

# **SYLLABUS 2016-17**

# **CLASS - 9**

## *Content*

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**English Language**

**English Literature**

**Chemistry**

**Geography**

**Biology**

**Hindi**

**Computer**

**Maths**

**Physics**

**History Civics**

# English Language

Lesson No.	Month	Topic	Concept	Activity
1. 2. 3. 4.	April	Comprehension-1 Narrative Compo Personal letters Gram - Tenses, voice	Reading, important points, meanings, clarity an interesting incident, Some Charcacters, Suitable back-ground, dialogue and language. Address, Date, Greetings, body of lettler, concluding lines uses of tenses, form of verb, voice	Writing skills live examples, experiences Format chart Discussion, Rules chart.
1. 2. 3. 4.	June	Comprehension-2 Descriptive Composition Complaint letters Gram - Degreess Narration	Reading, clarity of meanings description of some person, place orthing, describe a real or imaginary person, words, actions address, space, date, space, solution, subject, body of letter details of cause, explanation of effects, Request Changes of Tense, Universal truth, Reporting verbs Questions command & Request, Exclamations & wishes, formation of degrees, Inter change of degrees (comparative & superlative)	thinking skills Declamation Format chart Rules chart
1. 2. 3. 4.	July	Comprehension-3 Reflective composition Letters to the editor Gram - Join the sentences, pre-positions	Meanings, important points, Ques ' Ans. Social, political and domestic topic s habits & qualities, thoughts, abstract nature. Writer;s opinion, force ful approach, strong emotions formal tone, pleasure or indignation. releationship between the person or the thing connection of words and sentence.	thinking skills Writing skills Format of letter Live examples
1. 2. 3. 4.	Aug.	Comprehension-4 Argumentative compositions Applications Gram - Transformation of sentence	important points, meanings, clarity reasoning, various aspects of subject, statement argument, opinions, clear conclusion Address, Date, Salutation, subject, body of letter Conversion, Interchange of sentences	thinking skills speaking skills Debate Format chart showing examples
	Sep.	Revision of syllabus SA-1 Exam	Worksheet, exercise, examples, Refrence books	Brain storming, Test
1. 2. 3. 4.	Oct.	Comprehension –5 Story writing Job Applications Gram - Misc. Grammar exercises	Reading, meanings, Ques/Ans. dramatic events, good plot, purpose, tone, title theme, violent action Address, subject, Date, Content, salutation various exercise give, Instructions, examples	thinking skills Speaking skills - story presentation. model of Application live examples, pictures

Lesson No.	Month	Topic	Concept	Activity
1.	Nov.	Picture composition	Verifying scene, creating story describe	Analysis of picture, character writing skills
2.		Re flective & Argumen- tative compositions	Topics. nature, thoughts, reasoning, opinion, Arguments, clear conclusion.	
1.	Dec.	Comprehension - 6	Understanding, Content meaning Ques./ Ans.	thinking skills
2.		Personal letters	freedom of words, language, Address, salutation, body of letter concluding lines.	Speaking skills
3.		Narrative & Descriptive composition	incident, some characters, dialogue, description of scene, incident of person or thing	eloquet (2 groups)
4.		Gram - Misc Grammar exercises	solving exercises, examples, understanding practising	Live examples
1.	Jan.	Comprehension - 7	understanding meanings, solving exercise	thinking skills
2.		Complaint & Editorial letters	Address, presentation of words, body of letter, concluding lines, subject salutation.	Format chart, Rules
3.		Gram - Misc. Gram	Solving exercise, understanding rules	examples
	Feb.	Revision	Worksheet, exercises, Reference Book	Brain Storming, Test.
	Mar.	Exams	SA-2 Final Exams	

## Syllabus

### Unit Test-1 (20 Marks)

- |    |             |     |
|----|-------------|-----|
| 1. | Composition | 10m |
| 2. | Grammar     | 10m |

### Unit Test-2 (20 Marks)

- |    |                |     |
|----|----------------|-----|
| 1. | Letter writing | 10m |
| 2. | Grammar        | 10m |

### SA-1 / SA-2 (80 Marks)

- |    |               |     |
|----|---------------|-----|
| 1. | Composition   | 25m |
| 2. | Letter        | 10m |
| 3. | Comprehension | 25m |
| 4. | Grammar       | 20m |

## Paper Style

### Paper Style for Unit Test -1

- |              |   |              |                 |    |     |                    |    |  |
|--------------|---|--------------|-----------------|----|-----|--------------------|----|--|
| Q.1          | Composition (out of two (any one))  | 10m          |                 |    |     |                    |    |  |
|              | <table style="width: 100%; border: none;"> <tr> <td style="width: 50%;">i. Narrative</td> <td style="width: 50%;">ii. Descriptive</td> </tr> </table>   | i. Narrative | ii. Descriptive |    |     |                    |    |  |
| i. Narrative | ii. Descriptive   |              |                 |    |     |                    |    |  |
| Q.2          | Grammar   |              |                 |    |     |                    |    |  |
|              | <table style="width: 100%; border: none;"> <tr> <td style="width: 5%;">i.</td> <td style="width: 85%;">Transformation</td> <td style="width: 10%;">5m</td> </tr> <tr> <td>ii.</td> <td>Narration, Degrees</td> <td>5m</td> </tr> </table> | i.           | Transformation  | 5m | ii. | Narration, Degrees | 5m |  |
| i.           | Transformation  | 5m           |                 |    |     |                    |    |  |
| ii.          | Narration, Degrees  | 5m           |                 |    |     |                    |    |  |



# English Literature

Lesson No.	Month	Topic	Concept	Activity
Poem 1	Apr.	Where the mind is without fear	Importance of knowledge / education and freedom	Works of Rabindranath Tagore, his participation in freedom struggle.
Story 1		India's Heroes	Inspiring story of our martyrs people (heroes) who died in terrorist attack in Mumbai on 26 <sup>th</sup> Nov., 2008	Collect information of our Indian heroes & their sacrifices.
Story 3		Hunger	Hunger as the Dictator, invisible power that rules over the lives of peoples	Live examples of peoples who struggle to earn a living for their families
Poem 2		The Inchcape Rock	References from history	Group Discussion - moral
Poem 3	Jun.	In the Bazzars of Hyderabad	Life and works of Sarojni Naidu, glimpses of the social and cultural life of the Hyderabad city.	Recitation Analytic work of poem
Story 2	July	Journey by Night	Adventurous life in Jungles and creatures, graphic details	Live examples on dangerous encounters in the hill & forest.
Drama		Play - Act I (SC-I,II)	Intro of characters, their personalities, atmosphere background.	Role Play
		Act I (SC-III) Act II (SC -I to VI)	References from Bible, Construction of play, racial and religious differences, social barriers, prejudice	Role play of the characters
	Sep.	Revision	Worksheet, Reference book SA-1 Exam	Brain Storming
Story 4	Oct.	My lost Dollar	Personal experience, attitude towards borrowing and lending of small sums, arguments, hints advice	Make Album - Currencies of different countries.
Drama		Play - Act II (SC-VII-IX)	Suitor's test in fortune game, Portia's fulfillment of his father's will.	Role play of the characters
Poem 4	Nov.	A small pain in my chest	heroic deeds, tribute to soldiers, based on the war in Vietnam, no glory in war, sacrifices	discussion on "Effects of war" "Life of a soldier"
Drama		Play-Act III (SC I-V)	tragic elements, revenge plan, winner of fortune game, marriage, final trial room, themes of loyalty friend.	Role play
Story 5	Dec.	God lives in Panch	Justice wins against heavy odds, Truth ever shines power to awaken the conscience, responsibility	collect relevant information of formation and functions of Panchayat (Gram)
Poem 5		The Professor	English language, skills with faults, satire, irony and sarcasm, exaggerated typical style of Indian	Debate - "Are our Indian values changing day by day say for or against.
Story 6	Jan.	The last leaf	Power of love, strength and determination to do extraordinary things and sacrifices	Story writing based on true love, strength and determination, friendship.
Poem 6		Stopping by the woods in the Snowy evening	bonding between human and nature, Natural detail, harsh & difficult winter in New Hampshire	Speaking skills - on conservation and measures to save greenery
	Feb.	Revision	Worksheet / Reference Book	Brain storming
	March	Revision	SA - 2 Final Exams	



# CHEMISTRY

Lesson No.	Month	Topic	Concept	Activity
1.	April	Ch.1 Matter and its composition  Ch-6 Water	<ul style="list-style-type: none"> <li>• Explanation of change of state of matter on the basis of kinetic theory of matter.</li> <li>• Law of conservation of mass.</li> <li>• Water as a compound and as a universal solvent</li>   <li>• Its physical and chemical properties</li>   <li>• Solutions</li> </ul>	1. Particle distance in solid, liquid, gases. 2. Reaction of $\text{NaCl} + \text{AgNO}_3$ . 1. Experiment showing dissolved solids in water 2. Solvent, Solute and solution preparation 3. Preparation of saturated solutions.
2.	June	Continue.....  Ch. 2 Study6 of Gas	<ul style="list-style-type: none"> <li>• The behaviour of gases under changes of temperature and pressure.</li> <li>• Boyle's law</li> <li>• Charle's law</li> <li>• Gas Equation</li> <li>• Relationship between units</li> </ul>	1. Numericals
3.	July	Ch.3 Elements, compounds and mixtures	<ul style="list-style-type: none"> <li>• General characteristics and differences</li> <li>• Types of mixtures</li> <li>• Separation method :-                1. Filtration                2. Evaporation                3. distillation                4. fractional distillation                5. Chromatography             </li> </ul>	1. Homogeneous and Heterogeneous mixture 2. Filter sand from water 3. Separation of 'NaCl. and $\text{NH}_4\text{Cl}$ by crystallisation method. 4. Separation of Iron by magnet. 5. Oil + water showing Immiscibility.
4.	Aug.	Ch.4 The language of chemistry	<ul style="list-style-type: none"> <li>• Symbols : Elements</li> <li>• Valency</li> <li>• Radicals</li> <li>• Chemical Equalions</li> </ul>	1. Prepare chart showing element with symbols, atomic number, valency and formulae. 2. Numericals.
5.	Sept.	Ch-4	Continue & Revision.....	
6.	Oct.	Ch.9 Study of the first element Hydrogen	<ul style="list-style-type: none"> <li>• Position</li> <li>• Characteristic</li> <li>• Preparation</li> <li>• Test and uses.</li> </ul>	1. Lab manual identification of gases.
7.	Nov.	Continue.....  Ch.10 Pollution	<ul style="list-style-type: none"> <li>• Acid Rain</li> <li>• Global Warming</li> <li>• Ozoned depletion</li> </ul>	
8.	Dec.	Ch.7 Atomic Structure	<ul style="list-style-type: none"> <li>• Discovery of electrons, protons, Nucleus</li> <li>• Structure of an atom</li> </ul>	Model of Atomic structure

Lesson No.	Month	Topic	Concept	Activity
			• Isotopes	
9.	Jan.	Ch. 8 Periodic table	<ul style="list-style-type: none"> <li>• Dobereiner's Triads</li> <li>• Newland's law of octaves</li> <li>• Modern periodic law</li> <li>• The modern periodic table</li> </ul>	Discussion by showing periodic chart in chemistry lab.
10.	Feb.	Ch. 5 Physical and chemical change.	<ul style="list-style-type: none"> <li>• Distinctions between physical and chemical changes.</li> <li>• Conditions and types of chemical change</li> <li>• Energy change</li> <li>• Burning</li> </ul>	<ol style="list-style-type: none"> <li>1. Dissolution of sugar in water</li> <li>2. Burning of paper</li> <li>3. Magnetization of Iron</li> <li>4. Rusting of Iron.</li> </ol>
11.	March	Continue and Revision.		

## Syllabus

### Unit Test-1 (20 Marks)

Ch. 1 Matter & its composition

### Unit Test-2 (20 Marks)

Ch. 9 Study of the first element Hydrogen

### SA-1 (80 Marks)

Ch. 2 Study of gas laws

Ch. 3 Elements, compounds and mixtures

Ch. 4 The language of chemistry

Ch. 6 Water

### SA-2 (80 Marks)

Ch. 5 Physical and chemical change

Ch. 7 Atomic structure

Ch. 8 Periodic table

Ch. 10 Pollution

## Paper Style

### Paper Style for Unit Test -1 & 2

#### **Objective type Questions (10 M) (1 marks each)**

- Fill in the blanks
- Choose the correct options.
- Answer in one word.
- Define
- Formula (molecular, chemical)
- Equations

#### **Subjective type Questions (10M)**

- Answer in short                    2M
- Differentiate                        2M



# GEOGRAPHY

Lesson No.	Month	Topic	Concept	Activity
1.	April	The Earth as a planet	The earth: A unique planet, Shape of the Earth size of the earth, Earth- The living planet	Collect information about the earth.
2.		Geographic grid	Locating places - The grid system, parallels of latitude, prime meridian, longitude and time, local time and standard time, Indian standard time, Time zones, international date line, The great circle and the small circle.	
3.		Rotation and Revolution of the Earth	Rotation, Revolution and its effects, effect of the tilted Axis on Day and Night, The changing seasons A solstices and equinoxes	
4.	June	Structure of the earth	The core, The Mantle, lithosphere and the plate Tectonics, comparative study of crust, mantle and core.	Make charts and diagrams of the interior of the earth and collect informations about tectonic force. make model of land forms of the earth.
5.		Landforms of the earth	Landforms, mountains, plateaus, plains	
6.	July	Rocks	Rocks and Minerals, Types of Rocks, Rock cycle Economic significance of rocks.	Collect pictures of different rocks and try to recognise them from their physical properties. Make model of different types of volcanoes. collect information about some major earthquakes and discuss in class.
7.		Volcanoes	Types of volcanoes, products of volcanic Eruptions, world Distribution of volcanoes, effects of volcanic Activity.	
8.		Earth quakes	Earthquakes, causes of Earth quakes, Hazardous effects of earthquakes, constructive effects of earth quakes, Distribution of earth quakes	
9.	Aug.	Weathering and Denudation	The changing Landscape, weathering, effects of weathering, gradation and its agents, Lands forms made by wind work of River.	collect information about different types of weathering and discuss in class. Collect information about different major oceans of the World discuss with class.
10.		Hydrosphere, Tides and Ocean Currents	Hydrosphere, The oceans, importance of oceans, The distribution of Land and water, movements in the oceans, effects of ocean currents.	
11.	Oct.	The Atmosphere	Earth's Atmosphere, Composition of the Atmosphere structure of the Atmosphere. The ozone layer, The Green house effect and Global warming.	Find out the information about the effect of El Nino on global as weather system.
12.	Nov.	Insolation	Insolation, Factors affecting the distribution of Temperature, Heat Budget.	Make figure of heat Budget
13.	Dec.	Pressure Belts and types of winds	Atmospheric pressure, Measurement of Atmospheric pressure, Factors affecting distribution of pressure, major pressure belts of the world winds.	On a outline map of the world, mark with arrows and name the various



# BIOLOGY

Lesson No.	Month	Topic	Concept	Activity
1.	April	2. Cell - The Unit of Life  3. Tissues : Plant and animal tissues	<ul style="list-style-type: none"> <li>• Cell Theory</li> <li>• Structure of cell</li> <li>• Types of cell</li> <li>• Plant tissues</li> <li>• Animal tissues</li> </ul>	<p>To study of plant and animal cell by permanent slide.</p> <p>To Study of plant and animal tissues by permanent slide.</p>
2.	June	4. Vegetative propagation and micropropagation  5. The Flower	<ul style="list-style-type: none"> <li>• Artificial vegetative propagation</li> <li>• Hybridisation</li> <li>• Biotechnology</li> <li>• Transgenic organism</li> <li>• Structure of a bisexual flower &amp; its floral parts</li> </ul>	<p>Study of Artificial vegetature prepagation in grapevine (Jasmine)</p> <p>To study the different flower</p>
3.	July	6. Pollination & Fertilization 7. Seed - structure & germination 8. Respiration in plant	<ul style="list-style-type: none"> <li>• Pollination</li> <li>• fertilization</li> <li>• Types of germination</li> <li>• Types of seeds</li> <li>• Kinds of respiration</li> <li>• Experiments on respiration in plant</li> </ul>	<p>To Study the germination of pollen.</p> <p>To study the germination process in bean and Maize</p>
4.	Aug.	10. Five kingdom calssfication	<ul style="list-style-type: none"> <li>• Classification system</li> <li>• Invertebrate</li> <li>• Vertebrata</li> </ul>	To study plants and animal specimens.
5.	Sep.	10. Con....& Revision		
6.	Oct.	11. Economic importance of bacteria and fungi	<ul style="list-style-type: none"> <li>• Role of bacteria in medicine agriculture &amp; industry</li> </ul>	To study yeast & Bread mould.
7.	Nov.	12. Nutrition	<ul style="list-style-type: none"> <li>• Need of nutrition &amp; balanced diet.</li> </ul>	To study fthe presence of starch, protein & lipids in food.
8.	Dec.	13. Digestive system  14. Movement & locomotion	<ul style="list-style-type: none"> <li>• Digestive system of human</li> <li>• Dentition</li> <li>• Bone</li> <li>• Human skeleton &amp; muscles</li> </ul>	To study the model of skeleton system.
9.	Jan.	15. Skin "The jack of all Trades"  16. The respiratory system	<ul style="list-style-type: none"> <li>• Structure of skin &amp; its derivatives</li> <li>• Kind of respiration</li> <li>• Process of respiration</li> </ul>	<p>To study the poster of skin structure.</p> <p>To set up an experiment to demonsrate the mechnisim of breathing in human.</p>
10.	Feb.	17. Diseases Causes &	<ul style="list-style-type: none"> <li>• Disease caused by bacteria protozoa parasitic worms.</li> </ul>	
11.	Mar.	19. Waste generation &	<ul style="list-style-type: none"> <li>• Types of wastes</li> </ul>	Worksheet solving.

\* Lesson is not included in syllabus Ch-1, 9,18 (Already studied in previous classes)



# HINDI

Lesson No.	Month	Topic	Concept	Activity
१.	अप्रैल	गद्य - बात अठनी की (पत्र मुहावरे विशेषण)	भ्रष्टाचार जैसी बुराईयों की जानकारी छात्रों को देना उसे दूर करने का संकल्प लेना	पात्र अभिनय मुहावरों का खेल
२.	जुन	साखी (पद्य) निबंध - पत्र	कबीरदासजी की जानकारी छात्रों को देना निबंध तथा पत्रों के प्रारूप के बारे में छात्रों को बताना	दोहो का स्वर वाचन पत्र - लेखन
३.	जुलाई	पद्य-गिरिधर की कुंडलियाँ भाववाचक संज्ञा, समानार्थी , विलोम	नैतिक शिक्षा की जानकारी कुंडलियों द्वारा अर्थ समझाकर दी जाएगी । खेल-विधि द्वारा शब्दों की सूचि	कुंडलियों का गायन शब्दों का जाल
	अगस्त	संस्कार और भावना (एकांकी) उपसर्ग-प्रत्यय अपठित गद्यांश	संस्कार और भावनाओं का तालमेल, तथा मानव प्रकृति को विभिन्न उदाहरणों द्वारा समझाया जाएगा।	पारिवारिक वाद विवाद
	सितंबर	काकी (गद्य) पत्र	मातृ-वियोग की पीड़ा के बारे में उसके महत्त्व के बारे में, छात्रों को विस्तारसूचि बताया जाएगा ।	माँ के बारे में लेख लिखना
	अक्तूबर	निबंध - पत्र	पत्र का प्रारूप, निबंध	अभ्यास कार्य
	नवंबर	महायज्ञ का पुरस्कार (काव्य) निर्देशानुसार वाक्य परिवर्तन	मानव सेवा ही सबसे बड़ा महायज्ञ है, जीवों के कष्टों का निवारण ही हमारा धर्म है, इसका उल्लेख किया जाएगा ।	वाद-विवाद
	दिसंबर	स्वर्ग बना सकते है-पद्य नेताजी का चश्मा - गद्य वह जन्म भूमि मेरी -कविता	धरती पर मानवता और समानता के रहस्य को बताया जाएगा । देश भक्ति की भावना छात्रों में लाने का प्रयास इस पाठ द्वारा किया जाएगा । देश भक्ति की भावना का विकास	कविता लेखन नेता सुभाषचंद्र की तसवीर बनाना । भारत भूमि पर चर्चा
	जनवरी	मेघ आए - पद्य बहू की विदा - गद्य	मेघों के आने पर लोगो में छाया हर्षल्लास का वर्णन होगा । दहेज न देने पर बहू की कैसी हालत होती है, इसके पर उपर चर्चा की जाएगी ।	बारिश - का चित्र दहेज-प्रथा पर वाद-विवाद
	फरवरी	अपना अपना भाग्य-गद्य बड़े घर की बेटि - गद्य सूर के पद - पद्य	दुनिया में लोगो की सोच, उनके भाग्य, परिश्रम पर, उनके विचार, इस विषय को समझाया जाएगा । एकल परिवार तथा संयुक्त परिवार की व्याख्या की जाएगी । वात्सल्य और श्रृंगार रस का वर्णन	लेखन कार्य पारिवारिक विषयो पर चर्चा सूरदास के बारे में चर्चा ।



# COMPUTER

Lesson No.	Month	Topic	Concept	Activity
1.	April	<p>Ch. 6 Word Processing-I</p> <p>Ch.7 Word Processing-II</p>	<p>Features of word Processing, Creating, opening, saving, closing and exiting, Ms-Word; Different views of Documents in Ms word, Editing, and formatting a Document, Selecting text with keyboard and mouse; Movement of cursor using keyboard Cut, copy, paste; change case, paragraph alignment, line spacing; find and replace; spelling and grammar; Inserting page number, pictures from files; Print preview of a document and printing a document.</p> <p>Formatting text with style; modifying and deleting style; Changing text Direction; Auto Correct; Tab setting, Bullets and numbering; superscript and subscript, adding borders shading, Header footer; Paragraph spacing, setting and Indentation; Page setting landscape and portrait page style and margin, page break, table-creation and modification in MS-Word, inserting and deleting rows and columns; Merging and splitting cells; table autoformat, calculations in a table; sorting of data; protecting document, Mail Merge.</p>	<p>Create a word document of Ch-1 (2 pages) and add any table in this.</p> <p>format text in above document add footer, header, page number, page break etc.</p>
2.	June	<p>Ch. 1, Introduction to the Operating System</p> <p>Ch. 8 Multimedia Presentation-I</p> <p>Ch. 9 ? Multimedia Presentation-II</p>	<p>Hardware, Software, System Software, Application software, firmware, single user OS, Multi user OS, MS-DOS, Booting installation of Language software and Peripherals.</p> <p>Exploring power point windows, different tabs on ribbon, planning and creating a presentation, using installed designed themes, new from existing presentation, creating text box in a slide, font formatting, inserting, moving and re-sizing a clipart image, Saving and closing a presentation.</p> <p>Format Background systems, Smartart, opening a slide presentation-inserting, copying, moving, hiding, deleting slides, header and footer, notes page view Embedding audio and recording dialog, adding sound and music; powerpoint, normal, slide sorter, outline, slide show view, custom animation, deleting editing animation effects, slide transition, printing, a slide, Graphs in MS-Power point, integrating presentation with Ms-word, integrating presentation with internet.</p>	<p>Group Discussion</p> <p>Create a PPT on Advantages of computers in our life.</p> <p>Apply effect in above PPT.</p>
3.	July	Ch.2 Graphical user	Windows OS, Desktop and its components, Arra-	Changing mouse arrow,

Lesson No.	Month	Topic	Concept	Activity
		interface	moving icons on desktop, control panel, recycle bin start button, task bar, search box, creating a folder, renaming and deleting a folder, short cut creation on desktop, Handling multiple windows.	arranging icons on desktop removing items from on recycle bin.
	July	Ch.5 Computing and ethics	Ethical issues in computing, intellectual property right, Data protection, spam, software piracy, Cyber crime and its prevention, cyber laws, advantages of cyber laws, protection against malicious code.	Group Discussion
4.	Aug.	Ch. 3 Introduction to the world of internet.  Ch. 4 Internet and email services.	Computer Network - LAN, MAN, WAN, internet, internet protocol, transmission control protocol, internet service provider, modem, server, world wide web, web browser, connecting websites, file transfer protocol.  Online chatting video conference, online shopping, sending messages, live television, getting employment, opportunities, uploading and downloading information, Banking (e-commerce), e-reservation, social networking, electronic mail.	Find out which type of network is use in our lab.  Debate on advantages and disadvantages of various applications of internet.
5.	Sep.	Ch. 10 Spreadsheets-I	Features and components of spreadsheet; Types of Data, working with an existing workbook/work sheet, entering data, editing data, saving data in worksheet, creating new workbook, marking range, extending selection, selecting split range; cut, copy paste, inserting and removing worksheet, changing rows and columns, formatting numeric values cells, formatting, Autosum feature.	Creating a worksheet of students marks.
	Sep.	Revision		
6.	Oct.	Ch. 11, Spreadsheets-II  Ch. 12 Database package-I	Autofill in a worksheet, cell references, relative referncing, mixed referencing, simple statistical functions, mathematica statical function, conditional formatting, sorting of data values, filter data; charts: creating a chart in MS-Excel, editing chart, Inserting a chart into a word document.  DBMS, creating database, creating table using database sheet, using design view, field types or data types, entering the field name, defining primary key, entering data in table, different views of table, creatign database using template, inserting deleting working on existing table.	Sort the above list on basis of total marks.  Creating a student data base and store marks of 5 subjects of all them.
7	Nov.	Ch. 13 Database package-II	Creating queries, sorting queries, queries with criteria, forms in MS-Access, creating a form, searching a record relationship, types of relation-	Perform some queries on student table, Create one more table and establish

Lesson No.	Month	Topic	Concept	Activity
		Ch. 14, Elementary concept of object and classes	<p>ship, one to one, many to one, many to many, creating a relationship, report generation, creating a report by using wizard, printing, a report, mailling labels, working with multiple database, importing, linking data, object linking and embedding.</p> <p>Features of OOPs, Pinciples of OOP. classes, abstraction, encapsulations, inheritance, polymorphism, data hiding.</p>	<p>relationship between the</p> <p>Give real world examples of all the features.</p>
8.	Dec.	<p>Ch. 15 History and development of java</p> <p>Ch. 16, Values and Types</p>	<p>Features of data, compilation, interpretation, virtual machine, java libraries, java reserved words, types of java programs, comment sysmbols in java programming output statement in java programing, execution of java program.</p> <p>Data Types, Tokens, types of tokens Literals, identifiers, assignment, variables, punchuators, operators, seperators, data types primitive, non primitive, mixed expression, type conversion, Implicit, Explicit, Functions for mathematical calculations.</p>	<p>Make list of various reserve words with its use.</p> <p>Group discussions</p>
9.	Jan.	<p>Ch. 17 Operations and Expressions in java</p> <p>Ch. 18 Conditional statements in java</p>	<p>Operations, types of operators, arithmetical, relational, logical, ternary, nestrd ternary operators, bitwise operators, functions/ methods, components of methods, types of methods, pure, impure; class needs of class, defining a class, creating a class, access specifiers, constructor, cunstructor overloading.</p> <p>Java programming using - assignment statement, function argument, stream classes, input by using Scanner class, import system package, Tokens in text line, decision making in java, Bi-directional brandching switch case / menu driven program/ user's choice, testing and debugging types of errors, syntax, logical and run time error.</p>	<p>use of various operators in programming.</p> <p>Practicals on taking input from users and use of switch case.</p>
10.	Feb.	Ch. 19 Iterations through loops	Fixed iterations, use of break and continue; nested loop, unfixed iterations, use of break and continue in while and dowhile loop	practicals on patterns
		Revision		



# MATHS

Lesson No.	Month	Topic	Concept	Activity
1.	Apr.	Ch-1. Rational and irrational Numbers  Ch-15. Frequency Distribution  Ch-16. Mean & Median of Ungrouped data and frequency polygon  Ch-3 Expansions	1. Rational Numbers, Operations on Rational Numbers and properties of Rational Numbers 2. Irrational Numbers, Operations on irrational Numbers and properties of irrational Numbers. 3. Surds and Rationalization of Surds.  1. Data and Related Terms, collection of data and presentation of data.  Find median of an ungrouped data. Find mean for ungrouped frequency distribution by  1. Direct method. 2. Assumed mean method frequency polygon  1. Expansions $(a+b)^2$ , $(a+b+c)^2$ 2. Expansions $(a+b)^3$ 3. Expansion $(x+a)(x+b)$ Factorization by taking out the common factor Factorication by grouping Difference of two squares and sum and difference of cubes.	Spiral root Construction  Collect the data of minimum and maximum temperature of 7 days and write it down in table form.  Collect the data from daily life and calculate its mean.  Expansion of identity $(a+b+c)^2$
2.	June	Ch-4. Factorization  Ch-7. Logarithms  Ch-6. Indices	Factorization of trinomials (By splitting the middle term)  Logarithmic forms, exponential form: interchanging Laws of Logarithms and its use.  Laws of Indices	Group Discussion  Group Discussion  Group Discussion
3.	July	Ch-5 Linear Equations and simultaneous linear equation  Ch-10. Pythagoras Theorem	Linear Equations and simultaneous linear equations - (a) Solving algebraically and graphically (b) Solving simple problems based on these by framing appropriate formulae.  Proof & Simple application of Pythagoras Theorem & its converse.	Group Discussion  Group Discussion
4.	Aug.	Ch-8. Triangles  Ch-9. Mid Point and intercept Theorem	Triangle, types of Triangle, Congurrence of triangles, Inequalities, Construction of Triangles.  Proof and simple application of mid point theorem & its converse, Equal Intercept Theorem proof & simple application.	Practical Activity  Group Discussion
5.	Sep.	Revision (SA-1)		
6.	Oct.	Ch-2. Compound interest	Important terms, To find CI when interest is compounded annually, semi-annually & quarterly Growth & Depreciation.	Group Discussion



# Physics

Lesson No.	Month	Topic	Concept	Activity
1.	April	Measurements and experimentation	System of units and units in SI system, Fundamental and derived units, measurement of length using vernier callipers and screw gauge, simple pendulum	Measurement of length using vernier callipers and screw gauge.
2	June	Motion in one Dimension  Laws of motion	Scalar and vector, Distance, displacement, speed, velocity, uniform & non uniform speed, uniform & non uniform velocity, average speed & average velocity, instantaneous velocity, acceleration, graphical representation of linear motion, equation of motion, graphical derivation of equation of motion.  Force, types of force, contact and non contact forces, Newton's laws of motion, Inertia, linear momentum, Impulse, Newton's universal law of gravitation, difference between mass and weight, gravitational unit of force, relation between g and G.	Daily life examples related with rest and motion, acceleration  Daily life examples to explain Newton's laws of motion.
3.	July	Pressure in fluids and atmospheric pressure	Thrust, pressure, pressure in fluids, Pascal's law for the transmission of pressure in liquids, hydraulic machines hydraulic press, hydraulic jack, hydraulic brakes, atmospheric pressure, simple barometer aneroid and Fortin barometer.	Experiment to demonstrate atmospheric pressure, Experimental demonstration liquid pressure.
4.	Aug.	Upthrust in fluids, Archimedes' principle and floatation	Buoyancy and upthrust, Archimedes' principle, condition for sinking and floatation and its applications.	Experimental verification of Archimedes principle
5.	Sep.	Revision.....		
6.	Oct/Nov.	Propagation of sound waves.	Sound waves, propagation of sound in a medium speed of sound in different media, factors affecting speed of sound, infrasonic and ultrasonic frequencies.	Reflection of sound wave using plane mirror and hollow pipe.
7.	Dec.	Heat and energy  Reflection of light	Heat, Temperature, Thermal Expansion, Thermal expansion-linear, superficial and cubical expansion, relation between $\alpha, \beta, \gamma$ , anomalous expansion of water, Hope's experiment, renewable and non renewable sources of energy, green house effect and global warming, energy flow and its importance.  Reflection of light, regular and diffused reflection, laws of reflection, Image formation by plane mirror, lateral inversion, image formation in a pair of mirrors, image formation by spherical mirrors, uses of spherical mirrors, Sign convention for the measurement of distances, mirror formula and numerical problems.	Daily life examples related with expansion in solids and liquids.  Image formation using plane, convex and concave mirror.
8.	Jan.	Current electricity	Electric current, primary and secondary cell, open and closed circuit, potential and potential difference, Resistance, Factors affecting resistance, Resistivity factors affecting resistivity.	To complete a circuit using voltmeter, ammeter, resistance and verify Ohm's law.
9.	Feb.	Magnetism	Properties of magnet, magnetic field, lines of magnetic field, induced magnetism, magnetic field of Earth, neutral points.	To draw magnetic lines of a bar magnet.



# History Civics

## Civics

Lesson No.	Month	Topic	Concept	Activity
1.	Apr.	Our Constitution	Definition of the Constitution Date of adoption Date of enforcement Its Significance.	Class Discussion Brainstorming Explanation
2.	June	The Salient Features of our constitution	Feature, Single Citizenship, Universal Adult Franchise, Fundamental Rights and Fundamental Duties. Directive Principles of State Policy (Meaning) Welfare State	Brainstorming Explanation
3.	July	Fundamental Rights and Fundamental Duties.	Fundamental Right and Duties	Brainstorming, discussion, Explanation.
4.	Sep.	Directive Principles of...	Directive Principles of State Policy (Meaning)	Discussion Explanation
5.	Nov.	Elections	Meaning : Composition of Election Commission  Direct and Indirect Election, General Election, Mid term Election and By-election.	Brainstorming Discussion Explanation Conducting Elections
6.	Dec.	Local Self Government (Rural)	Rural : Three tier system of panchayati Raj-Gram Panchayat, Panchayat Samiti, Zila Parishad their meaning and function.	Brainstorming Discussion Explanation
7.	Jan.	Local Self- Government (Urban)	Urban : Municipal Committees and Municipal Corporation - Meaning and Functions.	Brainstorming Discussion Explanation.

## History

Lesson No.	Month	Topic	Concept	Activity
1.	April	The Harappan Civilization	The Beginning of the civilization Chief Features of the Harappan Civilization. End of the Indus valley Civilization	Collection of data Discussion Explanation
2		The vedic - Period	The coming of Indo - Aryan Archaeological Sources Iron and Pottery Early Vedic Age Social, Economic and Political life later vedic AGE Changes in society and political Life The impact of Aryan Civilization.	Brainstorming Discussion Explanation
3.	June	Rise of Jainism and Buddhism	Jainism and Buddhism (the birth of new religious sects) Life of Mahavira, Main beliefs and teachings of Mahavira Impact of Jainism Life of Buddha, the great, Renunciation, Enlightenment Teachings of Lord Buddha, eight fold paths.	Brainstorming Explanation
4		The Mauryan Empire	Ashoka, The Great, Extent of Ashoka's Empire Mauryan Administration Causes of downfall of the Mauryan Empire.	Brainstorming Discussion Explanation
5.	July	The Sangam Age	The Sangam Literature Inscription	

Lesson No.	Month	Topic	Concept	Activity
			Society and Economy Economic Life religion, Education and literature and Recreation.	Discussion Explanation
6	Aug.	The Age of the Guptas	The Imperial age of the Guptas Chandragupta-1, Samudragupta-1, Chandragupta-2 The last days of the Gupta Empire Golden age of Indian Culture.	Brainstorming Discussion Explanation
7.(a)	Sep.	Medieval India (The Cholas)	The three kindoms of South india The Cholas Downfall of Chola's The Chola Polity The Chola Society and Culture	Brainstorming Discussion Explanation
7. (b)	Oct.	The Delhi Sultanate	Qutbuddin Aibak (AD1206-1210) Literary sources about the history of Delhi Sultanate Polity or the Political Structures under the Delhi Sultanate. Main features of Indo - Islamic Architecture under Delhi Sultanate.	Brainstorming Discussion Explanation
8. (a)	Nov.	The Mughal Empire	India on the eve of Babur's Invasion Chronological order of the Mughals Causes for the decline of the Mughal Empire Impact of Mughals on Religion, Art, Architecture and Literature.	Brainstorming Discussion Explanation.
8. (b)	Dec.	Composite Culture	Sufism and Bhakti Movements Identical Principle of Sufism and Bhakti Movement The Main Bhakti Saints Christianity in India.	Brainstorming Discussion Explanation
9. (a)	Jan.	The Modern AGE in Europe (Renaissance)	Meaning of Renaissance and its features Causes of Renaissance Impact of Renaissance on Art Painting, Sculpture Impact of Science	Brainstorming Discussion Explanation
9. (b)	Feb.	The Reformation	Causes leading to Reformation Impact of Reformation of Europe major impact of Mercantilism.	Brainstorming Discussion Explanation.
9. (c)	March	Industrial Revolution	Meaning of industrial Revolution Industrial revolution in other countries Industrial revolution in England impact of Industrial Revolution	Brainstorming Discussion Explanation

