

SCIENCE SYLLABUS

Class – 8

8th Class Science Syllabus – An Overview

Syllabus for Class 8 Science is designed to provide a foundational understanding of various scientific principles. It is divided into three broad sections: Physics, Chemistry, and Biology. Here's a detailed breakdown of the topics and sub-topics covered in the Class 8 Science syllabus:

Here our chapters for ITSE Examination :-

Chapter 1: Crop Production and Management

Chapter 2: Microorganisms: Friend and Foe

Chapter 3: Synthetic Fibres and Plastics

Chapter 4: Materials: Metals and Non-Metals

Chapter 5: Coal and Petroleum

Chapter 6: Combustion and Flame

Chapter 7: Conservation of Plants and Animals

Chapter 8: Cell – Structure and Functions

Chapter 9: Reproduction in Animals

Chapter 10: Reaching the Age of Adolescence

Chapter 11: Force and Pressure

Chapter 12: Friction

Chapter 13: Sound

Chapter 14: Chemical Effects of Electric Current

Chapter 15: Some Natural Phenomena

Chapter 16. Light

Chapter 17: Stars and the Solar System

Chapter 18: Pollution of Air and Water

Chapter 1: Crop Production and Management

Topics and Sub- Topics:

- **Agricultural Practices**
 - Preparation of Soil
 - Sowing
 - Adding Manure and Fertilizers
 - Irrigation
 - Protection from Weeds
 - Harvesting
 - Storage
- **Basic Practices of Crop Production**
- **Animal Husbandry**

Chapter 2: Microorganisms: Friend and Foe

Topics and Sub-topics:

- **Microorganisms:** Types and Habitats
- **Useful Microorganisms**
 - Role in Food Industry
 - Role in Medicine
 - Role in Agriculture
 - Role in Cleaning Environment

- **Harmful Microorganisms**
 - Disease-causing Microbes
 - Food Spoilage and Preservation

Chapter 3: Synthetic Fibres and Plastics

Topics and Sub-topics:

- **Synthetic Fibres**
 - Types: Rayon, Nylon, Polyester, Acrylic
 - Properties and Uses
- **Plastics**
 - Types, Properties, and Uses
 - Environmental Impact
- **Plastics and the Environment**

Chapter 4: Materials: Metals and Non-Metals

Topics and Sub-topics:

- **Physical Properties:** Metals and Non-Metals
- **Chemical Properties**
 - Reactions with Oxygen, Water, Acids, and Bases
- **Uses of Metals and Non-Metals**

Chapter 5: Coal and Petroleum

Topics and Sub-topics:

- **Natural Resources:** Exhaustible and Inexhaustible
- **Fossil Fuels:** Coal, Petroleum, and Natural Gas
- **Conservation of Resources**

Chapter 6: Combustion and Flame

Topics and Sub-topics:

- **Types of Combustion**
- **Flame:** Structure and Types
- **Fuel:** Characteristics and Calorific Value
- **Pollution from Burning of Fuels**

Chapter 7: Conservation of Plants and Animals

Topics and Sub-topics:

- **Ecosystem:** Flora and Fauna
- **Biodiversity**
- **Conservation of Forest and Wildlife**
- **Protected Areas:** National Parks, Sanctuaries, Biosphere Reserves.
- **Red Data Book**
- **Migration and Recycling of Paper**

Chapter 8: Cell – Structure and Functions

Topics and Sub-topics:

- **Discovery of Cell**
- **Cell Structure:** Plant and Animal Cells
- **Types of Cells:** Prokaryotic and Eukaryotic
- **Cell Organelles and their Functions**

Chapter 9: Reproduction in Animals

Topics and Sub-topics:

- **Modes of Reproduction:** Sexual and Asexual
- **Sexual Reproduction:** Male and Female Reproductive Organs, Fertilization, Development of Embryo.
- **Asexual Reproduction:** Budding, Binary Fission, and Fragmentation.

Chapter 10: Reaching the Age of Adolescence

Topics and Sub-topics:

- **Adolescence and Puberty**
- **Changes during Puberty**
- **Secondary Sexual Characters**
- **Reproductive Phase of Life**
- **Role of Hormones**
- **Reproductive Health**

Chapter 11: Force and Pressure

Topics and Sub-topics:

- **Force:** Types and Effects
- **Contact and Non-Contact Forces**
- **Pressure:** Definition and Applications
- **Pressure in Fluids:** Atmospheric Pressure

Chapter 12: Friction

Topics and Sub-topics:

- **Types of Friction:** Static, Sliding, and Rolling
- **Factors Affecting Friction**
- **Advantages and Disadvantages**
- **Increasing and Reducing Friction**
- **Fluid Friction**

Chapter - 13 (Sound)

Topics and Sub-topics:

- **Production and Propagation of Sound**
- **Sound Needs a Medium to Travel**
- **Characteristics of Sound**
 - Frequency, Amplitude, Time Period
- **Speed of Sound**
- **Reflection and Absorption of Sound**
- **Hearing and Sound Measurement**

Chapter 14: Chemical Effects of Electric Current

Topics and Sub-topics:

- **Good and Poor Conductors of Electricity**
- **Chemical Effects of Electric Current**
- **Electrolysis: Electroplating and its Applications**

Chapter 15: Some Natural Phenomena

Topics and Sub-topics:

- **Lightning and Earthquakes**
- **Charging by Rubbing**
- **Types of Charges and their Interaction**
- **Lightning Safety**
- **Earthquake: Causes and Effects**
- **Seismograph and Seismic Zones**

Chapter – 16 (Light)

Topics and Sub-topics:

- **Reflection of Light**
- **Laws of Reflection**
- **Regular and Diffused Reflection**
- **Image Formation by Plane Mirror**
- **Spherical Mirrors: Concave and Convex**
- **Lenses: Convex and Concave**
- **Human Eye: Structure and Function**
- **Defects of Vision and their Correction**
- **Care of Eyes**
- **Optical Instruments**

Chapter 17: Stars and the Solar System

Topics and Sub-topics:

- **The Night Sky**
- **Phases of the Moon**
- **Stars and Constellations**
- **Solar System: Planets and their Characteristics**
- **Meteors, Meteoroids, and Comets**
- **Artificial Satellites**

Chapter 18: Pollution of Air and Water

Topics and Sub-topics:

- **Air Pollution**
 - Sources and Effects
 - Acid Rain
 - Global Warming
 - Ozone Depletion
- **Water Pollution**
 - Sources and Effects
 - Methods to Purify Water
- **Conservation of Water and Air**