



**BAL BHARATI PUBLIC SCHOOL, PITAMPURA, DELHI – 110034**

**CLASS IX**

**SESSION 2020-21**

**REVISED COMPLETE SYLLABUS**

SUBJECT	SYLLABUS
ENGLISH	<p><b><u>BEEHIVE (PROSE)</u></b></p> <ul style="list-style-type: none"><li>• The Fun They Had</li><li>• The Sound of Music</li><li>• The Little Girl</li><li>• A Truly Beautiful Mind</li><li>• My Childhood</li><li>• Packing</li><li>• Reach for the Top</li><li>• The Bond of Love</li><li>• If I Were You</li></ul> <p><b><u>BEEHIVE( POETRY)</u></b></p> <ul style="list-style-type: none"><li>• The Road Not Taken</li><li>• Wind</li><li>• Rain on the Roof</li><li>• A Legend of the Northland</li><li>• No Men Are Foreign</li><li>• On Killing a Tree</li><li>• The Snake Trying</li></ul> <p><b><u>MOMENTS (SUPPLEMENTARY READER)</u></b></p> <ul style="list-style-type: none"><li>• The Lost Child</li><li>• The Adventures of Toto</li><li>• In the Kingdom of Fools</li><li>• The Happy Prince</li><li>• Weathering the Storm in Ersama</li><li>• The Last Leaf</li><li>• A House is not a Home</li><li>• The Beggar</li></ul> <p><b><u>WRITING SKILL AND GRAMMAR</u></b></p> <ul style="list-style-type: none"><li>• Descriptive Paragraph on Person/diary entry</li><li>• Story Writing</li><li>• Gap Filling,Editing,Dialogue Writing,Reported speech(Integrated Grammar )</li></ul>
HINDI	<p><b><u>अपठित गद्यांश</u></b></p> <p><b><u>व्याकरण-</u></b></p> <ul style="list-style-type: none"><li>• शब्द व पद</li><li>• अनुस्वार-अनुनासिक</li><li>• उपसर्ग -प्रत्यय</li><li>• श्रुतिसमभिन्नार्थक</li><li>• पर्यायवाची</li><li>• विपरीत</li><li>• अर्थ की दृष्टि से वाक्य-भेद</li></ul> <p><b><u>स्पर्श भाग -1</u></b></p> <ul style="list-style-type: none"><li>• गद्य:<ul style="list-style-type: none"><li>❖ दुःख का अधिकार</li><li>❖ एवरेस्ट: मेरी शिखर यात्रा</li></ul></li></ul>

	<ul style="list-style-type: none"> <li>❖ तुम कब जाओगे, अतिथि</li> <li>❖ धर्म की आड़</li> <li>● <b>पद्य:</b> <ul style="list-style-type: none"> <li>❖ रैदास</li> <li>❖ रहीम</li> <li>❖ एक फूल की चाह</li> <li>❖ खुशबू रचते हैं हाथ</li> </ul> </li> </ul> <p><b>संचयन-</b></p> <ul style="list-style-type: none"> <li>● गिल्लू</li> <li>● स्मृति</li> <li>● हामिद खाँ</li> </ul> <p><b>रचनात्मक लेखन</b>  <b>अनुच्छेद</b>  <b>पत्र</b>  <b>संदेश लेखन</b>  <b>संवाद लेखन</b>  <b>नारा लेखन</b></p>
<p><b>MATHS</b></p>	<p><b><u>NUMBER SYSTEM</u></b></p> <ul style="list-style-type: none"> <li>● Review of representation of natural numbers, integers, rational numbers on the number line.</li> <li>● Rational numbers as recurring/ terminating decimals. Operations on real numbers.</li> <li>● Examples of non-recurring/non-terminating decimals. Existence of non-rational numbers (irrational numbers) and their representation on the number line.</li> <li>● Rationalization (with precise meaning) of real numbers</li> <li>● Recall of laws of exponents with integral powers. Rational exponents with positive real bases</li> </ul> <p><b><u>POLYNOMIALS</u></b></p> <ul style="list-style-type: none"> <li>● <u>Definition</u> of a polynomial in one variable, with examples and counter examples.</li> <li>● Terms and their coefficients of a polynomial and zero polynomial.</li> <li>● Degree of a polynomial. Constant, linear, quadratic and cubic polynomials. Monomials, binomials, trinomials. Factors and Zeros of a polynomial.</li> <li>● Factorization of <math>ax^2 + bx + c</math>, <math>a \neq 0</math> where a, b and c are real numbers, and of cubic polynomials using the Factor Theorem. Algebraic identities and their applications in simplification and factorization of expressions</li> </ul> <p><b><u>CO-ORDINATE GEOMETRY</u></b></p> <ul style="list-style-type: none"> <li>● The Cartesian plane</li> <li>● coordinates of a point, names and terms associated with the coordinate plane, notations</li> <li>● plotting points in the plane.</li> </ul> <p><b><u>LINEAR EQUATIONS IN TWO VARIABLES</u></b></p> <ul style="list-style-type: none"> <li>● Recall of linear equations in one variable</li> <li>● Introduction to the equation in two variables</li> <li>● Focus on linear equations of the type <math>ax+by+c=0</math>. Explain that a linear equation in two variables has infinitely many solutions and justify their being written as ordered pairs of real numbers, plotting them and showing that they lie on a line.</li> </ul>

- Graph of linear equations in two variables.
- Examples, problems from real life with algebraic and graphical solutions being done simultaneously.

### **LINES AND ANGLES**

- (Motivate) If a ray stands on a line, then the sum of the two adjacent angles so formed is  $180^\circ$  and the converse.
- (Prove) If two lines intersect, vertically opposite angles are equal.
- (Motivate) Results on corresponding angles, alternate angles, interior angles when a transversal intersects two parallel lines.
- (Motivate) Lines which are parallel to a given line are parallel.
- (Prove) The sum of the angles of a triangle is  $180^\circ$ .
- (Motivate) If a side of a triangle is produced, the exterior angle so formed is equal to the sum of the two interior opposite angles.
- Applications of all the above properties in different questions.

### **TRIANGLES**

- (Motivate) Two triangles are congruent if any two sides and the included angle of one triangle is equal to any two sides and the included angle of the other triangle (SAS Congruence).
- (Motivate) Two triangles are congruent if the three sides of one triangle are equal to three sides of the other triangle (SSS Congruence).
- (Motivate) Two right triangles are congruent if the hypotenuse and a side of one triangle are equal (respectively) to the hypotenuse and a side of the other triangle. (RHS Congruence)
- (Prove) The angles opposite to equal sides of a triangle are equal.
- (Motivate) The sides opposite to equal angles of a triangle are equal.
- Applications of all the above properties in different questions.

### **QUADRILATERALS**

- Recall all types of quadrilaterals with their properties done in previous classes
- (Prove) The diagonal divides a parallelogram into two congruent triangles.
- (Motivate) In a parallelogram opposite sides are equal, and conversely.
- (Motivate) In a parallelogram opposite angles are equal, and conversely.
- (Motivate) A quadrilateral is a parallelogram if a pair of its opposite sides is parallel and equal.
- (Motivate) In a parallelogram, the diagonals bisect each other and conversely.
- (Motivate) In a triangle, the line segment joining the mid points of any two sides is parallel to the third side and in half of it and (motivate) its converse.
- Applications of all the above properties in different questions.

### **CIRCLES**

- Definition of circle and related concepts-radius, circumference, diameter, chord, arc, secant, sector, segment, subtended angle.
- (Prove) Equal chords of a circle subtend equal angles at the center and (motivate) its converse.
- (Motivate) The perpendicular from the center of a circle to a chord bisects the chord and conversely, the line drawn through the center of a circle to bisect a chord is perpendicular to the chord.
- (Motivate) Equal chords of a circle (or of congruent circles) are equidistant from the center (or their respective centers) and conversely.
- (Prove) The angle subtended by an arc at the center is double the angle subtended by it at any point on the remaining part of the circle.
- (Motivate) Angles in the same segment of a circle are equal.
- (Motivate) The sum of either of the pair of the opposite angles of a cyclic quadrilateral is  $180^\circ$ .

- Applications of all the above properties in different questions.

### **CONSTRUCTIONS**

- Construction of bisectors of line segments and angles of measure  $60^\circ$ ,  $90^\circ$ ,  $45^\circ$  etc., equilateral triangles.
- Construction of a triangle given its base, sum/difference of the other two sides and one base angle.

### **HERON'S FORMULA**

- Area of a triangle using Heron's formula (without proof)

### **SURFACE AREAS AND VOLUMES**

- Surface areas and volumes of cubes, cuboids, spheres (including hemispheres) and right circular cylinders and cones.

### **STATISTICS**

- Collection of data
- presentation of data — tabular form,
- ungrouped / grouped, bar graphs/ Histogram

### **PROBABILITY**

- Repeated experiments and observed frequency approach to probability.
- Focus is on empirical probability.
- Motivate the concept; the experiments to be drawn from real - life situations, and from examples used in the chapter on statistics.

## **SCIENCE**

### **PHYSICS**

#### **Unit: Motion, Force and Work**

#### **MOTION**

- Distance and displacement
- ,velocity
- ,uniform and nonuniform motion along a straight line
- acceleration,
- distance-time and velocity -time graph for uniform motion and uniformly accelerated motion
- ,derivations of equations of motion by graphical method
- .elementary idea of uniform circular motion.

#### **FORCE AND LAWS OF MOTION**

- Force and Motion,
- Newton's Laws of Motion,
- Action and Reaction forces,
- Inertia of a body,
- Inertia and mass,
- Momentum,
- Force and Acceleration.
- Elementary idea of conservation of Momentum

#### **Gravitation**

- Gravitation;
- Universal Law of Gravitation,

- Force of Gravitation of the earth (gravity),
- Acceleration due to Gravity;
- Mass and Weight;
- Free fall.

**Work, energy and power:**

- Work done by a Force,
- Energy,
- power;
- Kinetic and Potential energy;
- Law of conservation of energy

**(LIST OF EXPERIMENTS IN PHYSICS)**

- Determination of the density of solid (denser than water) by using a spring balance and a measuring cylinder.
- Establishing the relation between the loss in weight of a solid when fully immersed in

a) Tap water

b) Strongly salty water with the weight of water displaced by it by taking at least two different solids

**CHEMISTRY-**

**Unit I: Matter- It's Nature and Behaviour Nature of matter**

- : Elements, compounds and mixtures.
- Heterogeneous and homogenous mixtures, colloids and suspensions.
- Particle nature and their basic units
- Methods of separation

**Atoms and molecules**

- Law of constant proportions,
- Atomic and molecular masses.
- Mole concept: Relationship of mole to mass of the particles and numbers.

**Structure of atoms:**

- Electrons, protons and neutrons
- valency, chemical formula of common compounds
- . Isotopes and Isobars.

**(LIST OF EXPERIMENTS IN CHEMISTRY)**

**1. Preparation of:**

- a true solution of common salt, sugar and alum
- a suspension of soil, chalk powder and fine sand in water
- a colloidal solution of starch in water and egg albumin/milk in water and distinguish between these on the basis of • transparency • filtration criterion • stability

**2. Preparation of**

- A mixture
- A compound using iron filings and sulphur powder and distinguishing between these on the basis of:
  - appearance, i.e., homogeneity and heterogeneity

- (ii) behaviour towards a magnet
- (iii) behaviour towards carbon disulphide as a solvent
- (iv) effect of heat

**3. Perform the following reactions and classify them as physical or chemical changes:**

- a) Iron with copper sulphate solution in water
- b) Burning of magnesium ribbon in air
- c) Zinc with dilute sulphuric acid
- d) Heating of copper sulphate crystals
- e) Sodium sulphate with barium chloride in the form of their solutions in water

**4. Verification of the law of conservation of mass in a chemical reaction.**

**BIOLOGY**

**Theme: The World of the Living**

**Unit II: Organization in the Living World**

**Cell - Basic Unit of life:**

- Cell as a basic unit of life
- prokaryotic and eukaryotic cells
- multicellular organisms
- cell membrane and cell wall
- cell organelles and cell inclusions; chloroplast, mitochondria, vacuoles, endoplasmic reticulum, Golgi apparatus; nucleus, chromosomes - basic structure, number.

**Tissues, Organs, Organ System, Organism**

- Structure and functions of animal and plant tissues (only four types of tissues in animals)
- Meristematic and Permanent tissues in plants.

**Health and Diseases:**

- Health and its failure.
- Infectious and Non-infectious diseases, their causes and manifestation.
- Diseases caused by microbes (Virus, Bacteria and Protozoans) and their prevention; Principles of treatment and prevention.
- Pulse Polio programmes.

**ONLY FOR INTERNAL ASSESSMENT**

Theme: Natural Resources: Balance in nature

Unit IV: Our Environment

- Bio-geo chemical cycles in nature: Water, Oxygen, Carbon and Nitrogen.

**PRACTICALS-(LIST OF EXPERIMENTS)**

- Preparation of stained temporary mounts of (a) onion peel, (b) human cheek

cells & to record :observations and draw their labeled diagrams.

- Identification of Parenchyma, Collenchyma and Sclerenchyma tissues in plants, striped, smooth and cardiac muscle fibers and nerve cells in animals, from prepared slides. Draw their labeled diagrams.

**SOCIAL SC.1.**

## **HISTORY**

### **I. The French Revolution**

- French Society During the Late Eighteenth Century
- The Outbreak of the Revolution
- France Abolishes Monarchy and Becomes a Republic
- Did Women have a Revolution?
- The Abolition of Slavery
- The Revolution and Everyday Life

### **II. Socialism in Europe and the Russian Revolution**

- The Age of Social Change
- The Russian Revolution
- The February Revolution in Petrograd
- What Changed after October?
- The Global Influence of the Russian Revolution and the USSR

### **III. Nazism and the Rise of Hitler**

- Birth of the Weimar Republic
- Hitler's Rise to Power
- The Nazi Worldview
- Youth in Nazi Germany
- Ordinary People and the Crimes Against Humanity

### **LIST OF MAP ITEMS CLASS IX (2020-21)**

#### **SUBJECT - HISTORY**

##### **Chapter-1:**

- The French Revolution Outline Political Map of France (For locating and labeling / Identification)
- Bordeaux
- Nantes
- Paris
- Marseilles

##### **Chapter-2:**

- Socialism in Europe and the Russian Revolution Outline Political Map of World (For locating and labeling / Identification)
- Major countries of First World War
- (Central Powers and Allied Powers)
- Central Powers - Germany, Austria-Hungary, Turkey (Ottoman Empire)
- Allied Powers - France, England, Russia, U.S.A.

##### **Chapter-3:**

- Nazism and Rise of Hitler Outline Political Map of World (For locating and labeling / Identification)
- Major countries of Second World War

- Axis Powers – Germany, Italy, Japan
- Allied Powers – UK, France, Former USSR, USA
- Territories under German expansion (Nazi Power) Austria, Poland, Czechoslovakia (**only Slovakia shown in the map**), Denmark, Lithuania, France, Belgium

## **POLITICAL SCIENCE**

### **I. What is Democracy? Why Democracy?**

- What is Democracy?
- Features of Democracy
- Why Democracy?
- Broader Meaning of Democracy

### **II. Constitutional Design**

- Why do we need a Constitution?
- Making of the Indian Constitution
- Guiding Values of the Indian Constitution

### **III. Electoral Politics**

- Why Elections?
- What is our System of Elections?
- What makes elections in India democratic?

### **IV. Working of Institutions**

- How is the major policy decision taken?
- Parliament Political Executive Judiciary

## **GEOGRAPHY**

### **1. India**

- Size and Location
- India and the World
- India's Neighbours

### **2. Physical Features of India**

- Major Physiographic Divisions
- Identify the location of India in the Indian subcontinent.
- Understand the major landform features and the underlying geological structure

### **3. Drainage**

Note: Only Map Items as given in the Map List from this chapter to be evaluated in Examination.

### **4. Climate**

- Concept
- Climatic Controls
- Factors influencing India's climate
- The Indian Monsoon
- Distribution of Rainfall
- Monsoon as a unifying bond



## 5.Natural Vegetation and Wild Life

- Factors affecting Vegetation
- Vegetation types
- Wild Life
- Conservation

### **FOLLOWING MAP ITEMS TO BE DONE FOR CLASS IX GEOGRAPHY**

(Outline Political Map of India)

#### India-Size and Location

- India-States with Capitals, Tropic of Cancer, Standard Meridian (Location and Labelling)

#### Physical Features of India

- Mountain Ranges: The Karakoram, The Zasker, The Shivalik, The Aravali, The Vindhya, The Satpura, Western & Eastern Ghats
- Mountain Peaks – K2, Kanchan Junga, Anai Mudi
- Plateau - Deccan Plateau, Chotta Nagpur Plateau, Malwa Plateau
- Coastal Plains - Konkan, Malabar, Coromandal & Northern Circar (Location and Labelling)

#### Drainage

**Note:** Only map items of this chapter as listed below to be evaluated in Examination.

Rivers: (Identification only)

- The Himalayan River Systems-The Indus, The Ganges, and The Satluj
- The Peninsular rivers-The Narmada, The Tapi, The Kaveri, The Krishna,
- The Godavari, The Mahanadi
- Lakes: Wular, Pulicat, Sambhar, Chilika

#### Climate

- Areas receiving rainfall less than 20 cm and over 400 cm (Identification only)

#### Natural Vegetation and Wild Life

- Vegetation Type: Tropical Evergreen Forest, Tropical Deciduous Forest, Thorn Forest, Montane Forests and Mangrove- For identification only
- National Parks: Corbett, Kaziranga, Ranthambor, Shivpuri, Kanha, Simlipal & Manas
- Bird Sanctuaries: Bharatpur and Ranganthitto
- Wild Life Sanctuaries: Sariska, Mudumalai, Rajaji, Dachigam (Location and Labelling)

## **ECONOMICS**

### 1. STORY OF VILLAGE PALAMPUR

- Various activities performed in Palampur
- Organization of production and factors of production
- Land- Distribution of land in Palampur, ways to grow more from the available land, comparison between modern and traditional methods of farming
- Labour- distribution of labour in Palampur, who demands labour and who supplies labour, plight of farm labourers
- Capital- different capital arrangements done by different categories of farmers
- Surplus
- Small scale manufacturing units or rural industries

### 2. PEOPLE AS RESOURCE

	<ul style="list-style-type: none"> <li>● Meaning of People as Resource</li> <li>● Difference between human capital and physical capital</li> <li>● Human capital formation</li> <li>● Cycles of human development- virtuous and vicious cycles</li> <li>● Activities performed by men and women in the economy- Economic and Non-Economic activities, Market and Non Market activities, Primary, Secondary and Tertiary activities</li> <li>● Reasons for women to be engaged in low paying jobs</li> <li>● Role of education in human capital formation</li> <li>● Role of health care in human capital formation</li> <li>● Unemployment- meaning, types- seasonal, disguised and educated, impact of unemployment on economic growth</li> </ul> <p>3. POVERTY AS A CHALLENGE</p> <ul style="list-style-type: none"> <li>● Meaning of poverty</li> <li>● Poverty as seen by social scientists</li> <li>● Dimensions of poverty- Social Exclusion and Vulnerability</li> <li>● Poverty Line</li> <li>● Inter-state disparities</li> <li>● Global poverty scenario</li> <li>● Causes of Poverty in India</li> <li>● Anti-poverty Measures- promotion of economic growth and Poverty Alleviation Programs</li> </ul>
FRENCH	<p><b>A) Reading Section:</b></p> <ul style="list-style-type: none"> <li>● One unseen prose passage (factual/descriptive) (150 words)</li> </ul> <p><b>B) Writing Section:</b></p> <ul style="list-style-type: none"> <li>● One long composition (Informal letter) 80 words.</li> <li>● Two short compositions -: (recipe, message, post card, description of a person with visual input and clues) (30-35 words)</li> </ul> <p><b>C) Grammar Section:</b></p> <p>Demonstrative adjectives, verbs (présent, futur proche, futur simple, pronominal verbs, passé composé, impératif, imparfait), question formation (excluding interrogative adjectives and pronouns), negatives, personal pronouns, simple relative pronouns.</p> <p><b>D) Culture and Civilization:</b></p> <ul style="list-style-type: none"> <li>● 1. L. 1 – La famille</li> <li>● 2. L. 2 – Au lycée</li> <li>● 3. L. 3 – Une journée de Pauline</li> <li>● 4. L. 4 – Les saisons</li> <li>● 5. L. 5 – Les voyages</li> <li>● 6. L. 6 - Les loisirs et les sports</li> <li>● 7. L. 7 – L’argent de poche</li> <li>● 8. L. 8 – Faire des achats</li> </ul>
GERMAN	<p>PartA- Objective type MCQ 40 marks Part B- Descriptive type - 40 marks</p> <p><b>Section A</b></p> <ul style="list-style-type: none"> <li>● Reading comprehension</li> </ul> <p><b>Section B</b></p> <ul style="list-style-type: none"> <li>● Writing skills</li> <li>● Email writing</li> <li>● Dialog writing</li> </ul> <p><b>Section C</b></p>

	<ul style="list-style-type: none"> <li>● Applied Grammar</li> <li>● Fixed prepositions</li> <li>● Separable verbs</li> <li>● Conjunctions (um...zu, während, bevor, Weil,wenn)</li> <li>● Genetiv</li> </ul> <p><b>Section D (Textbook)</b>  Lektion 1 Allein zu Hause  Lektion 2 wir kaufen nichta  Lektion 3 Das würde ich nicht tun  Lektion 4 Hamburg, wir kommen</p> <ul style="list-style-type: none"> <li>● Completing a seen passage with the given vocabulary</li> <li>● Comprehension seen.</li> </ul>
<p><b>SANSKRIT</b></p>	<ul style="list-style-type: none"> <li>● अपठित गद्यांश</li> <li>● संस्कृत में अनुवाद</li> <li>● चित्र वर्णनम्</li> <li>● पत्र पूर्ति</li> <li>● व्याकरण_</li> <li>● स्वर संधि ( दीर्घ,गुण,अयादि)</li> <li>● विसर्ग सन्धि(उत्व,)</li> <li>● व्यंजन संधि (जश्त्व , मोऽनुस्वारः)</li> <li>● शब्द रूप (बालक ,लता, साधु, नदी, अस्मद्, युष्मद्)</li> <li>● धातु रूप (पठ्, अस्, कृ,पा ,गम, वद्, क्रीड, नी ,दृश्_पंचलकारेषु)</li> <li>● धातु रूप सेव् ,लभ्_(लट्,लृट् लकार)</li> <li>● उपपद विभक्ति</li> <li>● उपसर्ग</li> <li>● प्रत्यय_क्त्वा,ल्यप्,तुमुन्,क्तवतु</li> <li>● संख्या_एक_चतुर्</li> <li>● पाठ_स्वर्णकाकः</li> <li>● पाठ _कल्पतरूः</li> <li>● पाठ _सूक्तिमौक्तिकम्</li> <li>● पाठ_भ्रान्तो बालः</li> <li>● पाठ _सिकतासेतुः</li> <li>● पाठ _जटायोः शौर्यम्</li> <li>● पाठ _पर्यावरणम्</li> </ul>