

SEBA Class 10 Science Syllabus

21. Ethanol or rectified spirit
22. Ether
23. Thermometer
24. Petridish
25. Stopwatch
26. Pipette/syringe
27. Spring balance



SCIENCE PRACTICAL

(For Class X)

List of Experiments (Class - X)

Sl. No. BIOLOGY

1. To prepare a temporary mount of a leaf to demonstrate its stomata.
2. To show that light is essential for photosynthesis.
3. To study binary fission of Amoeba or yeast with the help of prepared slide.
4. To dissect and display different parts of a complete flower (China rose)
5. To study the morphological characters of cockroach.

PHYSICS

6. To find the image distance due to an object placed in front of convex lens and hence to determine its focal length.
7. To study the image distance corresponding to an object placed at $2f$, $3f$, $4f$ distance in front of a convex lens.
8. To study the phenomenon of refraction through prism (by pin method) and hence to determine the angle of deviation.
9. To study the change of current due to variation of resistance in an electric circuit.
10. To study and demonstrate the principle of working of electric motor.

CHEMISTRY

11. To show that electrovalent compounds are soluble in

water but covalent compounds are not.

12. To show that aqueous solution of ionic compounds conduct electricity.
13. (i) To test the properties of hydrochloric acid with the help of reagents
 - (a) litmus solution (blue/red) or litmus paper.
 - (b) zinc metal
 - (c) Sodium carbonate
- (ii) To test properties of sodium hydroxide with the help of
 - (a) Blue/red litmus solution
 - (b) zinc metal
 - (c) Sodium carbonate
- (iii) Demonstration of a neutralization reaction.
14. To detect the presence of the functional group in carboxylic acid.
15. To study some redox reactions.

List of equipments and materials (Class - X)

BIOLOGY

1. Simple microscope
2. Compound microscope
3. Forceps, brush
4. Watch glass
5. Needle, dissecting needle
6. Slides and coverslips
7. Ganong's light screen or black paper

8. Potted plant
9. Beaker
10. Chemical reagents - Ethanol, Iodine solution
11. Slides of Binary fission of Amoeba and yeast

PHYSICS AND CHEMISTRY

1. Insulating copper wire
2. Torch light bulb.
3. Lens (convex) focal length, 5 cm)
4. Candle/match box
5. Prism
6. Pencil
7. Torch bulb or LED (bulb)
8. Razor Blade
9. Test Tubes, Test tube holders, Bunsen burner on spirit lamp
10. Chemical reagents viz. sodium chloride, copper sulphate, carbon tetrachloride, candle wax, naphthalene, sodium carbonate, pieces of zinc, phenolphthalein, distilled water, ethanoic acid/benzoic acid
11. Flexible wire
12. Adhesive tape
13. Litmus paper - blue and red
14. Match box
15. Bent glass tube (bent at the same angle at both ends)
16. Cork
17. Tissue paper

18. Droppers
19. Pipette
20. Burette
21. Conical flask
22. Beakers
23. Glass rod



General Science- Class- IX

Theme/Sub-theme	Questions	Key concepts	Resources	Activities/Processes
1. Food Higher yields	What do we do to get higher yields in our farms?	Plant and animal breeding and selection for quality improvement, use of fertilizers, manures; protection from pests and diseases; organic farming.	Visit to any fish/bee/dairy/pig etc. farms; data showing harmful effects of insecticides; process for the preparation of compost, vermicompost.	Collection of weeds found in fields of different crops; collection of diseased crops; discussion and studying composting/vermicomposting. (periods 8)
2. Materials Material in our clothing	What kinds of clothes help us keep cool? Why do wet clothes feel cool?	Cooling by evaporation. Absorption of heat.	Work done in class-VII; glassware, heat source, black paper, thermometers.	Experiments to show cooling by evaporation. Experiments to show that the white objects get less hot. (periods 5)
Different kinds of materials	In what way are materials different from each other? Is there some similarity in materials?	All things occupy space, possess mass. Definition of matter.	Everyday substances like wood, salt, paper, ice, steel, water, etc.	To feel the texture, observe the colour and lustre, effect of air, water and heat, etc. on each of the materials. (periods 4)

Theme/ Sub-theme	Questions	Key concepts	Resources	Activities/ Processes
The regional environment	What are the steps expected on the part of local administration to maintain balances in nature in your region? How can we help?	People's participation. Chipko movement. Legal perspectives in conservation and international scenario.	Case studies on Chipko movement; CNG use.	Making posters/slogans for creating awareness.
	How does the construction of big dams affect the life of the people and the regional environment? Are rivers, lakes, forests and wild life safe in your area?	Big dams: advantages and limitations; alternatives if any. Water harvesting. Sustainability of natural resources.	Case study material on dams. Resource material on water harvesting.	Case studies with focus on issues of construction of dams and related phenomena (actual/probable). Debates on issues involved.
Sources of energy	What are the various sources of energy we use? Are any of these sources limited? Are there reasons to prefer some of them over others?	Different forms of energy, leading to different sources for human use; fossil fuels, solar energy; biogas; wind, water and tidal energy; nuclear energy. Renewable versus non-renewable sources.	Experience; print material on various sources of energy; materials to make a solar heater.	Discussion, Making models and charts in groups. Making a solar heater/cooker. (Periods 8)

GENERAL SCIENCE

Subject Code : C3

Class -X

Theory Total Marks : 90

Time : 3 hours

Practical : 10

Pass Marks : 30

(Theory : 90, Internal Assessment : 10

Pass marks in written examination : 27)

Unit	CONTENTS	MARKS
Chapter 1	Chemical Reactions and Equations	6
Chapter 2	Acids, Bases and Salts	6
Chapter 3	Metals and Non-metals	7
Chapter 4	Carbon and its Compounds	6
Chapter 5	Periodic Classification of Elements	4
Chapter 6	Life Processes	8
Chapter 7	Control and Coordination	6
Chapter 8	How do Organisms Reproduce	5
Chapter 9	Heredity and Evolution	5
Chapter 10	Light-Reflection and Refraction	8
Chapter 11	Human Eye and Colourful World	5
Chapter 12	Electricity	6
Chapter 13	Magnetic Effects of Electric Current	5
Chapter 14	Sources of Energy	4
Chapter 15	Our Environment	4
Chapter 16	Management of Natural Resources	5
	Total	90

**Experimental Activities Practicals/ Internal Assessment
Marks- 10**

Sl. No.	Chapters	Marks
1.	Category A : Teacher's activity-- (Teacher will evaluate the students as he/she demonstrates)	2
2.	Category B : Student's activity-- Activity Practical record book	3 3
3.	Category C : Chart/Model/Specimen Collection	2
		10
	Grand Total :	100

Textbook : Science (for Class X). The Assam State Textbook Production and Publication Ltd. Guwahati-1

General Science - Class-IX (for blind Students) Code No. 48

Theme/Sub-theme	Questions	Key concepts	Resources	Activities/ Processes
1. Food Higher yields	What do we do to get higher yields in our farms?	Plant and animal breeding and selection for quality improvement, use of fertilizers, manures; protection from pests and diseases; organic farming.	Describe visit to any fish/bee/dairy/pig etc. farms; data showing harmful effects of insecticides; process for the preparation of compost, vermicompost.	Let the students feel by touch the collection of weeds found in fields of different crops; collection of diseased crops; discussion and studying composting/vermicompositing (Periods 8)
Material in our clothing	What kinds of clothes help us keep cool? Why do wet clothes feel cool?	Cooling by evaporation. Absorption of heat.	Work done in Class VII; glassware, heat source, black paper, thermometers.	Describe : Experiments to show cooling by evaporation. Experiments to show that the white objects get less hot. (periods 5)
Different kinds of materials	In what way are materials different from each other? Is there some similarity in materials? In how many ways can you group the different materials you see around? How do solids, liquids and gases	All things occupy space, possess mass. Definition of matter. Solid, liquid and gas; characteristics- shape, volume, density; change of state-melting, freezing.	Everyday substances like wood, salt, paper, ice, steel, water, etc. Wax, water, ice, oil, suger, camphor/ ammonium chloride/ naphthalene.	Tell the texture, the colour and lustre, effect of air, water and heat, etc. on each of the materials. (periods 4) Sorting out a medley of materials, in various ways Tell shape and physical state of different materials.