redbricks | school

Semester Overview 2019-2020

Subject	Name of Units	Skills
	MERCHANT OF	Reading and viewing:
ENGLISH	<u>VENICE</u> :	 Read fluently and demonstrate comprehension
	ACT I, SCENE 1	interpretation of a range of
	ACT I, SCENE 2	grade-appropriate literary texts, featuring some
	ACT I, SCENE 3	complexity in theme, writing
	ACT II, SCENE 1	techniques and specialised language, including literature
	ACT II, SCENE 2	from modern and ancient
	SHORT STORIES :	cultures, short stories, novels, non-fiction and instructional
	Short Story: Face in	material, reports and articles,
	the dark	advertising and promotional materials, authentic texts,
	Short Story: The Old	poems and plays in a variety of
	Man at the Bridge	forms.Demonstrate comprehension of
	Short Story : A Horse	visual texts with specialized
	and Two Goats	features and complex ideas (e.g., visual components of
	POEMS:	media such as magazines,
	Poem: Television	newspapers, web sites, reference books, graphic
	Poem: After Blenheim	novels, broadcast media,
	Poem:Bangle Sellers	videos, advertising and promotional materials)

- Select and use various strategies before reading and viewing to develop understanding of text, including setting a purpose, accessing prior knowledge to make and share connections. making predictions, asking questions, previewing texts
- Select and use various strategies during reading and viewing to construct, monitor, and confirm meaning, including predicting, making connections, asking and answering questions, making inferences and drawing conclusions. figuring out words. unknown reading selectively, determining importance of ideas/events, summarizing and synthesizing, identifying facts, opinions writers'/narrator's/characters' bias
- Select and use various strategies after reading and viewing to confirm and extend meaning, including making inferences and drawing conclusions, reflecting and responding, using graphic to organizers record information and summarizing and synthesizing
- Respond to selections they read or view, by expressing opinions and making judgements supported by

- explanations, reasons, and evidence, explaining connections (text-to-self. text-to-text, and text-toworld), identifying personally meaningful selections, passages, and images and comparing various viewpoints, analysing descriptive texts to infer meaning, opinion and attitude and synthesizing new ideas
- Identify how structures and features of text work to develop meaning, including form, function, and genre of text (e.q., brochure about smoking to inform students; persuasive) genre is features' (e.g., copyright, table of contents, headings, index, glossary, diagrams, sidebars, hyperlink, pull-quotes) literary elements (e.g., characterization, mood, setting, viewpoint, foreshadowing, conflict, protagonist, antagonist, theme, descriptions) non-fiction elements (e.g., topic sentence, development of ideas with supporting details. central idea, evidence or example, explanation) literary devices (e.g., imagery, onomatopoeia, simile, metaphor, symbolism, personification other and

figures of speech) idiomatic expressions

Writing:

- Write a variety of clear personal, formal, instructional, persuasive, argumentative, imaginative and visual representations that demonstrate connections to experiences, ideas, opinions and visual clues.
- Clearly develop ideas, mood and setting by using effective supporting details, explanations, analysis, insights and sensory details
- Demonstrate sentence fluency through strong, wellconstructed sentences that demonstrate a variety of lengths and patterns, with an increasingly fluid style, rhythm and flow
- Demonstrate effective word choice through the use of precise nouns, verbs, adjectives and modifiers, purposeful use of figurative and sensory language with increasing sophistication
- Demonstrate the effective use of tone and voice (first person, second person, omniscient narrator etc.) to suit the purpose and audience
- Use a format and/or organisation that is meaningful, logical, effective and

- appropriate to the purpose and audience with an appropriate beginning (e.g. salutation in a letter, address, indentation etc.) middle (subject line, paragraphing etc.) and ending (closing etc.)
- Demonstrate effective control over all aspects of coherence and cohesion (cohesive devices, referencing, substitution, sequence markers, establishing logical relationships, conjunctions, connectives etc.)
- Select and various use strategies before writing and representing, including establishing a purpose, identifying an audience, genre, form and and generating, selecting, developing, organizing ideas from personal interest. prompts, texts. and/or research
- Select and use various strategies during writing and representing to express and refine thoughts, including analysing models of literature accessing multiple sources of information consulting reference materials considering and applying feedback from discussions to revise ideas. organization, voice. word choice. and sentence fluency revising and

- editing
- Select and various use strategies after writing and representing to improve their work, including checking their against work established criteria revising to enhance traits writing (e.g., ideas. sentence fluency, word choice, voice, organization) editing for conventions (e.g., grammar and capitalization, usage, punctuation, spelling
- Use writing and representing to critique, express personal responses and relevant opinions, respond and experiences and texts Write short pieces of continuous prose in response to questions developing explanations, analysing the relationships in ideas and information, making generalizations, speculating about alternative viewpoints, providing supporting evidence presenting and personal opinions
- Use the features and of conventions language accurately to express meaning in writing and representing, complete including simple, compound, and complex sentences subordinate and independent clauses correct pronoun subject-verb and agreement in sentences with compound subjects correct and

effective use of punctuation conventional Canadian spelling for familiar and frequently used words spelling unfamiliar words by applying strategies (e.g., phonic knowledge, use of common spelling patterns, dictionaries, thesaurus) legible writing appropriate to context and purpose

Grammar and Vocabulary:

- Identify and explain how syntactic and structural features convey meaning
- Use tenses (simple, continuous, perfect and perfect continuous) accurately to convey time and sequence of events
- Use pronouns, referencing and substitution accurately to indicate clear relationships within and between sentence
- Identify and use a wide range of simple, compound and complex sentences with flexibility and accuracy to suit the purpose and format of the text
- Explore and use varied sentence structures to convey the same meaning
- Use punctuation and other structural clues to infer and convey meaning
- Select and use words (verbs, noun phrases, adjectives and

		adjective phrases, adverbs, modifiers) to convey precise meaning, nuances, intensity, mood, attitude, register, tone and opinion Identify and use synonyms and paraphrase effectively Identify and record how descriptive language is used in texts to convey meaning Use a wide range of vocabulary, including phrasal verbs and idiomatic expressions fluently and flexibly to convey precise meaning Demonstrate an awareness of style and collocation Demonstrate full control over spelling and word formation
HINDI	Chapter 1: Baat	Reading and Comprehending Note that the second s
	atthani ki (Sahitya Sagar Gadya bhag)	Dictionary skillsListen critically to understand
	Jagar Jadya Briag)	 Asking questions to clarify
	Sakhi (Sahitya Sagar	meaning
	Padya bhag)	 Discussion on main points of the story
	Chapter 2: kaki	 Writing short notes
	(Sahitya Sagar Gadya	Develop understanding for
	bhag)	different words • Paragraph writing
	Giridhar ki kundaliya	Understanding poetry
	(Sahitya Sagar Padya	• Essay writing
	bhag)	 Understanding the gist of Poetry
	Chapter 3: Mahayagya	Understanding characters
	ka purushkaar (Sahitya	 Descriptive writing
	Sagar Gadya bhag)	Picture writing

	Swarg bana sakte he (Sahitya Sagar Padya bhag) Chapter 4: Neta ji ka chashma (Sahitya Sagar Gadya bha) Vah janmbhumi meri (Sahitya Sagar Padya bhag)	 Writing character sketch Understanding proverbs Story writing letter writing Unseen passage Sentence structure Synonyms Antonyms Noun and Pronoun Adjectives Proverbs and Idioms Tenses
MATHS	Unit 4:Algebra-I Chapter 3: Expansions	 Perform operations on algebraic expressions Solve real-world problems in which phrases are translated into algebraic expressions Simplify the complex algebraic expressions Convert numbers between exponential form, factor form and standard form
	Chapter 4: Factorization	 Apply exponential laws to solve simple and complex problems Define a perfect square trinomial Factorise a perfect square trinomial Describe different factorization strategies to factor a polynomial Apply different factorization strategies to factor polynomials completely Discover the need for

Chapter 5: Simultaneous Linear Equation Chapter 6: Exponents/Indices	exponential notation when writing a product of many factors Solving linear equations by various methods Define base and exponent Recite and write numbers in exponential form Indicate if a number is written in exponential form, factor form or standard form Restate the rules for a base with an exponent of zero/one and other laws of exponents Convert numbers between exponential form, factor form and standard form Apply exponential laws to solve simple and complex problems
Chapter 7: Logarithms	 Discover the need for logarithmic notation when writing a product of many factors Recite and write numbers in logarithmic form Restate the rules logarithms Convert numbers between logarithmic form and standard form
Unit 4: Geometry Chapter 8: Triangles	 Classify a triangle according to its sides/angles Explain the terms related to a

Unit 5:Statistics

Chapter 14: Frequency

Distribution

Chapter 15: Mean And

Median of Ungrouped

Data, Frequency Polygon

Unit 6: Mensuration:

triangle

- Describe the properties of a triangle
- State/Apply theorems involving properties of a triangle
- State the definition of congruent triangles
- Determine the correspondences between parts of congruent triangles
- Know/apply these methods for proving congruence of triangles: SSS, SAS, ASA, and AAS
- Recognize the types of conclusions that can be established by using CPCTC
- State/apply theorems involving inequalities in a triangle
- Collect/Organize data for appropriate statistical analysis
- Effectively display the information in data sets graphically in the form of a histogram and frequency polygon
- Describe different ways to represent a data like mean, mode and median
- Describe/apply the formulas to calculate mean, mode and median
- Apply the concepts learned to solve real world problems

Chapter 16: Perimeter and Area of Plane Figure

Chapter 17:

Circumference and area of a circle

Unit 1:Pure

Arithmetic:

Chapter 1-Rational and
Irrational Numbers

Chapter 20: Coordinate Geometry

- State different units of measurements
- State/apply the formulas to calculate area of plane figures
- Calculate areas of irregular figures
- Apply the concepts of mensuration to solve real world problems
- State/apply the formulas to calculate volume and surface area
- Recognize different types of number systems
- Understand the arithmetical properties of the numbers
- Perform arithmetical operations with complex numbers
- Represent a rational number on number line
- Perform the Rationalization operation and explain its importance in making the calculations easy
- Understand that a linear function can be represented in multiple ways (e.g., graph, table, equation)
- Explain the basics of co ordinate system
- Identify ordered pairs that solve a linear equation

		 Represent a linear equation on a graph paper Solve a pair of simultaneous equations graphically
PHYSICS	Unit1: Measurement Chapter 1: Measurement and Experimentation	 Describe the need of a physical quantity and its unit. Convert quantities from one unit system to another. Use Vernier Callipers to calculate thickness Use Screw Gauge to calculate Diameter of a wire Measure the time period of a simple pendulum Apply the concepts in solving real life problems.
	Unit 2: Pressure Chapter 4: Pressure in fluids and Atmospheric Pressure Chapter 5: Upthrust in Fluids and Archimedes' Principle	 Differentiate between thrust and pressure Describe the laws of liquid pressure. Apply the formula P = hpg to solve various word problems related to liquid column State and apply Pascal's Law. Describe atmospheric pressure and its common consequences Explain the working and construction of different types of barometer. Explain the application of barometer in weather forecasting. Explain up thrust and buoyant force Describe Archimedes Principle

	Unit3: Motion Chapter 2: Motion in one Dimension Chapter 3: Laws of Motion	and its applications. Verify the Archimedes principle experimentally. Measurement of relative density by Archimedes Principle Describe and apply the principle of Flotation Differentiate between scalar and vector quantities. Apply the equations of motion to solve simple real life problems Represent the distance/displacement time data graphically and analyse it Describe the concepts and examples of contact and non contact forces Describe laws of motion, inertia and momentum with respect to various events in the surrounding. Explain universal law of gravitation and apply it in word problems.
CHEMISTRY	Chapter 4: Atomic structure and chemical bonding	 Understanding valence shells and its accommodation. Solving Organic reactions perform calculations and draw reasonable, accurate conclusions.
	Chapter 1: The language of	 Identify symbols and formulae Understand and write chemical reactions Balance a chemical reactions

	Chemistry	Calculate molecular massUnderstand new terms
	Chapter 2: Physical and chemical changes Chapter 3: Water	 Analyze difference between physical and chemical change Scientific method of thinking synthesize, separate and characterize compounds accurately interpret numerical data Ability to learn new information rapidly and efficiently Gathering data, making and testing models and predictions practical skills Analyzing and modeling a physical process Skills with chemical instrumentation Distinguishing the different waterborne diseases
BIOLOGY	Unit 1:	Define cell
	BASIC BIOLOGY	 State major postulates of Cell Theory
	Chapter 2: Cell- The	 Draw diagram to represent
	Basic Unit of Life	basic structure of the cellDifferentiate between plant
	Chapter 3: Tissues -	and animal cell
	Plant and Animal	 Explain structure and functions of various cell
	Tissues	organelles
		 Differentiate between Prokaryotic and Eukaryotic Cell
		 Understand tissue as combination of cells

Unit 2:

FLOWERING PLANTS

Chapter 4: The

Flower

Chapter 5: Pollination

and Fertilization

Unit 3:

PLANT PHYSIOLOGY

Chapter 6: Seeds-

Structure and

Germination

Chapter 7: Respiration

in plants

- Classify Plant Tissues
- State the characteristics and location of various types of plant tissues
- Classify Animal Tissues
- State the characteristics and location of various types of animal tissues
- Explain the structure and functions of various tissues
- Explain and draw structure of bisexual flower
- Write a general description and function of the floral parts
- Explain the significance of self and cross pollination
- Differentiate between self and cross pollination
- Give Examples of pollination
- Explain the process of fertilization in flowering plants
- Define Fruit and seed
- Draw and label diagrams of dicot and monocot seeds
- Define germination of seeds and explain its types
- Differentiate between epigeal and hypogeal germination
- List conditions necessary for germination
- Understand respiration as a process of energy liberation in plants
- Differentiate between photosynthesis and respiration
- Differentiate between aerobic

Unit 4: DIVERSITY IN LIVING ORGANISMS Chapter 8: Five

Kingdom Classification

Chapter 9: Economic

Importance of Bacteria and Fungi

Unit 5: HUMAN ANATOMY AND PHYSIOLOGY

Chapter 10: Nutrition

- and anaerobic respiration
- Outline the process of respiration and gaseous exchange
- Perform experiments to prove various aspects of germination and respiration in plants
- Outline the classification of living organisms in five kingdoms
- List down main characteristics of each kingdom of living organisms with suitable examples
- Classify various organisms in different phylums by observing their characteristics
- Appreciate the role of bacteria in medicine, agriculture and industry
- Consider and take appropriate measures against harmful role of bacteria
- Appreciate Economic importance of Fungi
- Understand the need of nutrition
- Classify food items according to nutrients present in them
- Enlist the functions of different food components
- Match the nutrients with their sources
- Understand importance of balanced diet

		 Create diet plan according to specific needs of the person Identify deficiency diseases through their symptoms Suggest a diet plan for prevention of deficiency diseases
HISTORY	Unit 1: The Harappan Civilization	 Understand the importance of History Identify the steps towards civilization Identify the cradles of civilization Find the origin, extent and sources of the Harappan Civilization Find the causes of Decline of the Harappan Civilization
	Unit 2: The Vedic Age	 Identify the sources of early and later Vedic society Do comparative study of early and later Vedic society Understand the most famous literary works of the later Vedic period - The Ramayana and the Mahabharata
	Unit 3: India in 6 th century BC	 Identify the causes for the rise of Jainism and Buddhism in the 6th century BC Understand doctrines and impact of Jainism and Buddhism
	Unit 4: The Mauryan Empire	 Identify the sources of information of the Mauryan Empire

	 know the rulers of Mauryan empire know about the extent of Ashoka's empire Understand aim of Ashoka's Dhamma and its relevance in present time
Unit 4: The Sangam Age	 Understand that the Sangam Age witnessed an interaction between the North and South of India Identify the various sources to reconstruct the Sangam Age Know about the three major kingdoms- the Chera, the Chola and the Pandya Critically analyze the social and economical condition during the Sangam Age
Unit 5: The Age of Guptas	 Understand the background to the rise of Guptas Identify the various sources to reconstruct the Gupta Age Know about the major kings-Chandragupta I, Sumudragupta, Chandragupta Vikramagupta Critically analyze the political history and administration of the Gupta Age Know about contributions to the Progress of Literature and Education Know about developments in the fields of Science, religion,

		culture and Architecture Identify architecture and Artistic Developments during the age of Guptas
CIVICS	Unit 1: Our Constitution	 Understand enactment of the Indian constitution Composition and formation of the Constituent Assembly Understand the main principles in the Preamble List the features of constitution List down the fundamental rights and duties Differentiate between rights and duties Explain the meaning of citizenship Describe the directive principles of state policy Explain the difference between directive principles and fundamental rights Write the steps taken by the government to implement the Directive principles
	Unit 2: Elections and the Election Commission	 Understand the importance of Election in democracy Understand kind and types of Election Understand essential differences between direct and indirect elections Understand the working of Election Commission Understand need of free and fair election

Unit 1 : Our World **GEOGRAPHY** • Analyse reasons for the Earth of being an unique planet Chapter 1: The Earth • Identify equatorial and polar As A Planet diameter of the earth Assess the size and Chapter 2: Geographic measurement of the earth • Demonstrate effect of Grid different incidence of angle of Chapter 3: Motions of sun rays the Earth Find out the location and extent of any place exist on the earth surface. Assess and evaluate the climatic conditions of any place with the help of their location. • Compare the time zones of Russia and USA. • Analyse the reason for addition and deduction of day while crossing International Date Line. • Construct opinion about 'What would happen if International Date Line passes through continents' • Assess the effects of the Earth's movement • Application of new key terms in the real life Compare and contrast different layers of the Earth in the interior part Unit 2: Structure of • Examine the composition of the Earth different layers of the Earth • State the properties of core, Chapter 4: Structure

mantle and crust.

• Young fold mountains are liable

	6.1 6.1	
	of the Earth	to earthquakes and volcanic action.
	Chapter 5: Landforms	Compare and contrast
	of the Earth	difference between
	Chapter 6: Rocks	Epeirogenic movement and
		orogenic movementState the properties of
	Unit 5	igneous, sedimentary and
		metamorphic rocks
	Chapter16: Pollution	• Examine the cause of
	Chapter 17 : Sources	earthquakes in the belt of young fold mountains
	of Pollution	 Identify different types of
	Chapter 18: Effects of	rocksDiscuss different types of
	Pollution	weathering
	Chapter 19: Preventive	 Analyse the factors that affect weathering
	Measures	 Relate weathering to soil
	Unit 6	formation
	Chapter 20: Natural	 Discuss different land forms produced by river and wind
	Regions of the World	produced by river and wind
COMPUTER	Unit 1 - Introduction	 Object Oriented programming,
		Features of OOP, Basic
APPLICATIONS	to object-oriented	Elements of OOP (Principles of
	programming	OOP), an overview of Objects,
	• Chapter 1:	Classes, Data Abstraction, Encapsulation, Inheritance,
	Introduction to	Polymorphism
	object-oriented	Object typesClass as Abstract Data Type,
	programming	 polymorphism and data hiding
	Principles of	in detail
	object oriented	Basic features of java
	programming	Compiler and Interpreter Town libraries in TDK 1.3
		Java libraries in JDK 1.3

	Semester 1
concepts. • Introduction to java	 Java reserved words Basic Structure in Java Programming Comment Symbols in Java Statement in Java Programming Java programming with BlueJ
Chapter 2: Elementary concepts of objects and classes.	 Concept of data types Tokens (Literals, Identifiers, Punctuators, operators Separators, assignment Rules for naming a variable Data types in java Type conversion Functions for mathematical calculations
Unit 2: General programming concepts Chapter 3: Values and data types Chapter 4: Operators and expressions in java Chapter 5: Input in iava	 Operators Types (Arithmetic, Relational, Logical, Ternary) Nested Conditional Operators; Bitwise Operators Functions/Methods- Defining a Method Components of a Method Types of Methods (Functions) Classes - Class as a User Defined Type Need of a Class, defining a Class, Creating a Class, Access Specifiers Constructor - Types of
java	 Constructor - Types of constructor

Overloading.

using

scanner

class

Input

	Unit 3: Java statements Chapter 6: Mathematical library methods Unit 7 - Conditional statements in java	 Methods used for data input. Using Assignment Statement, Function Argument, Process to input various types of Data by using Stream Classes (java.io), Scanner Class with Syntax and examples. Flow of Control - Only if statement, if-else-if, Switch Case Statement - Menu Driven Program Bi-directional flow of control. Group of 'if' statements Uses Choice Testing and Debugging; Types of Errors; Syntax Error; Logical Error; Run Time Error
		 Mathematical library functions and header files.
ART	 Paper 1: Still Life 3D shapes Object collected from campus Paper 4: Applied Art Poster making Book jacket designing Logo design Advert making Textile design 	 Composition Perspective Space and formation Visualization Association of ideas Creative and critical imagination Illustration Knowledge of mediums