Year 7 PLC's

PLC No.	Topic 1: Cells & Transport
1	Describe the components of an animal and a plant cell.
2	Explain the function of components of animal and plant cells.
3	Explain how to use a light microscope to make observations of cells.
4	Calculate the magnification of a cell.
5	Analyse the structure of specialised cells and relate to their function.
6	Compare unicellular and multicellular organisms.
7	Define diffusion and suggest how the rate of diffusion can be increased.
8	Suggest how the rate of diffusion can be increased.
9	Describe the role of the circulatory system in the body.
10	Describe how gas exchange takes place in the lungs.
11	Suggest the effect that alcohol and smoking can have on the body.

PLC No.	Topic 2: The Periodic Table
12	Describe the location of different types of element in the periodic table.
13	Define the terms atom, element and compound.
14	Use particle diagrams to classify a substance as an element, mixture or compound.
15	Describe properties of group 1 elements.
16	Explain how the reactivity of group 1 elements change as you go down the group.
17	Describe the properties of group 7 elements.
18	Explain how the reactivity of group 7 elements change as you go down the group.
19	Predict the position of an element in the periodic table based on its properties.
20	Use chemical formulae to identify elements.
21	Name compounds based on their chemical formulae.
22	Describe some simple molecules.
23	Compare ionic, covalent and metallic bonds.

PLC No.	Topic 3: Energy
24	Name the different ways energy can be stored.
25	Describe how energy can be transferred between stores.
26	Link energy and power.
27	Define work done and describe how machines can make work easier.
28	Apply the formula work done = force x distance when moving objects.
29	Explain how energy is stored in food and is a useful fuel.
30	Explain how energy can be dissipated.
31	Describe how thermal energy can be transferred by conduction.
32	Explain the processes of convection and radiation
33	Explain how thermal insulation works.
34	Identify the advantages and disadvantages of renewable and non-renewable energy resources

PLC No.	Topic 4: Organ Systems
35	Describe the function of the 7 food groups for the body.
36	Explain how to test for sugar, starch, protein and fats.
37	Label the main organs of the digestive system.
38	Explain how food is digested within the body.
39	Explain how enzymes are used to breakdown food.
40	Identify the key parts of the skeletal system
41	Describe how the muscular system is able to provide movement
42	Label the parts of the male and female reproductive systems
43	Explain the stages in the female menstrual cycle
44	Label the male and female parts of a flower
45	Describe the process of pollination
46	Suggest how different plants disperse their seeds
47	Construct food chains and webs to show feeding relationships between organisms
48	Suggest how toxins can build up within a food chain

PLC No.	Topic 5: Chemical Reactions
49	Name compounds based on their chemical formulae.
50	Describe what makes up an acid.
51	Describe what makes up an alkali.
52	Compare strong and weak acids.
53	Describe what happens during a neutralisation reaction.
54	Write word equations for making different salts.
55	Describe reactions between metals and acids.
56	Describe reactions between metals and oxygen.
57	Describe reactions between metals and water.
58	Explain how displacement reactions occur.
59	Balance symbol equations.
60	Describe what happens during a combustion reaction.
61	Write a word equation for complete combustion.
62	Write a word equation for incomplete combustion.
63	Compare the products of complete and incomplete combustion reactions
64	Describe what happens in an oxidation reaction
65	Describe what is happening during thermal decompostition.
66	State what a catalyst is and the role they play in chemical reactions

PLC No.	Topic 6: Forces
67	Name common forces that act on objects.
68	Describe contact and non-contact forces.
69	Describe balanced and unbalanced forces.
70	Calculate resultant force.
71	Define speed, using distance and time.
72	Explain the difference between velocity and speed.
73	Calculate speed using speed = distance ÷ time.
74	Interpret distance-time graphs.
75	Suggest how velocity-time graphs can show acceleration.
76	Calculate acceleration using acceleration = change in velocity ÷ time taken
77	Calculate pressure using pressure = force ÷ area

78	Explain why objects sink or float with regards to up thrust.
79	Describe the difference between mass and weight
80	Describe factors affecting stretch and squash of a spring.
81	Describe how magnetic poles interact.
82	Describe the field patterns created by a magnet.