



**BASIC SCIENCE SCHEME
J.S.2**

SN	TOPICS	CONTENT
1	Skeleton and movement	Definition, skeletal materials, components of skeletal system, animal skeleton(types), parts of mammalian skeleton, functions of the skeleton, joints, muscles of movement, injuries of movement.
2	Digestive system	Definition, structure of human digestive system, digestion of food, digestion of carbohydrates, digestion of protein and fats and oils, enzymes.
3	Circulatory system	Definition, types, components of blood, functions, blood vessels, the heart, blood and heart diseases.
4	Respiratory system	Definition, organs, structures, processes, products, and types of respiration, functions, respiratory diseases.
5	Excretory system	Definition, organs, structure, process, products, functions of different organs (skin, kidney, lungs and bile).
6	Reproduction	
6a	Animals	Types of reproduction, sexual reproduction in humans, reproductive organs in male and female, sperm fertilization, development of placenta, and gestation period.
6b	Plants	Definition, types, explanation of types(sexual and asexual), pollination, agents of pollination.
7	Physical growth and development.	Definition, factors affecting growth and development, food nutrient, sources of food, crop cultivation and harvesting, germination of seed, types of germination, conditions necessary for germination and harvesting.
8	Energy and its appliances.	Definition, forms, sources, properties, application of energy, conservation of energy, thermal energy and kinetic theory of matter, work and power.
9	Machines	Definition, types, levers, pulleys, inclined plane, wheel and axle, mechanical advantage, velocity ratio, deficiency, gears
10	Ecology	Definition, concept of ecology, habitat, environment, population, community, biome, eco system, biotic and abiotic factors, ecological mode of relationship(parasitism, symbiosis, commensalism, saprophytes, adaptation, tolerance, population density, food chain, food web, ecological pyramids(pyramid of energy, number and biome)
11	Wild life conservation	Definition, parks, reserves and sanctuaries, laws, benefits of conservation, forest- afforestation, deforestation and reforestation.
12	Change	Explanation of change, types of change with explanations and examples. Differences between physical and chemical changes
13	Elements, compound and mixtures	Elements: definition, the first 20 elements with their symbols. Compounds: e examples, component element and formula. Mixtures: definition, examples and their constituents. Difference between compounds and mixtures, difference between elements and compounds, explanation of the following, solutions, emulsions, colloidal dispersions, tidal effects, homogenous and heterogeneous mixtures.
14	Separation of mixtures	Explanation of all the methods of separating mixtures(filtration, distillation, fractional distillation
		, sieving, decantation, use of magnet, separation funnel, crystallization, sublimation and chromatography.
15	Oxygen	History (origin), laboratory preparation, industrial preparation, properties, test for oxygen, uses of oxygen, oxides and their properties.
16	Hydrogen	Laboratory preparation and industrial preparation, properties (physical and chemical properties) use.

