



LINGAYA'S  
PUBLIC SCHOOL  
choose to know

# PARENT'S BOOKLET

CLASS-XI-SCIENCE  
SESSION 2021-2022



Dear Parents,

Thank you for choosing Lingaya's Public School !

One of the most important decisions we make in our lives is choosing where our children will attend school. As it is said that the number of years a student spends at a school will make or break that person, schools hold a great deal of power and responsibility.

Was your dream to be a dancer, doctor, astronaut, engineer, sailor, entrepreneur, or painter when you were a child? Dreamed of climbing mountains, studying insects, or discovering a new planet? Was it your dream to be Prime Minister of this nation? Starting from a thought is the first step. We are defined by our thoughts. Our goals are enabled by them. Dreams of the future are a part of growing up. The question is, will we be able to realize them fully. Do we have the means and resources to become who we thought we should be?

Ensure your child realizes his/her potential and dreams big.

Lingaya's focuses on enhancing the unique identity your child has-character, scholarship, and humanity. Our team considers learning a sacred pursuit. The purpose of education will be to think beyond classroom learning. Our activities and lessons will take the child on a journey through the wonders and glories of art, music, culture, science, and above all the deep rooted Indian values.

Lingaya's staff and team are energized by change, diversity, and progress. The result is that our students have access to the highest quality educational opportunities that satisfy their diverse learning needs. As a result, the curriculum creates an engaging learning environment through highly skilled teaching.

It is the legacy of two decades that distinguishes Lingaya's from others, and it is making its mark across India. Lingaya's is a premier education institution of the country & Overseas, with four prestigious technical & management institutes and 02 k-12 schools (and counting) that have earned the trust of the people. Over 99% first divisions at our schools, two decades of tradition, 10000+ Alumni and 40+ programs for all-round development of a child-all define the excellence of Lingaya's Public School.

Warm Regards,

Principal



## LIST OF THE BOOKS

S.N.O	SUBJECT	Author Name / All Books NCERT
1	ENGLISH	FLAMINGO VISTAS
2	PHYSICS	NCERT
3	MATHEMATICS	NCERT
4	CHEMISTRY	NCERT
5	BIOLOGY	NCERT
6	PHYSICAL EDUCATION	SARASWATI PUBLICATION (DR.V.K SHARMA)
7	COMPUTER	SARASWATI PUBLICATION (DR.V.K SHARMA)

## CLASS-XI-SCIENCE SYLLABUS BREAK-UP SESSION (2021-2022)

### ENGLISH

#### JUNE TO JULY

LITERATURE	WRITING SKILLS	ACTIVITY
Hornbill 1. The Portrait of a lady Poem- A Photography Snapshot 1. The Summer of the beautiful white horse.	Notice Skills Poster writing	Take any Photography and describe about it using poetic devices (Individual Activity)

#### AUGUST TO SEPTEMBER

LITERATURE	WRITING SKILLS	ACTIVITY
Hornbill 1. We're not of raid To die..... 2. Discovering TutPoem 1. The Laburnum Top	1. Note- Making 2. Debate/Speech Writing	Activities of listening and speaking skills (ASL).



**OCTOBER TO DECEMBER**

LITERATURE	WRITING SKILLS	ACTIVITY
Hornbill 1. Landscape of the Soul 2. The Ailing planet 3. The Browing Version 4. Silk RoadPoem 1. The Voice of the rain 2. The childhood Snapshots 1. Alberts Elinstein at School 2. Mother's Day 3. Birth	Official letter (enquiry letter) Grammar- Determiners, tenses	Project

**EXAMINATIO SCHEDULE**

EXAMINATION	MONTH	SYLLABUS
P.T1	July	Hornbill-Chapter 1, Poem-1, Beehive- Chapter-1
TERM-1	September	Hornbill-Chapter-1,2,3, Poem1,2Beehive-Chapter-1,2,3
P.T2	November	Hornbill-Chapter-4,5, Poem-3Beehive-Chapter-4,5
FINAL EXAM	FEBRUARY	Hornbill- Complete syllabus Beehive- Complete syllabus

**SCIENCE**

**PHYSICS**

**JUNE TO JULY**

TOPIC	ENRICHMENT ACTIVITY	PROJECT
<ul style="list-style-type: none"> <li>• Physical World</li> <li>• Units and Dimensions</li> <li>• Errors and Dimensions Analysis</li>   <li>• Kinematics</li> <li>• Laws of motion</li> </ul>	1. CGS, MKS and FPS System of units and the countries using them. 2. How to obtain a physical relation when dependence on other physical quantities is given 3. To learn differences between error accuracy and precision. 4. Identify the different types of motion and deal with them. 5. Explaining motions based on law of conservation of linear momentum	Make a project on any topic of daily life use



### AUGUST TO SEPTEMBER

TOPIC	ENRICHMENT ACTIVITY	PROJECT
<ul style="list-style-type: none"><li>• Work energy and power.</li><li>• Motion of systems of particles and Rigid Body motion.</li><li>• Gravitation</li> <li>• Properties of Bulk matters</li><li>• Solids</li></ul>	<ul style="list-style-type: none"><li>• To Study elastic and inelastic Collision in day to day life.</li><li>• To apply law of conservation of angular momentum to a given situation.</li><li>• To select materials for construction of building and bridges on the basis of their mechanical strength.</li><li>• To study effect of surface tension and viscosity on, eye and eardrops and toothpaste.</li><li>• To study daily life examples involving surface tension and viscosity</li></ul>	Preparation of Science exhibition Each students is a required to make a working model.

### OCTOBER TO DECEMBER

TOPIC	ENRICHMENT ACTIVITY	PROJECT
<ul style="list-style-type: none"><li>• Properties of Bulk matters</li><li>• Thermal properties of matter</li><li>• Kinetic Theory of gases</li><li>• Thermodynamics</li><li>• Wave &amp; oscillation</li><li>• Revision &amp; Tests</li></ul>	Verify gas laws on the basis of Kinetic theory of gases	To make a investigatory project

### JANUARY TO FEBRUARY

TOPIC	ENRICHMENT ACTIVITY	PROJECT
<ul style="list-style-type: none"><li>• Revision &amp; Tests</li><li>• Revision &amp; Tests</li></ul>		

## CHEMISTRY

### APRIL TO JULY

TOPIC	ENRICHMENT ACTIVITY	PROJECT
<ul style="list-style-type: none"><li>• Basic Concepts of Chemistry</li><li>• Structure of Atom</li></ul>	<ul style="list-style-type: none"><li>• Basic Laboratory Techniques Characterization and Purification of Chemical Substances</li></ul>	

### JULY TO SEPTEMBER

TOPIC	ENRICHMENT ACTIVITY	PROJECT
<ul style="list-style-type: none"><li>• Classification of Elements &amp; Periodicity in Properties</li><li>• Chemical Bonding and Molecular Structure</li><li>• States of Matter: Gases and Liquids</li><li>• Thermodynamics</li></ul>	<ul style="list-style-type: none"><li>• Experiments based on pH</li></ul>	



**SEPTEMBER TO OCTOBER**

TOPIC	ENRICHMENT ACTIVITY	PROJECT
<ul style="list-style-type: none"><li>• Equilibrium</li><li>• Redox Reactions</li><li>• Hydrogen</li><li>• s-Block Element</li><li>• Some p-Block Elements</li></ul>	<ul style="list-style-type: none"><li>• Chemical Equilibrium</li></ul>	

**NOVEMBER TO JANUARY**

TOPIC	ENRICHMENT ACTIVITY	PROJECT
<ul style="list-style-type: none"><li>• Organic Chemistry: Basic Principles &amp; Techniques</li><li>• Hydrocarbons</li><li>• Environmental Chemistry</li></ul>	<ul style="list-style-type: none"><li>• Quantitative Estimation</li></ul>	

**BIOLOGY**

**JUNE TO JULY**

TOPIC	ENRICHMENT ACTIVITY	PROJECT
<ul style="list-style-type: none"><li>• Cell-the unit of life</li><li>• Cell Cycle</li><li>• Biomolecules</li></ul>	<ul style="list-style-type: none"><li>• Study of permanent slides of different unicellular organisms</li><li>• Study of Specimens</li></ul>	Make a project on given topic for VivaVoce.

**AUGUST TO SEPTEMBER**

TOPIC	ENRICHMENT ACTIVITY	PROJECT
<ul style="list-style-type: none"><li>• The living world</li><li>• Biological Classification</li><li>• Plant Kingdom</li><li>• Animal Kingdom</li><li>• Morphology of flowering plants</li></ul>	<ul style="list-style-type: none"><li>• Study of A typical flower</li><li>• Study of temporary slide of leaf peel</li></ul>	

**OCTOBER TO DECEMBER**

TOPIC	ENRICHMENT ACTIVITY	PROJECT
<ul style="list-style-type: none"><li>• Anatomy of flowering plants</li><li>• Structural organization of animals</li><li>• Transport of flowering Plants.</li><li>• Mineral Nutrition</li><li>• Photosynthesis in higher Plant.</li><li>• Respiration in Plants.</li><li>• Plant-Growth &amp; Development.</li></ul>	<ul style="list-style-type: none"><li>• Study of T.S of Secondary growth of plants</li><li>• Study of T.S of Monocot &amp; Dicot Stem.</li><li>• Study of T.S of monocot</li><li>• Study of T.S of Monocot &amp; Dicot root.</li></ul>	



**JANUARY TO FEBRUARY**

TOPIC	ENRICHMENT ACTIVITY	PROJECT
<ul style="list-style-type: none"><li>• Digestion &amp; Absorption</li><li>• Breathing &amp; Exchange of gases</li><li>• Body fluids &amp; Circulation</li><li>• Excretory products &amp; their elimination</li><li>• Locomotion &amp; Movement.</li><li>• Neural control &amp; coordination.</li><li>• Chemical coordination &amp; integration</li><li>• Revision &amp; Tests.</li></ul>		

**MATHEMATICS**

**JUNE TO JULY**

TOPIC	ENRICHMENT ACTIVITY	PROJECT
<ul style="list-style-type: none"><li>• INTRODUCTION TO SETS</li><li>• TYPES OF SETS, INTERVALS, VENN DIAGRAMS <b>SET</b></li><li>• PRACTICE QUESTIONS</li><li>• RELATIONS AND FUNCTIONS</li><li>• TRIGONOMETRIC FUNCTIONS</li></ul>	<p>To find the number of subsets of a given set and verify that if a set has <math>n</math> number of elements, then the total number of subsets is <math>2^n</math>.</p> <ul style="list-style-type: none"><li>• To verify that for two sets <math>A</math> and <math>B</math>, <math>n(A \times B) = pq</math> and the total number of relations from <math>A</math> to <math>B</math> is <math>2^{pq}</math>, where <math>n(A) = p</math> and <math>n(B) = q</math>.</li></ul>	

**AUGUST TO SEPTEMBER**

TOPIC	ENRICHMENT ACTIVITY	PROJECT
<ul style="list-style-type: none"><li>• PRINCIPLE OF MATHEMATICAL INDUCTION</li><li>• COMPLEX NUMBERS AND QUADRATIC EQUATIONS</li><li>• LINEAR INEQUALITIES</li><li>• PERMUTATIONS AND COMBINATIONS</li><li>• BINOMIAL THEOREM</li><li>• SEQUENCE AND SERIES</li></ul>	<ul style="list-style-type: none"><li>• To identify a relation and a function.</li><li>• To distinguish between a Relation and a Function.</li></ul>	



**OCTOBER TO DECEMBER**

TOPIC	ENRICHMENT ACTIVITY	PROJECT
<ul style="list-style-type: none"><li>• STRAIGHT LINES</li><li>• CONIC SECTIONS</li><li>• INTRO. TO 3-D GEOMETRY</li><li>• LIMITS AND DERIVATIVES</li></ul>	<ul style="list-style-type: none"><li>• To verify the relation between the degree measure and the radian measure of an angle.</li><li>• To find the values of sine and cosine functions in second, third and fourth quadrants using their given values in first quadrant.</li><li>• To plot the graphs of <math>\sin x</math>, <math>\sin 2x</math>, <math>2\sin x</math> and <math>\sin 2x</math>, using same coordinate axes.</li></ul>	

**JANUARY TO FEBRUARY**

TOPIC	ENRICHMENT ACTIVITY	PROJECT
<ul style="list-style-type: none"><li>• MATHEMATICAL REASONING</li><li>• STATISTICS</li><li>• PROBABILITY</li></ul>	<ul style="list-style-type: none"><li>• TEST SERIES AND REVISION</li></ul>	

**PHYSICAL EDUCATION**

**JUNE TO JULY**

TOPIC	ENRICHMENT ACTIVITY	PROJECT
<p><b>Unit I Changing Trends &amp; Career in Physical Education</b></p> <ul style="list-style-type: none"><li>• Meaning &amp; definition of Physical Education</li><li>• Aims &amp; Objectives of Physical Education</li><li>• Career Options in Physical Education</li><li>• Competitions in various sports at national and international level</li><li>• Khelo-India Program.</li></ul> <p><b>Unit II Olympic Value Education</b></p> <ul style="list-style-type: none"><li>• Olympics, Paralympics and Special Olympics</li><li>• Olympics Symbols, Ideals, Objectives &amp; Values of Olympism</li><li>• International Olympic Committee</li><li>• Indian Olympic Association</li></ul> <p><b>Unit III Physical Fitness, Wellness &amp; Lifestyles</b></p>	<ul style="list-style-type: none"><li>• Make a chart paper and write in brief on Aims &amp; Objective of physical Education.</li><li>• Make a file about Khelo India Program.</li><li>• Make a file about value of Olympic Education</li></ul>	<p><b>NA</b></p>



<ul style="list-style-type: none"> <li>• Meaning &amp; Importance of Physical Fitness, Wellness &amp; Lifestyles</li> <li>• Components of Physical Fitness and Wellness</li> <li>• Components of Health related fitness</li> </ul>		
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**AUGUST TO SEPTEMBER**

TOPIC	ENRICHMENT ACTIVITY	PROJECT
<p><b>Unit IV Physical Education &amp; Sports for CWSN (Children With Special Needs- Divyang)</b></p> <ul style="list-style-type: none"> <li>• Aims &amp; Objectives of Adaptive Physical Education</li> <li>• Organization Promoting Adaptive sports (special Olympics Bharat; Paralympics, Deaflympics)</li> <li>• Concept of Inclusion, its need and Implementation</li> <li>• Role of Various professionals for children with special needs (Counsellor, Occupational Therapist, Physiotherapist, Physical Education Teacher, Speech Therapist &amp; Special Educator)</li> </ul> <p><b>Unit V Yoga</b></p> <ul style="list-style-type: none"> <li>• Meaning &amp; Importance of Yoga</li> <li>• Elements of Yoga</li> <li>• Introduction- Asanas, Pranayam, Meditation &amp; Yogic Kriyas</li> <li>• Yoga for Concentration &amp; related Asanas (sukhasana; Tadasana; Padmasana &amp; Shashankasana, Naukasana, Vikshasana (Tree Pose), Garudasana (Eagle Pose)</li> <li>• Relaxation Techniques for improving Concentration- Yoganidra</li> </ul> <p><b>Unit VI Physical Activity &amp; Leadership Training</b></p> <ul style="list-style-type: none"> <li>• Leadership Qualities &amp; Role of a Leader</li> <li>• Creating leaders through Physical Education</li> <li>• Meaning, objectives (Rock</li> </ul>	<ul style="list-style-type: none"> <li>• Make a file and Explain Component of Fitness and wellness,</li> <li>• Make chart paper and Explain all asana, mantra, and poses of surya namaskar.</li> </ul>	<p style="text-align: center;"><b>NA</b></p>



<ul style="list-style-type: none"> <li>• Meaning &amp; Concept of Sports Training</li> <li>• Principles of Sports Training</li> <li>• Warming up &amp; limbering down</li> <li>• Skill, Technique &amp; Style</li> <li>• Concept &amp; Classification of doping</li> <li>• Prohibited Substances &amp; their Side effects</li> <li>• Dealing with Alcohol and Substance abuse</li> </ul>		
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#### EXAMINATION SCHEDULE

Examination	Month	Syllabus
<ul style="list-style-type: none"> <li>• P.T 1</li> </ul>	<ul style="list-style-type: none"> <li>• JULY</li> </ul>	<ul style="list-style-type: none"> <li>• Chapter 1 and 2</li> </ul>
<ul style="list-style-type: none"> <li>• TERM -1</li> </ul>	<ul style="list-style-type: none"> <li>• SEPTEMBER</li> </ul>	<ul style="list-style-type: none"> <li>• Chapter 1 to 6</li> </ul>
<ul style="list-style-type: none"> <li>• P.T 2</li> </ul>	<ul style="list-style-type: none"> <li>• NOVEMBER</li> </ul>	<ul style="list-style-type: none"> <li>• Chapter 7 and 8</li> </ul>
<ul style="list-style-type: none"> <li>• FINAL EXAM</li> </ul>	<ul style="list-style-type: none"> <li>• FEBURARY</li> </ul>	<ul style="list-style-type: none"> <li>• All Chapters</li> </ul>

#### COMPUTER

##### APRIL TO JULY

TOPIC	ENRICHMENT ACTIVITY	PROJECT
<ul style="list-style-type: none"> <li>• Basic computer organisation</li> <li>• Types of software</li> <li>• Operating System</li> <li>• Boolean logic</li> <li>• Number system</li> <li>• Encoding Schemes</li> <li>• Emerging Trends</li> </ul>	<ul style="list-style-type: none"> <li>• Make list in word of Hardware and software, input &amp; output devices.</li> <li>• Make a list how many software are installed in your lab.</li> <li>• Identify that which operating system used in your PC.</li> <li>• Make presentation on Boolean logic.</li> </ul>	<ul style="list-style-type: none"> <li>• Make a list on Units of memory.</li> <li>• Make a chart on conversion of Binary to octal, decimal to hexadecimal and vice versa.</li> </ul>



**JULY TO SEPTEMBER**

TOPIC	ENRICHMENT ACTIVITY	PROJECT
<ul style="list-style-type: none"><li>• Introduction to problem solving</li><li>• Familiarization with the basis of Python programming</li><li>• Knowledge of data types</li><li>• Operators</li><li>• Expression, statements, type conversion &amp; input/output</li><li>• Errors</li><li>• Flow chart</li><li>• Conditional statements</li></ul>	<ul style="list-style-type: none"><li>• Using word pad draw flow chat and do grouping.</li><li>• Give introduction to Python and WAP to print "Hello World".</li><li>• Explain the data types in Python</li><li>• Explain the operators in Python</li><li>• Explain it by Python</li><li>• Explain it by Python</li><li>• Explain it by Python Explain it by Python</li></ul>	<ul style="list-style-type: none"><li>• Make a chart to represent</li></ul>

**SEPTEMBER TO DECEMBER**

TOPIC	ENRICHMENT ACTIVITY	PROJECT
<ul style="list-style-type: none"><li>• Iterative statements</li><li>• Strings</li><li>• Lists</li><li>• Tuples</li><li>• Dictionary</li><li>• Sorting techniques</li><li>• Introduction to python modules</li></ul>	<ul style="list-style-type: none"><li>• Explain it by Python</li><li>• Explain it by Python</li><li>• Explain it by Python</li><li>• Explain it by Python</li><li>• Explain it by Python</li><li>• Explain it by Python</li><li>• Explain it by Python</li></ul>	

**DECEMBER TO FEBRUARY**

TOPIC	ENRICHMENT ACTIVITY	PROJECT
<ul style="list-style-type: none"><li>• Digital footprints</li><li>• Digital society and netizen</li><li>• Data Protection</li><li>• Cyber crime</li><li>• Cyber safety</li><li>• Safely accessing web sites</li><li>• E-waste management</li><li>• IT Act</li><li>• Technology &amp; Society</li></ul>	<ul style="list-style-type: none"><li>• Make presentation about topic.</li><li>• Make presentation about topic.</li></ul>	<ul style="list-style-type: none"><li>• Make a chart on Hacking.</li><li>• Make a chart on Viruses</li></ul>



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"Par Excellence With Human Touch"



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