

# LEARNING OUTCOME (CLASS - VII)

## CHEMISTRY

### CHAPTERS

1. Chemical reactions and equations
  - a. Students will be able to know about chemical reactions.
  - b. Students will be able to understand the concepts of balanced chemical equations.
  - c. Students will be able to utilize the concepts of reactions in daily life.
2. Acids, Bases and Salts
  - a. Students will be able to define acid, base and salts.
  - b. Students will be able to understand the concepts of pH.
  - c. Students will be able to apply the concepts of acids in daily life.
3. Metals and Non-metals
  - a. Students will be able to know about metals and non-metals.
  - b. Students will be able to understand the properties of metals and non-metals.
  - c. Students will be able to utilize the concepts of metals in daily life.
4. Carbon and its compounds
  - a. Students will be able to know about carbon.
  - b. Students will be able to recall about allotropes of carbon.
  - c. Students will be able to apply the concepts of carbon in daily life.
5. Periodic classification of elements
  - a. Students will be able to know about the classification of elements
  - b. Students will be able to differentiate the different forms of periodic tables.

## PHYSICS

### CHAPTERS

1. Light-Reflection and Refraction
  - a. Students will be able to know about reflection of light.
  - b. Students will be able to differentiate reflection and refraction.
  - c. Students will be able to utilize the concepts of light in daily life.
2. Human Eye and Colourful world
  - a. Students will be able to know about the structure of eye.
  - b. Students will be able to understand the functions of eye.
  - c. Students will be able to apply the concepts of lens in daily life.
3. Electricity
  - a. Students will be able to define electric current.
  - b. Students will be able to understand about the units of charge and current.
  - c. Students will be able to utilize the concepts of circuit diagrams in daily life.
4. Magnetic effect of electric current
  - a. Students will be able to know about that how electric current produced by magnet.
  - b. Students will be able to understand about electro magnet.
  - c. Students will be able to apply the concepts of motors and generators in daily life.
5. Sources of energy
  - a. Students will be able to know about the different sources of energy.
  - b. Students will be able to understand about the production of energy.
  - c. Students will be able to utilize the concepts of solar energy in daily life.

## SST

1. Students will get knowledge about resources, their development and use of the resources.
2. Students will also learn about water resources and sources of water and their need. They will also get knowledge about different type of agriculture.
- 3 Students will get information about minerals, energy resources and their uses. Students will also learn about a hydel power plants and manufacturing units.
4. Students will learn the importance of novels and the contribution to the society.
5. Students will get the information about different types of movements took place in India.
6. Students will understand about the effect of industries on weavers and workers and their contribution to the economy of the country.
7. Students will know about the types of development like human and economic development.
8. Students will be able to know about the types of commercial banks and central bank.
9. Students will understand the types of sectors in the economy and types of unemployment.
10. The students will be able to know about globalization and liberalization.
11. Students will be able to know the power sharing.
12. Students will understand the meaning and benefits of federalism and how federalism works.
13. Students will be knowing the importance of democracy and how caste and religion affect democracy.
14. Students will also know about different types of political parties and coalition govt. national and regional parties.

## BIOLOGY

Chapter Six: Life Processes:

- (1)The maintenance of life requires processes like Nutrition, Respiration, Transportation and Excretion.
- (2)Heterotrophic nutrition involves the intake of complex materials prepared by other organisms.
- (3)Respiration may be Aerobic or Anaerobic. Aerobic respiration makes more energy available to the organism.
- (4)In humans ,the transport of materials such as oxygen ,carbon-di-oxide ,food an nitrogenous waste is the function of circulatory system.
- (5)In plants transportation of water is called Transpiration and transportation of food is called Translocation.

Ch7 Control and co-ordination

Students are able to learn that:

- (1)Control and co-ordination are the functions of Nervous system and Hormonal system.
- (2)The nervous system uses electrical impulses to transmit messages.
- (3)Our nervous system gets information from sense organs and acts through our muscles.

(4) Chemical co-ordination is seen in both plants and animals.

(5) Growth promoting hormones in plants are Auxin, Gibberlin and Cytokinin.

Ch 8 How do organisms reproduce:

Students are able to learn that:

(1) Reproduction, like other life processes is not essential to maintain the life of an individual.

(2) In Fission many bacteria and protozoans simply divide into two or more daughter cells.

(3) Roots, stems and leaves of some plants develop into new plants through Vegetative propagation.

(4) Sexual reproduction involves two individuals for the creation of a new individual.

(5) The Male reproductive system in humans consists of testes, vas-deferens, seminal vesicles, prostate gland, urethra and penis.

(6) Female reproductive system in humans comprises of ovaries, fallopian tube, uterus and vagina.

Ch 9 Heredity and Evolution:

Students are able to learn that:

(1) Variations arise during the process of reproduction can be inherited.

(2) These variations may lead to increased survival of the individuals.

(3) Sex is determined by different factors in various species. In humans the sex of child depends upon whether the paternal chromosome is X (for girls) or Y (for boys).

(4) Changes in the non-reproductive tissues, caused by environmental factors are not inheritable.

(5) Evolutionary relationships are traced in the classification of organisms.

(6) Evolution can be worked out by the study of not just living species, but also fossils.

Ch 15 Our environment:

Student will be able to learn that:

(1) The main components of eco-system are Biotic and A-biotic.

(2) The various components of an ecosystem are interdependent.

(3) Producers make energy from sunlight available to the rest of an eco-system.

(4) Human activities have a great impact on environment.

(5) CFC is responsible for depletion of Ozone layer.

(6) The waste we generate may be Biodegradable or Non-biodegradable.

Ch 16 Management of Natural Resources:

Students will be able to learn that:

(1) Our natural resources like Forests, Wild life, Coal, Water and Petroleum need to be used in a sustainable manner.

(2) We can reduce pressure on our environment by sincerely applying the maxim of 3 R i.e., Reduce, Reuse and Recycle.

(3) Management of forest resources has to take into account the interest of various stakeholders.

(4) The harnessing of water resources by building dams has social, economic and environmental implications.

(5) For sustenance of these natural resources we should use them judiciously.

## Real Numbers

The students of X standard will learn Euclid's division algorithm, Fundamental Theorem of Arithmetic and conversion recurring decimal to a rational number. They will be able to prove irrationality of  $\sqrt{2}$ ,  $\sqrt{3}$  etc.

## Algebra

The students will be made familiar with part of Linear Equations in two variables, their solutions through algebraic as well as graphical methods and their use in solving everyday life problems.

They will learn about quadratic equations, methods of their solutions, nature of roots, relation between roots and coefficient and formation of Quadratic Equation when roots are given. They will have knowledge of Division Algorithm of Polynomials and solve problems on H.C.F., L.C.M. through division method.

## Arithmetic Progression

The students will acquire knowledge of A.P., its  $n^{\text{th}}$  term and sum of first  $n$ -terms.

## Trigonometry

They will be told about measurement of an angle (sexagesimal, centesimal and circular systems). They will learn Trigonometric Ratios of an acute angle of a right angled triangle. They will acquire knowledge of T-Ratios of standard angles of  $0^{\circ}$ ,  $30^{\circ}$ ,  $45^{\circ}$ ,  $60^{\circ}$ , and  $90^{\circ}$ . They will solve simple problems of height and distances having these angles as one of the acute angle. They will learn basic trigonometric identities and T-Ratios of complementary angles.

## Co-ordinate Geometry

Graphical Solution of pair of linear equations in two variables, distance between two points, section formula and area of triangle.

## Geometry

They will be familiar with properties of similar triangles, proof and application of Pythagoras Theorem and properties of tangents to a circle.

## Mensuration

The students will be able to find out area of sector and segments of a circle. They will learn surface areas and volumes of combinations of two figures having cubes, cuboids, spheres, hemisphere, right circular cylinder/cone and frustum of a cone.

## Statistics and Probability

They will learn about mean, median and mode of grouped data and cumulative frequency graph.

They will acquire efficiency to use classical definition of probability and simple problems on probability.

ENGLISH

### English Communicative 101

#### The general objectives at this stage are:

- to listen and comprehend live as well as record in writing oral presentations on a variety of topics
- to develop greater confidence and proficiency in the use of language skills necessary for social and academic purpose
- to participate in group discussions, interviews by making short oral presentation on given topics
- to perceive the overall meaning and organisation of the text (i.e., the relationships of the different “chunks” in the text to each other
- to identify the central/main point and supporting details, etc., to build communicative competence in various registers of English

- to promote advanced language skills with an aim to develop the skills of reasoning, drawing inferences, etc. through meaningful activities
- to translate texts from mother tongue(s) into English and vice versa
- to develop ability and knowledge required in order to engage in independent reflection and enquiry

At the end of this stage learners will be able to do the following:

- read and comprehend extended texts (prescribed and non-prescribed) in the following genres: science fiction, drama, poetry, biography, autobiography, travel and sports literature, etc.
- text-based writing (i.e., writing in response to questions or tasks based on prescribed or unseen texts) understand and respond to lectures, speeches, etc.
- write expository / argumentative essays, explaining or developing a topic, arguing a case, etc. write formal/informal letters and applications for different purposes.
- write items related to the workplace (minutes, memoranda, notices, summaries, reports etc.
- filling up of forms, preparing CV, e-mail messages., making notes from reference materials, recorded talks etc.
- The core course should draw upon the language items suggested for class IX-X and delve deeper into their usage and functions. Particular attention may, however, be given to the following areas of grammar:
- The use of passive forms in scientific and innovative writings.
- Converting one kind of sentence/clause into a different kind of structure as well as other items to exemplify stylistic variations in different discourses modal auxiliaries-uses based on semantic considerations.

### Specific Objectives of Reading

Students are expected to develop the following study skills:

refer to dictionaries, encyclopaedia, thesaurus and academic reference material

- select and extract relevant information, using reading skills of skimming and scanning
- understand the writer's attitude and bias
- comprehend the difference between what is said and what is implied
- understand the language of propaganda and persuasion
- differentiate between claims and realities, facts and opinions form
- business opinions on the basis of latest trends available
- comprehend technical language as required in computer related fields arrive at
- personal conclusion and comment on a given text specifically develop the
- ability to be original and creative in interpreting opinion develop the ability to
- be logically persuasive in defending one's opinion making notes based on a text

Develop literary skills as enumerated below:

personally respond to literary texts

- appreciate and analyse special features of languages that differentiate literary texts from non-literary ones
- explore and evaluate features of character, plot, setting, etc.
- understand and appreciate the oral, mobile and visual elements of drama
- identify the elements of style such as humour, pathos, satire and irony, etc.
- make notes from various resources for the purpose of developing the extracted ideas into sustained pieces of writing

### Listening and Speaking

Speaking needs a very strong emphasis and is an important objective leading to professional competence. Hence, testing of oral skills must be made an important component of the overall testing pattern. To this end, speaking and listening skills are overtly built into the material to guide the teachers in actualization of the skills.

### Specific Objectives of Listening

Students are expected to develop the ability:

- to listen to lectures and talks and to be able to extract relevant and useful information for a specific purpose.
- to listen to news bulletins and to develop the ability to discuss informally on a wide ranging issues like current national and international affairs, sports, business, etc.
- to respond in interviews and to participate in formal group discussions.
- to make enquiries meaningfully and adequately and to respond to enquiries for the purpose of travelling within the country and abroad.
- to Listen to business news and to be able to extract important information.
- to develop the art of formal public speaking.

### Specific Objectives of Writing

- to write letters to friends, pen friends, relatives, etc.
- to write business and official letters.
- to send faxes, e-mails[formal].
- to open accounts in post offices and banks.
- to fill in railway/airline reservation forms.
- to write on various issues to institutions seeking relevant information, lodge complaints, express thanks or tender apology.
- to write applications, fill in application forms, prepare a personal bio-data for admission into colleges, universities, entrance tests and jobs.
- to write informal reports as part of personal letters on functions, programmes and activities held in school (morning assembly, annual day, sports day, etc.)
- to write formal reports for school magazines/events/processes/ or in local newspapers about events or occasions.
- to express opinions, facts, arguments in the form a speech or debates. to draft
- papers to be presented in symposia.
- to take down notes from talks and lectures.
- to write examination answers according to the requirement of various subjects.
- to summarise a text.

### About Reading

Inculcating good reading habits in children has always been a concern for all stakeholders in education. The purposes to create independent thinking individuals with the ability to not only create their own knowledge but also critically interpret, analyse and evaluate it with objectivity and fairness. This will also help students in learning and acquiring better language skills.

Creating learners for the 21st century involves making them independent learners who can learn, unlearn and relearn and, if our children are in the habit of reading, they will learn to reinvent themselves and deal with the many challenges that lie ahead of them.

Reading is not merely decoding information or pronouncing words correctly. It is an interactive dialogue between the author and the reader in which the reader and the author share their experiences and knowledge with each other. Good readers are critical readers with an ability to arrive at a deeper understanding of not only the world presented in the book but also of the real world around them.

Consequently, they become independent thinkers capable of taking their own decisions in life rationally.

Hence, a few activities are suggested below which teachers may use as a part of the reading project.

Short review

Dramatization of the story

Commentary on the characters

Critical evaluation of the plot, storyline and characters

- Comparing and contrasting the characters within the story and with other characters in stories by the same author or by the other authors
- Extrapolating about the story read or life of characters after the story ends defending characters actions in the story
- Making an audio story out of the novel/text to be read aloud.
- Interacting with the author
- Holding a literature fest where students role-play as various characters to interact with each other
- Role playing as authors/poets/dramatists, to defend their works and characters
- Symposiums and seminars for introducing a book, an author, or a theme
- Creating graphic novels out of novel or short stories they read
- Dramatizing incidents from a novel or a story
- Creating their own stories

Books of one genre to be read by the whole class.

Teachers may select books suitable to the age and level of the learners. Care ought to be taken to choose books that are appropriate in terms of language, theme and content and which do not hurt the sensibilities of a child.

Teachers may later suggest books from other languages but dealing with the same themes as an extended activity. The Project should lead to independent learning/reading skills and hence the chosen book should not be taught in class, but may be introduced through activities and be left for the students to read at their own pace. Teachers may, however, choose to assess a student's progress or success in reading the book by asking for verbal or written progress reports, looking at their diary entries, engaging in a discussion about the book, giving a short quiz or a work sheet about the book/short story. The mode of assessment may be decided by the teachers as they see fit.