

# ENGLISH

## TOPIC

## LEARNING OBJECTIVE

## ACTIVITY

### MARCH

#### Prose

The Last Lesson

#### Poetry

My Mother At Sixty Six

#### Sup. Reader

The Tiger King

#### Novel Chapter-1

#### Reading Skills

Comprehensions ; Note Making

#### Writing Skills

Notices, Article Writing

- To enhance reading skills
- To use suitable expressions to write a debate
- To be able to sift important points in a paragraph and make notes

- Language enhancement through slogans, appropriate words and creativity
- Group discussion
- New words/phrases
- Dramatization

**REFERENCE BOOK/ WEBLINKS :** <https://www.youtube.com/watch?v=JuBAXrPGiXg>  
: Rachna Sagar Together With

### APRIL

#### Prose

Lost Spring

#### Poetry

An Elementary School Classroom

#### Sup. Reader

The Enemy

#### Novel

Chapter-2 and 3

#### Reading Skills

Comprehension, Note Making

#### Writing Skills

Posters, Speech Writing

- To be able to read, infer and understand
- To be able to read, infer and understand
- To read poem for pleasure
- To be able to different aspects of novel

- Speaking in Group/class/with partner
- Explore the different aspects of the Novel reading like symbolism, society those days and today; vices; repentances; social sanctions, ethics and values etc.
- New words

**REFERENCE BOOK/ WEB LINK :**  
<https://www.youtube.com/watch?v=h2OzU09Qhwo&list=PLoIr30tNT8CZryoRM5jABp3TYMyMUY0VK> : Rachna Sagar Together With

# MAY

## Prose

Deep Water

## Poetry

Keeping Quiet

## Sup. Reader

Should Wizard Hit Mommy

## Novel

Chapter-4, 5 and 6

## Reading Skills

Comprehension, Note Making

## Writing Skills

Advertisement, Debate

- To practise reading and comprehension skills
- To be able to read, understand and infer
- To recreate the sounds and images suggested by the words.
- To develop a habit of self-reading
- To be able to sift important points in a paragraph and make notes

Speaking in Group/class/with partner, Group Discussion

**REFERENCE BOOK/ WEB LINK: Rachna Sagar Together With,**

<https://www.youtube.com/watch?v=j2uyFJGIFUM>

# JULY

## Prose

The Rattrap

## Poetry

A Thing of Beauty

## Sup. Reader

On the Face of It

## Novel

Chapter-7, 8, 9, 10, 11

## Reading Skills

Comprehension, Note Making

## Writing Skills

Formal and Informal invitations, letter to Editor, Enquires

- To practise reading and comprehension skills
- To be able to infer and analyse
- To recreate the images suggested by the words.
- To develop a habit of self-reading
- To be able to sift important points in a paragraph and make notes

Speaking in Group, letter writing, phrases for discursive writing, VCOP for writing, reading, CSP

# SEPTEMBER

REVISION

# OCTOBER

## Prose

Indigo

## Poetry

Aunt Jennifer's Tigers

## Sup. Reader

Evens Tries an O-Level

## Novel

Chapter-12, 13, 14, 15, 16 and 17

## Reading Skills

Comprehensions ; Note Making

**Writing Skills** Application for Jobs

- To identify specific details from the text
- To appreciate rhythm and rhyme in the poem
- To practise reading and comprehension skills
- To develop a habit of self-reading
- To be able to sift important points in a paragraph and make notes

Speaking in Group/class/with partner, applications, VCOP, CSP Activity, Reading, Using Wow Words, Active listening

**REFERENCE BOOK/ WEBLINKS :** <http://mycbseguide.com/downloads/cbse-class-12-english-core/1855/cbse-revision-notes/7/> Rachna Sagar Together With

# NOVEMBER

## Prose

Going Places

## Poetry

Revision of all Poems

## Sup. Reader

Memories of Childhood

## Novel

Chapter-18, 19, 20, 21, 22

## Reading Skills

Comprehensions ; Note Making

## Writing Skills

Formal letters

- To appreciate and understand writer's fondness for nature
- To read and understand. To predict
- To appreciate poetic devices
- To develop the habit of self-reading

Speaking in Group/class/with partner, completing the notes, Making notes, Using VCOP, CSP with Newspaper

**REFERENCE BOOK / WEBLINKS :** <http://mycbseguide.com/downloads/cbse-class-12-english-core/1855/cbse-revision-notes/7/>

Rachna Sagar Together With Sample Papers

## DECEMBER- FEBRUARY

### REVISION

# MATHEMATICS

UNIT NO. & CHAPTER	LEARNING OBJECTIVE	KEY CONCEPT
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## MARCH

<p><b>Unit -I (Relation and functions)</b> <b>Relations and function</b></p>	<p>Child will be able to understand the concept of relation and function and their types.</p>	<p>Type of relations, reflexive, symmetric, transitive and equivalence relations. One to one and onto functions. Composite functions, inverse of a function, Binary operations.</p>
<p><b>Inverse Trigonometric Functions.</b></p>	<p>To solve trigonometric function by graphically . concept of inverse trigonometric function.</p>	<p>Definition, range, domain, principal, value branches, graph of inverse trigonometric functions. Elementary properties of inverse trigonometric functions</p>

**Reference Book/ Web link: <https://www.youtube.com/watch?v=jU4hWqayXvs>**

## APRIL

<p><b>Unit II Algebra Matrices.</b></p>	<p>To understand the concept of notation, order, equality, and type of matrices, to perform the operation of matrix</p>	<p>Concept, notation, order, equality, type of matrices, zero matrix, transpose of a matrix, symmetric and skew symmetric matrices, addition, multiplication and scalar multiplication of matrices, non commutativity of multiplication of matrices and of multiplication of matrices and existence of non zero matrices.</p>
<p><b>Determinants:</b></p>	<p>Calculating the area of figures by a different method, Able to solve the linear equation in three variable.</p>	<p>Determinant of a square matrix (up to 3x3 matrices), properties of determinants, minors, cofactors and applications of determinants in finding the area of triangle, adjoint and inverse of a square matrix, consistency, inconsistency and number of solutions of system of linear equations, solving system of linear equation in two or three varied variables</p>



# SEPTEMBER

## REVISION

# OCTOBER

### UNIT IV: Vector and three dimensional geometry Vector

To connect the mathematics in real life with concept of vector and scalars . able to connect it with the other branches as physics.

Vector and scalars, magnitude and direction of a vector, direction cosines/ratios of vectors. Type of vectors, position vectors of a point, negative of a vector, components, addition, multiplications of a vector by a scalar, scalar product of vectors

### Three-dimensional Geometry:

Understand the concept of Cartesian equation of a line and calculate the shortest distance between two lines.

Ratio of a line joining two points, Cartesian and vector equation of a line, shortest distance between two lines. Cartesian and vector equation of a plane, Angle between:- two lines, two planes, lines and planes, distance of point from a plane.

Reference Book/ Web link : <http://www.schoolnotes4u.com//>

# NOVEMBER

### UNIT V- Linear programming Linear programming

Each child will be able to: Understand the basic concept of linear inequalities.

Definition of the terminology as constraints, optimization, different types of linear programming (L.P) problems, mathematical formulation of L.P problems, graphical method of solution for problems in two variables, feasible and infeasible regions, feasible and infeasible solutions and optimal feasible solutions.

### UNIT VI- Probability

Able to deal with problems based on multiplication theorem on probability for independent events

Multiplication theorem on probability. Conditional probability, independent events, total probability, Bayes' theorem, Random variable and its probability distribution, mean and variance of haphazard variable. Repeated independent trials and Binomial distribution.

Reference Book/ Web link : <https://www.youtube.com/watch?v=j7SBAlhj3k//>

# DECEMBER-FEBURARY

## REVISION



## MAY

Ch-4: Moving charges & Magnetism

- define the Biot-Savart law and to calculate the magnetic field and magnetic forces in flowing currents.
- to calculate this from given current distributions.
- use Lorentz force formula and they should be able to use it in calculating the force on a charged particle in an electric and magnetic field.
- derive Ampere's law & relate this to Biot-savart law
- know about the divergence and the curl of the magnetic field.

Ch-5: Magnetism & Matter

- explain the static properties of electric and magnetic fields.
- They should derive Faraday's law of electromagnetic induction and how it relates to the curl of the electric field.
- Students should be able to relate the current flowing into a capacitor and the law of conservation of charge with the idea of the displacement current.

**Reference Book/ Web link :** **HC VERMA/**<http://dmr-physicsnotes.blogspot.in/p/magnetism-i-1.html>

## JULY

Ch-6: Electromagnetic Induction

- derive how Maxwell's equations lead to electromagnetic waves and how the speed of light is related to static properties of the vacuum.
- to solve simple problems involving electromagnetic waves in free space.

Ch-7: Alternating current

**Reference Book/ Web link :** <http://hscphysicssem.blogspot.in/p/electromagnetic-induction-and.html>

## AUGUST

Ch- 8: Electromagnetic waves

- to write the equations of terms like displacement current, electromagnetic waves with little derivation.
- Derive terms of electromagnetic spectrum.
- to understand differentiate between virtual and real images.
- to apply these to understand how lenses form images.
- explain about combination of lenses, and how they can be used to achieve desired results.

Ch- 9: Ray optics & optical instrument

Ch-10: Wave optics

- Identify systems that can be understood using simple models of harmonic oscillation Explain the role of the wave equation

## SEPTEMBER

REVISION

## OCTOBER

Ch-10: wave optics(Remaining)

Ch-11: Dual nature of Radiation & Matter

Ch-12: Atoms

Ch-13: Nuclei

- to derive the Propagation of light as a wave Laws of reflection and refraction on the basis of wave theory.
- Experimental evidence to support wave theory of light.
- explain the factors on which the fringe width depends.
- to support wave theory of light and limit of resolution.
- derive Photoelectric emission and its variation with certain parameters like frequency & intensity.
- explain Particle nature of light.
- derive De Broglie wave length and wave nature of matter
- derive alpha-particle scattering with the explanation of Models of Bohr model & Rutherford.
- Review radiation units of measurement and comprehend typical versus dangerous radiation doses.
- Describe the risks associated with radiation.

Reference Book/ Web link : <http://schools.aqlasem.com/11783> ,  
<http://www.livescience.com/37206-atom-definition.html>

## NOVEMBER

Ch-14: Semiconductor Electronics: Materials, Devices & simple circuits

Ch-15: Communication system

- to define and analyze the four basic amplifiers models. Solve the amplifier's transfer functions and gain.
- to understand in depth the op amp as a circuit building block and its terminal characteristics for applications.
- An ability to explain the essence of the diode functions,
- to develop a high degree of familiarity with the MOSFET: its physical structure and operation, terminal characteristics, circuit models,
- Formulate and interpret the presentation and processing of signals in communication systems.
- Assess and evaluate different analogue and digital modulation and demodulation techniques.
- Evaluate the influence of noise on communications signals.

Reference Book/ Web link : <http://electronics.howstuffworks.com/diode.htm>

## DECEMBER-FEBRUARY

REVISION

# CHEMISTRY

CHAPTER & KEY CONCEPT	LEARNING OBJECTIVE
<b>MARCH</b>	
<b>Unit I: Solid State</b>	<ul style="list-style-type: none"><li>•classify crystalline solids on the basis of the nature of binding forces;</li><li>•define crystal lattice and unit cell;</li><li>•explain close packing of particles;</li><li>•describe the imperfections in solids and their effect on properties;</li><li>•correlate the electrical and magnetic properties of solids and their structure.</li></ul>
<b>Unit II : Solutions</b>	<ul style="list-style-type: none"><li>•state and explain Henry's law and Raoult's law;</li><li>•distinguish between ideal and non-ideal solutions;</li><li>•explain deviations of real solutions from Raoult's law;</li><li>•describe colligative properties of solutions and correlate these with molar masses of the solutes;</li></ul>
<b>Unit XV: Polymers</b>	<ul style="list-style-type: none"><li>• explain the terms - monomer, polymer and polymerisation and appreciate their importance;</li><li>• distinguish between various classes of polymers and different types of polymerisation processes;</li><li>• appreciate the formation of polymers from mono- and bifunctional monomer molecules;</li><li>• describe the preparation of some important synthetic polymers and their properties;</li><li>• appreciate the importance of polymers in daily life.</li></ul>
<b>Reference Book/ Web link :</b> <a href="https://www.google.co.in/?qws_rd=ssl#q=cbse+12+chemistry+solid+state">https://www.google.co.in/?qws_rd=ssl#q=cbse+12+chemistry+solid+state</a>	
<b>APRIL</b>	
<b>Unit III: Classification of Elements and Periodicity in Properties</b>	<b>The student will be able to</b> <ul style="list-style-type: none"><li>•describe an electrochemical cell and differentiate between galvanic and electrolytic cells;</li><li>•apply Nernst equation for calculating the emf of galvanic cell and define standard potential of the cell;</li><li>•derive relation between standard potential of the cell, Gibbs energy of cell reaction and its equilibrium constant;</li><li>•define resistivity (<math>\rho</math>), conductivity (<math>\kappa</math>) and molar conductivity (<math>L_m</math>) of ionic solutions;</li><li>•differentiate between ionic (electrolytic) and electronic conductivity;</li><li>•enunciate Kohlrausch law and learn its applications;</li><li>•understand quantitative aspects of electrolysis;</li><li>•describe the construction of some primary and secondary batteries and fuel cells;</li><li>•explain corrosion as an electrochemical process</li></ul>
<b>Unit IV: Chemical Bonding and Molecular Structure</b>	

## MAY

### Unit IV: Chemical Kinetics

- define the average and instantaneous rate of a reaction;
- distinguish between elementary and complex reactions;
- differentiate between the molecularity and order of a reaction;
- temperature and catalyst;
- derive integrated rate equations for the zero and first order reactions;
- determine the rate constants for zeroth and first order reactions;

### Unit V: Surface Chemistry

- describe interfacial phenomenon and its significance;
- define adsorption and classify it into physical and chemical adsorption;
- explain mechanism of adsorption;
- explain the factors controlling adsorption from gases and solutions on solids;

**Reference Book/ Web link:** -class 12/chemistry/Chemistry Notes for class 12 Chapter 4 chemical kinetic .pdf. class 12/chemistry/Chemistry Notes for class 12 Chapter 5 surface chemistry.pdf

## JULY

### Unit VI: General Principles and Processes of Isolation of Elements

- explain the terms minerals, ores, concentration, benefaction, calcination, roasting, refining, etc.;
- understand the principles of oxidation and reduction as applied to the extraction procedures;
- apply the thermodynamic concepts like that of Gibbs energy and entropy to the principles of extraction of Al, Cu, Zn and Fe;
- explain why reduction of certain oxides like  $\text{Cu}_2\text{O}$  is much easier than that of  $\text{Fe}_2\text{O}_3$  ;

### Unit VII: p -Block Elements

- appreciate general trends in the chemistry of elements of groups 15,16,17 and 18;
- learn the preparation, properties and uses of di nitrogen and phosphorus and some of their important compounds;
- know the chemistry of interhalogens and structures of Oxo acids of halogens;
- enumerate the uses of noble gases

### Unit XVI: Chemistry in Everyday Life

- . visualise the importance of Chemistry in daily life;
- . explain the term 'chemotherapy';
- . describe the basis of classification of drugs;
- . explain drug-target interaction of enzymes and receptors;
- . explain how various types of drugs function in the body;
- . know about artificial sweetening agents and food preservatives;

**Reference Book/ Web link :** <http://study.com/academy/lesson/gravitational-force-definition-equation-examples.html>

## AUGUST

### Unit VIII: d and f Block Elements

- learn the positions of the d and f-block elements in the periodic table;
- know the electronic configurations of the transition (d -block) and the inner transition (f-block) elements;
- \* properties, structures and uses of some important compounds such as  $K_2Cr_2O_7$  and  $KMnO_4$ ;
- understand the general characteristics of the d- and f-block elements and the general horizontal and group trends in them

### Unit IX Coordination Compounds

- appreciate the postulates of Werner's theory of coordination compounds;
- learn the rules of nomenclature of coordination compounds;
- write the formulas and names of mononuclear coordination compounds;
- define different types of isomerism in coordination compounds;
- understand the bonding in coordination compounds in terms of the Valence Bond and Crystal Field theories;

**Reference Book/ Web link:** -[https://www.google.co.in/class\\_12/chemistry/Chemistry Notes for class 12 Chapter d and f Block Elements .pdf](https://www.google.co.in/class_12/chemistry/Chemistry_Notes_for_class_12_Chapter_d_and_f_Block_Elements_.pdf)

## SEPTEMBER

### REVISION

## OCTOBER

### Unit X: Haloalkanes and Haloarenes

- name halo alkanes and haloarenes according to the IUPAC system of nomenclature from their given structures;
- describe the reactions involved in the preparation of haloalkanes and haloarenes and understand various reactions that they undergo;

### Unit XI: Alcohols, Phenols and Ethers

- name alcohols, phenols and ethers according to the IUPAC system of nomenclatures;
- discuss the reactions involved in the preparation of alcohols from (i) alkenes (ii) aldehydes, ketones
- correlate physical properties of alcohols, phenols and ethers with their structures;
- discuss chemical reactions of the three classes of compounds on the basis of their functional groups
- write the common and IUPAC names of aldehydes, ketones and carboxylic acids;

### Unit XII: Aldehydes, Ketones and Carboxylic Acids

- explain the mechanism of a few selected reactions of aldehydes and ketones;
- understand various factors affecting the acidity of carboxylic acids and their reactions;
- describe the uses of aldehydes, ketones and carboxylic acids

**Reference Book/ Web link :** [https://www.google.co.in/class\\_12/chemistry/Chemistry Notes for class 12: Alcohols, Phenols and EthersChapter.pdf](https://www.google.co.in/class_12/chemistry/Chemistry_Notes_for_class_12:_Alcohols,_Phenols_and_EthersChapter.pdf)

## NOVEMBER

### Unit XIII: Organic Compounds Containing Nitrogen

- describe amines as derivatives of ammonia having a pyramidal structure;
- classify amines as primary, secondary and tertiary;
- name amines by common names and IUPAC system;
- describe some of the important methods of preparation of amines;
- explain the properties of amines;
- describe the method of preparation of diazonium salts and their importance in the synthesis of a series of aromatic compounds including azo

### Unit XIV: Biomolecules

- . define the biomolecules like carbohydrates, proteins and nucleic acids;
- . classify carbohydrates, proteins, nucleic acids and vitamins on the basis of their structures;
- . explain the difference between DNA and RNA;
- . appreciate the role of biomolecules in Biosystems.

## DECEMBER-FEBRUARY

REVISION

# BIOLOGY

CHAPTER & KEY CONCEPT	LEARNING OBJECTIVE
<b>MARCH</b>	
<p><b>UNIT VI Reproduction</b> Chapter- 1 Reproduction, Sexual and Asexual modes of reproduction</p> <p>Chapter- 2 <b>Sexual Reproduction in Flowering Plants</b> Flower structure, Development of male and female gametophytes; Pollination-types and agencies, Double fertilization; Post fertilization events-Development of endosperm parthenocarpy, polyembryoma, Significance of seed and fruit formation</p>	<ul style="list-style-type: none"> <li>• To define Reproduction and explain it as a vital process of life.</li> <li>• Differentiate between sexual and asexual modes of reproduction</li> <li>• Explain the modes of asexual reproduction, Budding, fragmentation, Vegetative propagation etc.</li> <li>• Explain the phases and events of sexual reproduction.</li> <li>• Diagrammatically describe the structure of flower Explain the adaptations of flowers for pollination</li> <li>• Compare internal fertilization and external fertilization.</li> <li>• Describe the post-fertilization changes in a flower.</li> <li>• Understand the stages of development of seed and formation of fruit</li> </ul>
<p><b>Reference Book/ Web link :</b> <a href="http://www.mikecurtis.org.uk/plant_reproduction.htm">http://www.mikecurtis.org.uk/plant_reproduction.htm</a></p>	
<b>APRIL</b>	
<p>Chapter- 3 <b>Human Reproduction</b> Male and female reproductive systems, Menstrual cycle; Fertilisation embryo development up to blastocyst formation, implantation; Pregnancy and placenta formation Parturition Lactation</p> <p>Chapter- 4 <b>Reproductive health</b> prevention of sexually transmitted diseases (STD), Oral and Surgical methods of Birth control , Medical Termination of Pregnancy (MTP), Amniocentesis, Infertility and assisted reproductive technologies</p>	<ul style="list-style-type: none"> <li>• Explain the main organs of male and female reproductive system.</li> <li>• Elaborate the process of formation of gametes</li> <li>• To explain the cyclic changes that takes place in the reproductive organs of primate females</li> <li>• Discuss the events takes place during fertilization and implantation</li> <li>• To discuss sexually transmitted infections in adolescents, and to discuss the various contraceptive methods.</li> <li>• To know the Side effects associate with contraceptive methods</li> <li>• Discuss various types of assisted reproductive technologies; IVF,AI,GIFT etc.</li> </ul>
<p><b>Reference Book/ Web link:</b> <a href="https://www.youtube.com/watch?v=paUP3z9RQR8">https://www.youtube.com/watch?v=paUP3z9RQR8</a></p>	

## MAY

### Unit VII. Genetics and Evolution

Chapter- 5

#### Principles of Inheritance and Variation

Mendelian Inheritance, Elementary idea of polygenic inheritance, Chromosome theory of inheritance, Linkage, Crossing Over  
Sex determination - in humans, birds  
Mendelian disorder in humans

Z

Chapter- 6

#### Molecular Basis of Inheritance

DNA as genetic material, Structure of DNA & RNA, DNA Replication, Gene expression and regulation, Human Genome project, DNA fingerprinting.

- Discuss the contributions of Gregor Mendel and his experiments with the garden pea.
- Review the structure of DNA and chromosomes.
- Compare a dominant trait to a recessive trait. Demonstrate Mendel's Law of Dominance and Law of Segregation by using a Punnett Square.
- To explain salient features of chromosomal theory
- To discuss parallelism between chromosome and Mendelian factor.
- Explain linkage and Recombination
- To explain DNA as genetic material
- Draw the double helical structure of DNA and list its components
- Explain the process of Replication of DNA
- Draw the structure of RNA and discuss Transcription in Prokaryotes and Eukaryotes.

**ReferenceBook/Weblink:**<https://www.engrade.com/traciewynn/500006190599/17>, <http://schools.aqlasem.com/46494>

## JULY

Chapter- 7

#### Evolution

Origin of life, Biological evolution, Darwin's contribution, Modern Synthetic theory of Evolution; Mechanism of evolution - Variation and

### Unit VIII Biology and Human Welfare

Chapter- 8

#### Human Health and Diseases

Parasites causing human diseases (Malaria, Filariasis, Ascariasis, Typhoid, Pneumonia, common cold, amoebiasis, ring worm); Basic concepts of immunology, Adolescence, drug and alcohol abuse.

Chapter- 9

#### Strategies for Enhancement in Food Production

Improvement in food production, Plant breeding, tissue culture, single cell protein, Biofortification, Apiculture and Animal husbandry.

- Discuss the molecular evidence for human evolution.
- Learn about the genetic relationship between humans and our closest living relatives
- Learn the pathogens involved in causing the common diseases
- Discuss the public health measures to safeguard against infectious diseases.
- Explain the concept of innate and acquired immunity
- To discuss the poultry and dairy farm management
- Explain in brief the role of animal husbandry in human welfare
- Explain the methods of plant and animal breeding for improved food quality.
- Learn the Importance of tissue culture techniques in further enhancing food production.

**Reference Book/ Web link:**[-http://study.com/academy/topic/the-molecular-and-chromosomal-basis-of-inheritance.htmI](http://study.com/academy/topic/the-molecular-and-chromosomal-basis-of-inheritance.htmI).

## AUGUST

### UNIT-IX Biotechnology and Its Application

Chapter- 11

#### Biotechnology - Principles and Processes

Genetic engineering (Recombinant DNA technology).

Chapter- 12

#### Biotechnology and its Application

Application of Biotechnology in health and agriculture: Human insulin and vaccine production, gene therapy; Genetically modified organisms, Bio safety issues, Biopiracy and patents.

Chapter- 13

#### Organisms and Populations

Habitat and niche, Population and ecological adaptations, Population interactions- mutualism, competition, predation, parasitism; Population attributes growth, Birth rate and death rate, Age distribution.

- To help the students know and understand basic facts and concepts related to biotechnology.
- To develop an interest in students to study Biotechnology as a discipline.
- To acquaint students with different applications of Biotechnology in everyday life.
- To familiarize the students to understand the relationship of Biotechnology to health, nutrition, environment and agriculture.
- Describe and distinguish patterns of dispersion of individuals in a population.
- Predict changes in populations

## SEPTEMBER

### REVISION

## OCTOBER

Chapter- 14

#### Ecosystem

Components of Ecosystem, energy flow, Pyramids of number, biomass, Energy; nutrient cycles, Ecological succession; ecological services - carbon fixation, pollination, seed dispersal, and oxygen release

- Students will review through teacher guided discussion the important concepts of the ecosystem.
- Discuss the energy flow in an ecosystem.

## NOVEMBER

Chapter- 15

#### Biodiversity and its Conservation

Concept of biodiversity, patterns of biodiversity, importance of biodiversity, loss of biodiversity; biodiversity conservation, Hotspots, endangered organisms, extinction, Red Data Book, biosphere reserves.

Chapter- 16

#### Environmental Issues

Air and water pollution and its control; water pollution and its control; agrochemicals and their effects, Solid waste management, Greenhouse effect and climate change; Ozone layer depletion, Deforestation

- Identify the role of conservation biology with regard to biodiversity.
- Understand importance of biodiversity.
- Discuss the causes of air and water pollution.
- Explain the role of CFC's in ozone depletion.
- Define deforestation and understand how deforestation has become a problem.



# JULY

## Ch-7 Test and measurement

- Role and importance of different test in sports.
- Effect of test in selection for different sports.
- Training of the skills and how to implement the skills during the match.

## Football

- History of the game
- Field dimension.
- Introduction to game.

# AUGUST

## Ch-8 Physiology and sports

- Effects of exercise on individual with respect to physiological process.
- Physiological changes due to age & role of exercise during this process.

## Football

- Training of different skills.
- Match practice.

# SEPTEMBER

## REVISION

# OCTOBER

## Ch-9 Sports medicine

- ❖ They know about the different sports injuries.
- ❖ Causes, precaution and prevention of sports injuries.
- ❖ Impact of hard surfaces and soft surfaces on athletes.

## Handball

- History of the game.
- Field dimension.
- Introduction to match.

## Ch-10 Biomechanics and sports

- Improvement in their normal movement.
- Improvement in performing technique of different games

# NOVEMBER

## Ch-11 Psychology and sports

- ❖ Learn different coping strategies for better living.
- ❖ Personality development and technique.
- ❖ Motivational strategies.
- ❖ Role and importance of different training in sports.
- ❖ Will enhance their own fitness.

## Handball

- Training of different skills.
- Match practice.

## Ch-12 Training in sports

# INFORMATICS PRACTICES

UNITNO. & LESSON KEY CONCEPTS	LEARNING OBJECTIVE	PRACTICAL
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## MARCH

<p><b>Ch-1 Computer Networking</b>                      Network and its need                      Terminology of Network- Node, Server, NIU IP and domain name                      Network topology                      Types of network                      Transmission media                      Network Security</p> <p><b>Ch-2 Open Source Concepts</b></p> <p><b>Chapter-3 Java IDE Programming</b>  <b>Revision Tour-I</b>                      Introduction to JAVA                      Token                      Operations in Java</p>	<ul style="list-style-type: none"> <li>• To understand the meaning and importance of network.</li> <li>• To define Terminology of Network- Node, Server, NIU IP and domain name</li> <li>• To familiar with the term and types of topology</li> <li>• To know about LAN,WAN,MAN</li> <li>• To explain transmission media</li> <li>• To understand the importance of network security.</li> <li>• To explain open source Concepts.</li> <li>• To explain JAVA as programming as well as platform for other application.</li> <li>• To define Tokens e.g. Keyboard, Identifiers, Literals, Separators, Operators.</li> <li>• To perform mathematical and logical operation using operator.</li> </ul>	<p>Creating simple programs using mathematical and logical operators</p>
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**Reference Book/web link:** [https://en.wikipedia.org/wiki/Computer\\_network](https://en.wikipedia.org/wiki/Computer_network) , : <http://www.javatpoint.com/java-programs>

## APRIL

<p><b>Chapter-4 Java IDE Programming</b>  <b>Revision Tour-II</b>                      Swing Components- Text fields, Text Area, Label, Buttons Combo box and list</p> <p><b>Chapter-5 Java IDE Programming</b>  <b>Revision Tour-III</b>                      Classes and Object</p>	<ul style="list-style-type: none"> <li>• To use swing components- Textfields, Text Area, Label, Buttons Combobox and list to make various Java programs</li> <li>• To define class and Objects</li> <li>• To define class in the program</li> <li>• To define types of members in a class</li> <li>•</li> </ul>	<p>Creating Java programs using Netbeans.</p> <p>Programming in Java Netbeans and defining class as a data type</p>
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**Reference Book/web link:** <http://www.javatpoint.com/java-programs>

## MAY

### Chapter-6 More About Classes and Libraries

Java Libraries  
Math Library  
Working with string

- To define Java library
- To make program and use string methods
- To use mathematical functions to perform mathematical computing in Java program
- 

. making programs using string methods

Reference Book/web link: <http://www.javatpoint.com/java-programs>

## JULY

### Chapter-7 Concepts of Inheritance

Introduction and need of Inheritance  
Different forms of Inheritance

### Chapter-8 Database Connectivity to MYSQL

Introduction to Database  
Creating Database

### Chapter-9 Web Application

Web Browser, Web Server, Web Address and URL

- To explain Inheritance and need of Inheritance
- To explain Different forms of Inheritance
- To explain database and its importance
- To create database
- To define Web Browser, Web Server, Web Address and URL

Making programs using mathematical functions

Creating database in Java netbeans and MySQL

Surfing on the net.

Reference Book/web link: <http://www.javatpoint.com/java-programs> ,  
<http://www.w3schools.com/html/>

## AUGUST

### Chapter-10 HTML-I Basic HTML Elements

Html and its capabilities  
HTML tags

### Chapter-11 HTML-II : Lists, Tables and Forms

Table tags- TD, TR, TH  
Bullets and Number list

- To define HTML
- To explain its capabilities
- To create programs using various tags of HTML
- To use Table tags- TD, TR, TH to create table in HTML
- To create list using Bullets and Number

creating programs using various tags of HTML  
create table in HTML

creating list using Bullets and Number in HTML

Reference Book/web link: <http://www.w3schools.com/html/>

## SEPTEMBER

### REVISION

## OCTOBER

### Chapter-12 XML- eXtensible Markup Language

Introduction to XML  
Comparing XML with  
SGML, HTML, EDI

### Chapter-13 MYSQL Revision Tour

Data Model  
MYSQL Elements-  
Literals, Data Types,  
Null Values, Comments  
Creating,

- To define XML
- To tell differences and similarities  
XML with SGML, HTML, EDI
- Models
- To define MYSQL Elements- Literals,  
Data Types, Null Values, Comments
- To Create, Modify, Insert and Delete  
Table

Reference Book/web link: <https://dev.mysql.com/doc/refman/5.5/en/programs.html>

## NOVEMBER

### Chapter- 14 Database Transactions

Concepts of Data  
Transaction  
Transaction Properties

### Chapter-15 More on SQL

Grouping Function  
Types of Group

### Chapter-16 Tables and Integrity Constraints

- To define concepts of Data Transaction  
To define Transaction Properties

To create group in table

To create table with Constraints  
To Add, Modify, Delete columns

Creating group in table

Reference Book/web link:

<https://dev.mysql.com/doc/refman/5.5/en/programs.html>

## DECEMBER

### Chapter-17 IT Application

E-Governance-  
Objective, Challenges  
Major E-Governance  
Projects in India  
Societal Impact

E-Business- Types  
Challenges  
Major E- Business  
Projects in India  
Societal Impact

E-Learning- Benefits,  
Limit and advantages

To know E-Governance- Objective,  
Challenges

To explain Major E-Governance  
Projects in India

To explain Societal Impact of E-  
Governance

To know E-Business-Types, Challenges  
To explain Major E- Business Projects  
in India  
To explain Societal Impact of E-  
Business

To tell benefits, limit and advantages of  
E-Learning

Reference Book/web link: <http://the-social-impacts.blogspot.in/>

## JANUARY-FEBRUARY

## PROJECT WORK