

Rajasthan Board Class 9 Science Syllabus

विज्ञान

विषय कोड 07

समय 3.15 घण्टे

पूर्णांक-100

क्र. सं.	इकाई का नाम	पुस्तक में पाठ का क्रमांक	अध्याय का नाम	अंक भार	इकाई के कुल अंक
1.	भोजन (Food)	15	खाद्य संसाधनों में सुधार	9	9
2.	द्रव्य-प्रकृति एवं व्यवहार (Matter- its nature and behaviour)	1. 2. 3. 4.	हमारे आस-पास के पदार्थ क्या हमारे आस-पास के पदार्थ शुद्ध हैं। परमाणु एवं अणु परमाणु संरचना	5 6 7 8	26
3.	सजीव जगत में संघटन (Organization in living work)	5. 6. 7. 13.	जीवन की मौलिक इकाई ऊतक जीवों में विविधता हम बीमार क्यों होते हैं	5 5 7 5	22
4.	गति, बल तथा कार्य (Motion, force & work)	8. 9. 10. 11. 12.	गति बल तथा गति के नियम गुरुत्वाकर्षण कार्य तथा ऊर्जा ध्वनि	6 7 6 6 6	31
5.	हमारा पर्यावरण (Our Environment)	14.	प्राकृतिक संपदा	12	12

निर्धारित पुस्तक :

1. विज्ञान- एन.सी.ई.आर.टी. से प्रतिलिप्याधिकार अन्तर्गत प्रकाशित

Details of the Syllabus

विज्ञान (SCIENCE)

Unit I : Food भोजन

Plant and animal breeding and selection for quality improvement and management ; use of fertilizers, manures; protection from pests and diseases; organic farming.

Unit 2 : Matter – Nature and behaviour

द्रव्य – प्रकृति एवं व्यवहार

Definition of matter; solid, liquid and gas; characteristics – shape, volume, density; change of state- melting (absorption of heat), freezing, evaporation (Cooling by evaporation), condensation, sublimation.

Nature of Matter : Elements, compounds and mixtures. Heterogeneous and homogenous mixtures, colloids and suspensions.

Particle nature : basic units: atoms and molecules. Law of constant proportions. Atomic and molecular masses.

Mole Concept : Relationship of mole to mass of the particles and numbers. Valency. Chemical formula of common compounds.

Structure of atom : Electrons, protons and neutrons; Isotopes and isobars.

Unit 3 : Organization in the living world

सजीव जगत में संघटन

Biological Diversity : Diversity of plants and animals – basic issues in scientific naming, basis of classification. Hierarchy of categories / groups, Major groups of plants (salient features) (Bacteria, Thalophyta, Bryophyta, Pteridophyta, gymnosperms and Angiosperms). Major groups of animals (salient features) (Non-chordates upto phyla and chordates up to classes).

Cell – basic Unit of life : Cell as a basic unit of life; prokaryotic and eukaryotic cells, multicellular organisms; cell membrane and cell wall, cell organelles; chloroplast, mitochondria, vacuoles, ER, golgi apparatus; nucleus, chromosomes – basic structure, number. Tissues, organs, organ system, organism.

Structure and functions of animal and plant tissues (four types in animals; meristematic and permanent tissues in plants).

Health and diseases : Health and its failure. Infectious and Non-infectious diseases, their causes and manifestation. Diseases caused by microbes (Virus, Bacteria and protozoans) and their prevention, Principles of treatment and prevention. Pulse

polio programmes.

Unit 4 : Motion, Force and Work

गति, बल तथा कार्य

Motion : Distance and displacement, velocity; uniform and non-uniform motion along a straight line; acceleration, distance – time and velocity – time graphs for uniform motion and uniformly accelerated motion, equations of motion by graphical method; elementary idea of uniform circular motion.

Force and Newton's laws : Force and motion, Newton's laws of motion, inertia of a body, inertia and mass, momentum, force and acceleration. Elementary idea of conservation of momentum, action and reaction forces.

Gravitation : Gravitation; universal law of gravitation, force of gravitation of the earth (gravity), acceleration due to gravity; mass and weight; free fall.

Floatation : Thrust and pressure. Archimedes principle, buoyancy, elementary idea of relative density.

Work Energy and Power : Work done by a force, energy, power; kinetic and potential energy; law of conservation of energy.

Sound : Nature of sound and its propagation in various media, speed of sound, range of hearing in humans; ultrasound; reflection of sound; echo and SONAR.

Structure of the human ear (auditory aspect only).

Unit 5 : Our Environment

हमारा पर्यावरण

Physical resources : Air, Water, Soil.

Air for respiration, for combustion, for moderating temperatures, movements of air and its role in bringing rains across India.

Air, water and soil pollution (brief introduction). Holes in ozone layer and the probable damages.

Bio-geo chemical cycles in nature : water, oxygen, carbon, nitrogen.

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