



JAI VATIKA PUBLIC SCHOOL

Syllabus Class XI Science (2024-25)

ENGLISH CORE

- Prescribed Books: 1. Hornbill: Textbook Published by NCERT Core Course
2. Snapshots: Supplementary Reader Published by NCERT Core Course

April

Hornbill:
English links

English links

Snapshot:

English links

English links

TERM-I

1. The Portrait of Lady

(Pages 224-232)

2. We're Not Afraid to Die. If Can be Together

(Pages 233-241)

1. The Summer of the Beautiful White Horse

(Pages 301-308)

Reading: Case based Passages
Writing: Posters (Pages 107-131)
Grammar: Cloze (Gap-filling)

May

Hornbill:
English links

Poem:
English links

Poem:
English links

Snapshot:
English links

3. Discovering Tut: The Saga Continue
(Pages 242-250)
The Laburnum's Top
(Pages 275-280)
A Photograph
(Pages 266-274)
2. The Address
(Pages 309-317)
Reading: Case based Passages
Writing: Posters (Pages 107-131)

July

Hornbill:-
Poem:
English links

Snapshot:
English links

Reading:
English links

Voice of the Rain
(Pages 281-287)
5. Mother's Day
(Pages 318-326)
Discursive passages
Writing: Debate Writing
(Pages 170-188)
Grammar: Tenses, Sentence Reordering

August

Hornbill:
English links

Poem:
English links

English links

7. The Adventure
(Pages 251-259)
Childhood
(Pages 288-293)
Reading: Factual Passages

Writing: Classified Advertisements
(Pages 132-144)
Grammar: Clauses
Sentence Transformation

Term I (in September 2024) Exam will be based on Syllabus covered from April to August 2024.

October

TERM-II

Hornbill:-

Poem:

English links

Snapshot:

English links

Father to Son

(Pages 294-300)

7. Birth

(Pages 327-335)

Reading: Case based Passages

Writing: Speech Writing

(Pages 145-169)

November

Hornbill:

English links

Snapshot:

English links

English links

8. Silk Road

(Pages 260-265)

8. The Tale of Melon City

(Pages 336-344)

Writing: Classified Advertisements

(Pages 132-144)

Grammar: Editing

December

Revision

January

Revision

Term-II (in Feb 2025) Exam will be based on Syllabus covered from August to December 2024.

PHYSICS

Prescribed Books:

Pardeep's Fundamental Physics by K.L.Gomber and K.L Gogia

Lab Manual:

Global Physics Lab Manual by Vinod Sharma

April

Chapter-2: Units and Measurements

Chapter-3: Motion in a Straight Line

Chapter-4: Motion in a Plane

May

Chapter-4: Motion in a Plane

Chapter-5: Laws of Motion

Chapter-6: Work, Energy and Power

July

Chapter-8: Gravitation

August

Chapter-7: System of Particles and Rotational Motion

Chapter-9: Mechanical Properties of Solids + (Revision)

PRACTICALS (PRACTICALS ARE BASED ON PREVIOUS YEAR)

1. To measure diameter of small spherical/cylindrical body and to measure internal diameter and depth of a given beaker/calorimeter using Vernier Calliper and hence find its volume.
2. To measure diameter of a given wire and thickness of a given sheet using screw gauge.
3. To determine volume of an irregular lamina using screw gauge.
4. To determine radius of curvature of a given spherical surface by a spherometer.
5. To determine the mass of two different objects using a beam balance.
6. To find the weight of a given body using parallelogram law of vectors.
7. Using a simple pendulum, plot its $L-T^2$ graph and use it to find the effective length of second's pendulum.
8. To study the relationship between force of limiting friction and normal reaction and to find the co-efficient of friction between a block and a horizontal surface.

Activities: -

1. To make a paper scale of given least count, e.g., 0.2 cm, 0.5 cm.
2. To determine mass of a given body using a meter scale by principle of moments.
3. To measure the force of limiting friction for rolling of a roller on a horizontal plane.
4. To study the conservation of energy of a ball rolling down on an inclined plane (using a double inclined plane)

October	Chapter–10: Mechanical Properties of Fluids Chapter–11: Thermal Properties of Matter
November	Chapter–12: Thermodynamics Chapter–13: Kinetic Theory Chapter–14: Oscillations
December	Chapter–15: Waves
January	Revision of Whole Syllabus

PRACTICALS (PRACTICALS ARE BASED ON PREVIOUS YEAR)

1. To determine Young's modulus of elasticity of the material of a given wire.
2. To find the force constant of a helical spring by plotting a graph between load and extension.
3. To study the variation in volume with pressure for a sample of air at constant temperature by plotting graphs between P and V , and between P and $1/V$.
4. To determine the surface tension of water by capillary rise method.
5. To study the relationship between the temperature of a hot body and time by plotting a cooling curve.

Activities:-

1. To observe change of state and plot a cooling curve for molten wax.
2. To observe and explain the effect of heating on a bi-metallic strip.
3. To note the change in level of liquid in a container on heating and interpret the observations.
4. To study the effect of detergent on surface tension of water by observing capillary rise.

Note: Practical examination will be held before Term I and Term II Examinations of which the syllabus will be given by the teacher.

CHEMISTRY

Prescribed Book: Modern's abc of Chemistry Part 1 & 2 by S.P Jauhar

Lab Manual: Global Chemistry Lab Manual by Ravi Kumar.

April	1. Some Basic Concepts of Chemistry
May	2. Structure of Atom
July	3. Classification of Elements and Periodicity in Properties
	4. Redox Reactions
August	5. Chemical Bonding and Molecular Structure

September **Term-I**

<u>Practical Term-I</u>	1. Crystallization
	2. Experiments based on pH
	3. Content based experiment
	4. Quantitative Estimation
October	6. Organic Chemistry: Some Basic Principles and Techniques
	7. Equilibrium
November	8. Hydrocarbons
December	9. Thermodynamics
<u>Practical</u>	1. Volumetric Analysis
	2. Salt Analysis
	3. Quantitative Estimation
	4. Chemical Equilibrium
January	Revision of Complete Syllabus

BIOLOGY

Prescribed Book: Modern abc of Biology By B.B. Arora & A.K. Sabarwal (Modern)

Lab Manual: Global Biology Lab Manual by Dr. Nishtha

April	Ch-1 The Living World
	Ch-2 Biological Classification
May	Ch-3 Plant Kingdom
	Ch-4 Animal Kingdom
July	Ch-5 Morphology of Flowering plants
	Ch-6 Anatomy of Flowering plants
	Ch-7 Structural Organization in Animals
August	Ch-8 Cell- The Unit of Life
	Ch-9 Biomolecules
	Ch-10 Cell Cycle and Cell Division

September **Term-I**

Practicals

1. Study and describe locally available common flowering plants, from family Solanaceae (Poaceae, Asteraceae or Brassicaceae can be substituted in case of particular geographical location) including dissection and display of floral whorls, anther and ovary to show number of chambers (floral formulae and floral diagrams), type of root (tap and adventitious); type of stem (herbaceous and woody); leaf (arrangement, shape, venation, simple and compound).
2. Preparation and study of T.S. of dicot and monocot roots and stems (primary).
3. Study of osmosis by potato osmometer.
4. Study of distribution of stomata in the upper and lower surfaces of leaves.
5. Test for the presence of sugar, starch, proteins and fats in suitable plant and animal materials.
6. Test for presence of urea in urine.

October	Ch- 13 Photosynthesis in Higher Plants Ch-14 Respiration in Plants Ch-15 Plant Growth and Development Ch-17 Breathing and Exchange of Gases
November	Ch-18 Body Fluids and Circulation Ch-19 Excretory Products and their Elimination Ch-20 Locomotion and Movements
December	Ch-21 Neural Control and Coordination Ch-22 Chemical Coordination and Integration
January	Revision of Complete Syllabus

Study and Observe the following (spotting):

1. Parts of a compound microscope.
2. Specimens/slides/models and identification with reasons – Bacteria, Oscillator, Spirogyra, Rhizopus, mushroom, yeast, liverwort, moss, fern, pine, one monocotyledonous plant, one dicotyledonous plant and one lichen.
3. Virtual specimens/slides/models and identifying features of – Amoeba, Hydra, liver fluke, Ascaris, leech, earthworm, prawn, silkworm, honeybee, snail, starfish, shark, rohu, frog, lizard, pigeon and rabbit.
4. Human skeleton and different types of joints with the help of virtual images/models only.

MATHEMATICS

Prescribed Book:	Mathematics Textbook for Class XI-NCERT
Reference Book:	Modern ABC of Mathematics by J.P. Mohindru & Bharat Mohindru
Lab Manual:	Global Mathematics Activity Book – By Teena Arora
April:	Ch -1: Sets Ch - 4: Complex Numbers and Quadratic Equations Ch - 5: Linear Inequalities
May:	Ch – 3: Trigonometric Functions Ch - 2: Relation and Function
July:	Ch - 6: Permutations and Combination Ch - 7: Binomial Theorem
August:	Ch - 8: Sequences and Series

Ch - 11: Introduction to Three-dimensional Geometry

Term I (in September 2024) Exam will be based on Syllabus covered from April to August 2024.

October:	Ch - 9: Straight lines Ch - 10: Conic- Section
November:	Ch - 12: Limit and Derivatives Ch - 14: Probability
December:	Ch - 13: Statistics

Term II (in January 2025) Exam will be based on Syllabus covered from April to December 2024.

PHYSICAL EDUCATION

PRESCRIBED BOOKS:	Textbook on Physical Education (Sonia Publications)
Lab Manual-	Physical Education Practical book (Sonia Publications)

Term-I

April:	1. Changing Trends and Career in Physical Education
May:	2. Olympism
July:	3. Yoga
	4. Physical Education and Sports for CWSN
August:	5. Physical fitness, health, and wellness Revision of complete Syllabus of Term 1

September:	Term 1 Exams Chapters 1 to 5 include in Term- I Exams.
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Term 2

October:	6. Test, Measurement and Evaluation
	7. Fundamentals of Anatomy, physiology in sports
November:	8. Fundamentals of kinesiology and biomechanics in sports
	9. Psychology and Sports
December:	10. Training and Doping in Sports Revision of complete Syllabus of Term 2 + Practical File Work

January:	Revision of Syllabus
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Term-II Exam will be based on Syllabus covered from April to December 2024 .

Spoken English

Term 1

April

1. Introduction Round

- Sample paper 1 to 5

2. Debate

Topics

- All students should be required to volunteer in their community

- In-person school is better than online schools
- Animals should not be kept in zoos.

3. ASL

Activities

- Listen to the announcement being made at railway station and complete the exercise.
- Listen to a T.V. reporter interviewing Ms. Sudhashan was a leading , member of the group of teachers , who conducted a district level survey to ascertain the seriousness of the issue and complete the exercise.
- Listen audio of announcement on board a train that is due to depart soon and complete the statement in one word.
- Listen the audio of three different radio advertisements (1-4) carefully and complete the information.

4. Speaking

1. Work with your partner and take the turn to ask the questions:

- Set 1 to Set 8

May

1. Oral presentation

- Parents knows well
- Social media killing all relationships
- A good person always enjoy peace of mind
- Students should not be pressurized to opt a particular stream

2. Picture Description

- Watch the picture carefully and describe
- Draw and describe

3. ASL

- Listen to the announcement regarding change of name and classified advertisement , complete the exercise
- Listen to the news report and complete the paragraph.
- Hear a scientist talk and answer the following questions.
- Hear a short talk on “power of humor at work” and answer the questions.
- Hear five different people describing India of their dreams and match the correct speaker with his ideas.

July

1. Group Discussion

- Driving by minors
- Role of Creativity in Education
- How can we create a sense of community in neighborhood?
- The role of internet in education and the future of traditional learning methods.
- Future belongs to India

2. Sample Paper 6,7,8,9

3. ASL

- Listen to the radio advertisement by Higher Education University, Rohtak for sale of the university and complete the table.
- Listen to a radio advertisement by Insync Kathau Dance school and complete the exercises that follow.

- Hear radio talk on 'Unconsciousness' and answer the questions.
- Hear a radio talk by travelling enthusiast who loves to travel alone and tick the correct option.

August

1. Story Telling

Meaning, purpose, benefits, tips

Activities

- Create the story on given scenario
- Story telling basket with objects

2. News Reading

- Purpose, tips, benefits

Activities

- Guess the Article
- Newspaper lies

3. ASL

- Listen to the list of precautions issued by the othamologists from L.V. Prasad Eye Institute Hyderabad , to ensure a safe and happy Diwali for all of us and complete the exercise.
- Listen to three speakers talk about the childhood and early life of Viart Kholi and complete the exercise.
- Listen a short talk on menace of carbon dioxide concentration in the atmosphere and answer the questions in one word.
- Hear a radio talk on the ancient Roman city of Pompeii and answer the questions.
- Hear talk of five different people giving tips on Smart Online Shopping and match the statement with correct speaker.

Term II

October

1. ASL

- Listen to the psychologist talking about parents should consider before talking to their children about cyber bullying and complete the exercise that follow.
- Listen to the announcement on board Boeing 747-400 Air India flight number AIR-806 flying from Mumbai to Dubai and complete.
- Listen a radio talk on vitamin B12 deficiency and tick the correct answer.
- Hear a short talk on special train called Red Ribbon Express and fill in blanks not more than three words.
- Listen a student presenting her project on tiger's death in India in the year 2013 and tick the correct answer.

2. Role Play

- Business and costumers
- Competitions
- Radio Hosts

3. Oral Presentation

- Adventure sports exciting and risky
- Internet killer of real world
- Swach Bharat – Mission Impossible

- Increasing population – the greatest weakness of a nation
- A good person always enjoys peace of mind

November

1. Sample Paper

10, 11, 12

2. Problem Solving

- Problem Solving Task 1,2,3,4,5,6

3. ASL

- Hear five different people give tips on being good listener and correctly match the statements with their respective speaker.
- Hear a woman business leader interacting with some students and fill in the blanks not more than three words.
- Hear an interview of visually impaired activist advocating representation of the differently able people in the Parliament.

December

1. Public Speaking

- Describe a valuable item that you would like to give as a gift.
- Describe someone you know who often help others.
- Describe an occasion when you lost your way.
- Describe an important decision you made.
- Describe a piece of technology that you find difficult to use.

2. ASL

- Hear the conversation of different parts of Chennai's world famous Santhome Basilica Cathedral and the questions.
- Hear audio of radio city Beat on radio channel city 24*7 about Raahgiri day and answer the following questions.

3. Problem Solving

- Problem Solving task 7,8,9,10

January

1. Mini Presentation

- Wild Animals
- T.V. Program
- Politeness
- Social Networking
- Emails
- Rain Days

2. Problem Solving

Problem solving tasks 11, 12,13,14,15