



World Curriculum

BY COMPARATIVE EDUCATION SOCIETIES

Science

Grade 6 1. Plants 1.1 Flower 1.2 Root 1.3 Stem 1.4 Leaf 1.5 Photosynthesis 1.6 Diffusion 1.7 Osmosis 1.8 Transpiration 1.9 Transportation of water and minerals	2. Human Body 2.1 Sense organs 2.2 Mouth and teeth 2.3 Digestive system 2.4 Excretory system 2.5 Respiratory system 2.6 Nervous system	3. Cell 3.1 Structure 3.2 Parts of a cell 3.3 Plant and animal cells 3.4 Variation of cells in organisms 3.5 Tissues and organs 3.6 The role of cells in organisms	4. Structure of matter 4.1 An atom 4.2 Constituents of an atom 4.3 An element 4.4 The periodic table 4.5 Classification of elements 4.6 A molecule 4.7 Compounds 4.8 A mixture 4.9 A solution	5. Soil 5.1 Types of soil 5.2 Characteristics of soil 5.3 Soil profile 5.4 Role of microorganisms in soil 5.5 Water absorption in soil 5.6 Soil erosion	6. The Earth 6.1 The unique Earth in the solar system 6.2 Rotation of Earth 6.3 Revolution of Earth around the Sun 6.4 Rocks, minerals and soils 6.5 The Moon 6.6 Phases of the Moon 6.7 Day and night 6.8 Seasonal changes 6.9 Fossils and the fossil record	7. Motion and force 7.1 Types of motion 7.2 Speed 7.3 Distance-time graph 7.4 Speed measurement 7.5 Force 7.6 Turning effect of a force 7.7 Hammer, Lever, pulley, wheel and axis 7.8 Inclined plane and pulley 7.9 Human body and simple machine	8. Light 8.1 Sources of light 8.2 Light rays and beams 8.3 How light travels 8.4 Light and the human eye 8.5 Transmission of light through objects 8.6 Plane mirror and reflection of light	9. Electricity 9.1 Electric charge 9.2 Electric current 9.3 Conductors and insulators 9.4 Resistance of a conductor 9.5 A simple electric circuit 9.6 Measuring electric current
Grade 7 1. Plants 1.1 Reproduction 1.2 Asexual reproduction 1.3 Sexual reproduction 1.4 Pollination 1.5 Fertilization 1.6 Fruits and seeds 1.7 Germination of seeds 1.8 Herbs, shrubs and trees 1.9 Deforestation and conservation of forests	2. Human Body 2.1 Circulatory system 2.2 Muscles and joints 2.3 Reproduction system 2.4 Adolescence and puberty 2.5 Lifestyle and health 2.6 Harmful drugs	3. The living world 3.1 Main characteristics 3.2 Classifying living organisms 3.3 Various types of plants 3.4 Gait of animals, reptiles, bird and fish 3.5 Digestion in grass eating animals 3.6 Feeding and digestion in amoeba	4. States of matter 4.1 Solids 4.2 Liquids 4.3 Gases 4.4 Air - a mixture of gases 4.5 Particle theory 4.6 Diffusion 4.7 Brownian motion 4.8 Changing state 4.9 Discontinuous nature of matter	5. Air and water 5.1 Components of air 5.2 Layers of atmosphere 5.3 Balance of key air components 5.4 Weather and climate 5.5 Environmental water cycle 5.6 Types of water 5.7 Drinking water 5.8 Natural reservoirs of water 5.9 Depletion of water table	6. The Solar System and beyond 6.1 Planets in the solar system 6.2 The Milky Way 6.3 Stars, constellations and galaxies 6.4 Asteroids, comets, meteors and meteorites 6.5 Star distance 6.6 Black holes	7. Force and friction 7.1 Distance and displacement 7.2 Speed and velocity 7.3 Acceleration 7.4 Types of forces 7.5 Gravitational force 7.6 Mass and weight 7.7 Weightlessness 7.8 Friction 7.9 How to reduce friction?	8. Light 8.1 Laws of reflection 8.2 Multiple reflection 8.3 Reflection from curved mirrors 8.4 Formation of shadows 8.5 Umbra and Penumbra 8.6 Speed of light	9. Electricity 9.1 Static electricity 9.2 Generation of electricity 9.3 Heating effect of electric current 9.4 Chemical effect of electric current 9.5 Electroplating 9.6 Lightning
Grade 8 1. Agriculture 1.1 Choice of crop 1.2 Soil preparation 1.3 Seed selection and sowing 1.4 Irrigation 1.5 Fertilizers 1.6 Protection of crop 1.7 Harvesting 1.8 Storage 1.9 Sale of produce	2. Food and nutrition 2.1 Types of food 2.2 Carbohydrates 2.3 Proteins 2.4 Fats 2.5 Vitamins 2.6 Lipids 2.7 Mineral salts 2.8 Balanced diet 2.9 Deficiency	3. The living ecosystem 3.1 Biotic and Abiotic components 3.2 Feeding relationships 3.3 Plant and animal adaptations 3.4 Ecological balance 3.5 Food chains, webs and energy flows 3.6 Organisms and their habitats 3.7 Deforestation and reforestation 3.8 Biosphere reserve 3.9 Endemic species and their preservation	4. Material changes 4.1 Physical change 4.2 Chemical change 4.3 Combustion 4.4 Rusting 4.5 Crystallisation 4.6 Reversible and nonreversible changes 4.7 Chemical reaction 4.8 Rearranging atoms 4.9 Conservation of mass	5. Pollution 5.1 Air pollution 5.2 Soil pollution 5.3 Water pollution 5.4 Treatment of polluted water 5.5 Greenhouse effect 5.6 Ozone depletion 5.7 Global warming 5.8 Carbon footprint 5.9 Conservation of environment	6. Space exploration and artificial satellites 6.1 Man on the Moon 6.2 Telescopes 6.3 Spacecrafts and space shuttles 6.4 Spectroscope 6.5 Types of artificial satellites and their uses 6.6 The International Space Station 6.7 Humanmade gadgets on Mars 6.8 The Universe 6.9 Journey into space	7. Pressure 7.1 Force and area 7.2 Units of pressure 7.3 Pressure in gases and liquids 7.4 Pneumatics 7.5 Atmospheric pressure 7.6 Air resistance 7.7 Hydraulics 7.8 Aerosols 7.9 Winds, storms and cyclones	8. Sound 8.1 Sound waves 8.2 Amplitude and frequency 8.3 Transverse and longitudinal waves 8.4 How human ear listens 8.5 Difference between music and noise 8.6 Propagation of sound through solids 8.7 Propagation of sound through liquids 8.8 Velocity of sound 8.9 Echo	9. Magnetism 9.1 Magnets and magnetic materials 9.2 Types of magnets 9.3 Poles of a magnet 9.4 Magnetic force 9.5 Geomagnetism 9.6 Electromagnetism

Learning Outcomes

- LO1. Appreciate how key concepts and principles of science helped in enriching human life
- LO2. Explore the application of science in new ways to benefit society locally as well as globally
- LO3. Demonstrate efficient and responsible use of natural resources through scientific methods

Note: Color coding represents common themes of topics across grades 6, 7 and 8