel and series circuits can be suitable for different uses.
125	Describe how the frequency and voltage of mains electricity
126	Explain how to re-wire a plug with knowledge of the different coloured wires.
127	Describe how charged objects interact with one another.
128	Recall the equations to calculate charge.
129	Describe how to make an electromagnet.
130	Describe how to change the strength of an electromagnet.

PLC No.	Topic 12: DNA and Inheritance
131	State where DNA is found in a cell
132	Describe how DNA, chromosomes and genes are related.
133	Explain why offspring from the same parents look similar but not identical
134	Draw punnett squares to predict offspring characteristics.
135	Compare continuous and discontinuous variation.
136	Describe the structure of DNA.
137	Link how the function of ribosomes to making DNA.
138	Suggest how genetic modification is useful in medicine and everyday life.
139	Describe the theory of Natural Selection.
140	Explain how a species, over time, changes due to Natural selection.
141	Compare Darwin and Lamarck's theories of Evolution.
142	Explain why a species may become extinct.
143	Explain the importance of maintaining biodiversity.

PLC No.	Topic 13: Ions & Electrolysis
144	Describe how a positive and negative ion are formed.
145	Link the charge of an ion to it's group on the periodic table.
146	Break common compounds into their ions.
147	Draw a set up of electrolysis.
148	Describe the movement of ions during electrolysis of molten compounds.
149	Explain what happens during electrolysis of aqueous solutions.
150	Explain how electrolysis can be used to extract aluminium and other metals.
151	Describe the process of phytomining and bioleaching.