

## **Theme: The World of the Living**

### **Unit II: World of Living**

#### **Chapter – 6 Life processes**

**Life processes:** ‘Living Being’. Basic concept of nutrition, respiration, transport and excretion in plants and animals.

## **Theme: How Things Work**

### **Unit III: Natural Phenomena**

#### **Chapter – 10 Light – Reflection and Refraction**

Reflection of light by curved surfaces; Images formed by spherical mirrors, centre of curvature, principal axis, principal focus, focal length, mirror formula (Derivation not required), magnification.

Refraction; Laws of refraction, refractive index.

Refraction of light by spherical lens; Image formed by spherical lenses; Lens formula (Derivation not required); Magnification. Power of a lens.

#### **Chapter – 11 Human eye and colourful world**

Refraction of light through a prism, dispersion of light, scattering of light, applications in daily life.

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## **TERM - II**

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## **Theme: Materials**

### **Unit I: Chemical Substances - Nature and Behaviour**

#### **Chapter – 4 Carbon and its compounds**

**Carbon compounds:** Covalent bonding in carbon compounds. Versatile nature of carbon. Homologous series.

#### **Chapter – 5 Periodic classification of elements**

**Periodic classification of elements:** Need for classification, early attempts at classification of elements (Dobereiner’s Triads, Newland’s Law of Octaves, Mendeleev’s Periodic Table), Modern periodic table, gradation in properties, valency, atomic number, metallic and non-metallic properties.

## **Theme: The World of the Living**

### **Unit II: World of Living**

#### **Chapter – 8 How do organisms reproduce?**

**Reproduction:** Reproduction in animals and plants (asexual and sexual) reproductive health-need and methods of family planning. Safe sex vs HIV/AIDS. Child bearing and women’s health.

#### **Chapter – 9 Heredity and Evolution**

**Heredity:** Heredity; Mendel’s contribution- Laws for inheritance of traits: Sex determination: brief introduction;

**Theme: Natural Phenomena**

**Unit IV: Effects of Current**

**Chapter – 12 Electricity**

Ohm's law; Resistance, Resistivity, Factors on which the resistance of a conductor depends. Series combination of resistors, parallel combination of resistors and its applications in daily life. Heating effect of electric current and its applications in daily life. Electric power, Interrelation between P, V, I and R.

**Chapter – 13 Magnetic effects of current**

**Magnetic effects of current:** Magnetic field, field lines, field due to a current carrying conductor, field due to current carrying coil or solenoid; Force on current carrying conductor, Fleming's Left Hand Rule, Electric Motor, Electromagnetic induction. Induced potential difference, Induced current. Fleming's Right Hand Rule.

**Theme: Natural Resources**

**Unit V: Natural Resources**

**Chapter – 15 Our Environment**

**Our environment:** Eco-system, Environmental problems, Ozone depletion, waste production and their solutions. Biodegradable and non-biodegradable substances.

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**ONLY FOR INTERNAL ASSESSMENT**

**Note: Learners are assigned to read the below listed part of Unit V. They can be encouraged to prepare a brief write up on any one concept of this Unit in their Portfolio. This may be an assessment for Internal Assessment and credit may be given (Periodic assessment/Portfolio). This portion of the Unit is not to be assessed in the year-end examination.**

**Chapter – 16 Management of natural resources:** Conservation and judicious use of natural resources. Forest and wild life; Coal and Petroleum conservation. Examples of people's participation for conservation of natural resources. Big dams: advantages and limitations; alternatives, if any. Water harvesting. Sustainability of natural resources.

7. Tracing the path of the rays of light through a glass prism.

**Unit-III:(Chapter-11)**

**TERM-II**

**LIST OF EXPERIMENTS**

1. Studying the dependence of potential difference (V) across a resistor on the current (I) passing through it and determining its resistance. Also plotting a graph between V and I.

**Unit-IV:(Chapter-12)**

2. Studying (a) binary fission in *Amoeba*, and (b) budding in yeast and Hydra with the help of prepared slides.

**Unit-II:(Chapter-8)**

**PRESCRIBED BOOKS:**

- Science-Textbook for class IX-NCERT Publication
- Science-Text book for class X- NCERT Publication
- Assessment of Practical Skills in Science-Class IX - CBSE Publication
- Assessment of Practical Skills in Science- Class X- CBSE Publication
- Laboratory Manual-Science-Class IX, NCERT Publication
- Laboratory Manual-Science-Class X, NCERT Publication
- Exemplar Problems Class IX – NCERT Publication
- Exemplar Problems Class X – NCERT Publication

**Assessment Areas (Theory) 2021-22  
(Class X)  
Science (086)**

**Theory**

**TotalMaximum Marks: 80**

<b>Competencies</b>	<b>Marks</b>
<b>Demonstrate Knowledge and Understanding</b>	46 %
<b>Application of Knowledge/Concepts</b>	22 %
<b>Analyze, Evaluate and Create</b>	32 %

**Note:**

- Internal choice would be provided.

**Internal Assessment – Term I and II (10 Marks each)**

- **Periodic Assessment** - 03 marks
- **Multiple Assessment** – 02 marks
- **Subject Enrichment** (Practical Work) - 03 marks
- **Portfolio** - 02 marks