NEW ERA PUBLIC SCHOOL, DWARKA
SYLLABUS (2019-20)
CLASS: IX

SUBJECT: ENGLISH

MONTH & WORKING DAYS	UNIT/ CHAPTER/ SUB TOPICS	WRITING SKILLS/ GRAMMAR	ACTIVITIES
TERM I			
APRIL (20)	UNIT 1- The Fun They Had The Road Not Taken (Poem) Supplementary Reader- The Lost Child	Adverbs, Conditional Clauses, Notice Writing	Group Discussion
MAY (18)	UNIT 2- The Sound of Music Wind (Poem) Supplementary Reader- The Adventures of Toto	Infinitives, Subject-Verb Agreement, Article Writing	PPT Presentation
JUNE	SUMMER VACATION		
JULY (23)	UNIT 3- The Little Girl Rain on the Roof (Poem) UNIT 4- A Truly Beautiful Mind Supplementary Reader- Ishwaran the Story-teller	Reporting Verbs, Participle Clauses, Paragraph Writing, Newspaper Report	Class Presentation

AUGUST (21)	UNIT 5- The Snake and the Mirror
	        The Lake Isle of Innisfree (Poem)
	        A Legend of the Northland (Poem)
	
	Supplementary Reader- In the Kingdom of Fools, The Voice of the Rain
		Reported Speech, Story Writing	Story Relay

SEPTEMBER (20)	Supplementary Reader- The Happy Prince		
	Revision		
TERM II			
OCTOBER (15)	UNIT 6- My Childhood No Men are Foreign (Poem) Supplementary Reader- Weathering the Storm in Ersama	Passive Voice, Diary Entry	Enactment

NOVEMBER (20)	UNIT 7- Packing The Duck and the Kangaroo (Poem) UNIT 11- If I Were You... Supplementary Reader- The Last Leaf Supplementary Reader- The Accidental	Jumbled Sentences, Formal Letters	Debate

DECEMBER (18)	UNIT 8- Reach for the Top
	       On Killing a Tree (Poem)
	UNIT 9- The Bond of Love
	       The Snake Trying (Poem)
	Supplementary Reader- A House Is Not a Home
		Phrasal verbs, Prefixes and Suffixes, Tenses	Extempore

JANUARY (15)	Tourist UNIT 10-Kathmandu A Slumber did my Spirit Seal (Poem) Supplementary Reader- The Beggar	Debate	Role Play
FEBRUARY (19)	Revision		

न्यू इरा पब्लिक स्कूल , द्वारका
हिंदी पाठयक्रम (2019-20) कक्षा – नौवीं

माह	गद्य - स्पर्श	पद्य - स्पर्श	संचयन	व्याकरण
अप्रैल,मई-19	दु:ख का अधिकार	रैदास के पद		वर्ण-विच्छेद 'र' के विभिन्न रूप अनुस्वार,अनुनासिक नुक्ता, चित्र-वर्णन अनौपचारिक-पत्र
जून,जुलाई-19		रहीम के दोहे	गिल्लू	उपसर्ग,प्रत्यय विज्ञापन-लेखन अनुच्छेद-लेखन संवाद-लेखन
अगस्त - 19	एवरेस्ट : मेरी शिखर यात्रा	आदमीनामा	स्मृति	विराम-चिह्न संधि(स्वर-संधि) अपठित-गद्यांश अपठित- काव्यांश
सितम्बर -19	तुम कब जाओगे अतिथि			संधि(व्यंजन,विसर्ग) संवाद-लेखन विज्ञापन-लेखन अपठित-गद्यांश
अक्टूबर - 19	कीचड का काव्य	एक फूल की चाह		चित्र वर्णन , पत्र-लेखन संवाद-लेखन,विराम-चिह्न विज्ञापन-लेखन
नवम्बर - 19	धर्म की आड़		हामिद खां	वर्ण-विच्छेद उपसर्ग,प्रत्यय अपठित-गद्यांश अपठित- काव्यांश
दिसम्बर - 19	शुक्रतारे के समान	अग्निपथ		अनुच्छेद-लेखन पत्र-लेखन चित्र वर्णन,संवाद-लेखन
जनवरी - 20		नए इलाके में खुशबू रचते हैं हाथ	दिए जल उठे	संधि वर्ण-विच्छेद,नुक्ता अनुस्वार,अनुनासिक
फरवरी - 20	पुनरावृत्ति	पुनरावृत्ति	पुनरावृत्ति	पुनरावृत्ति

SUBJECT: MATHEMATICS

MONTH & WORKING DAYS	UNIT	SUB TOPICS	PRACTICALS/ PROJECTS/ ACTIVITIES
		TERM I	
APRIL (20)	UNIT 1 REAL NUMBERS	**NUMBER SYSTEMS** Review of representation of natural numbers, integers, rational numbers on the number line. Representation of terminating / non-terminating recurring decimals onthe number line through successive magnification. Rational numbers as recurring/ terminating decimals. Operations on real numbers. 2. Examples of non-recurring/non-terminating decimals. Existence of non-rational numbers (irrational numbers) such as , and their representation on the number line. Explaining that every real number is represented by a unique point on the number line and conversely, viz. every point on the number line represents a unique real number. 3. Definition of nth root of a real number. 4. Rationalization (with precise meaning) of real numbers of the type and (and their combinations) where x and y are natural number and a and b are integers. 5. Recall of laws of exponents with integral powers. Rational exponents with positive real bases (to be done by particular cases, allowing learner to arrive at the general laws.)	1) Square root spiral 2) Plotting the coordinates of the vertices of a quadrilateral to find its mirror image about the x axis.
	UNIT II: ALGEBRA	**POLYNOMIALS** Definition of a polynomial in one variable, with examples and counter examples. Coefficients of a polynomial, terms of a polynomial and zero polynomial. Degree of a polynomial. Constant, linear, quadratic and cubic polynomials. Monomials, binomials, trinomials. Factors and multiples. Zeros of a polynomial. Motivate and State the Remainder Theorem with examples. Statement and proof of the Factor Theorem. Factorization of $ax^2 + bx + c$, $a \neq 0$ where a, b and c are real numbers, and of cubic polynomials using the Factor	

		Recall of algebraic expressions and identities. Verification of identities and their use in factorization of polynomials.	3) Verify the identity $(a-b)^2 = a^2 - 2ab + b^2$
MAY (18)	UNIT II: ALGEBRA	**LINEAR EQUATION IN TWO VARIABLES** Recall of linear equations in one variable. Introduction to the equation in two variables Focus on linear equations of the type ax+by+c=0. 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. Graph of linear equations in two variables. Examples, problems from real life, including problems on Ratio and Proportion and with algebraic and graphical solutions being done simultaneously.	
	UNIT III: COORDINATE GEOMETRY	**COORDINATE GEOMETRY** The Cartesian plane, coordinates of a point, names and terms associated with the coordinate plane, notations, plotting points in the plane.	
	UNIT IV: GEOMETRY	**INTRODUCTION TO EUCLID'S** GEOMETRY (Not for assessment) History - Geometry in India and Euclid's geometry. Euclid's method of formalizing observed phenomenon into rigorous Mathematical with definitions common/obvious notions, axioms/postulates and theorems. The five postulates of Euclid. Equivalent versions of the fifth postulate. Showing the relationship between axiom and theorem, for example: (Axiom) 1. Given two distinct points, there exists one and only one line through them. (Theorem) 2. (Prove) Two distinct lines cannot have more than one point in common.	
JUNE	SUMMER VACATION		

| JULY (23) | UNIT IV: GEOMETRY | **LINES AND ANGLES.**
(Motivate) If a ray stands on a line, then the sum of the two adjacent angles so formed is 180 and the converse.
2. (Prove) If two lines intersect, vertically opposite angles are equal.
3. (Motivate) Results on corresponding angles, alternate angles, interior angles when a transversal intersects two parallel lines.
4. (Motivate) Lines which are parallel to a given line are parallel.
5. (Prove) The sum of the angles of a triangle is 180
.6. (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.
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).
2. (Prove) Two triangles are congruent if any two angles and the included side of one triangle is equal to any two angles and the included side of the other triangle (ASA Congruence).
3. (Motivate) Two triangles are congruent if the three sides of one triangle are equal to three sides of the other triangle (SSS Congruence).
4. (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)
5. (Prove) The angles opposite to equal sides of a triangle are equal.
6. (Motivate) The sides opposite to equal angles of a triangle are equal.
7. (Motivate) Triangle inequalities and relation between 'angle and facing side' inequalities in triangles.

QUADRILATERALS
1. (Prove) The diagonal divides a parallelogram into two congruent triangles.
2. (Motivate) In a parallelogram opposite sides are equal, and conversely.
3. (Motivate) In a parallelogram opposite angles are equal, and conversely. | 4) To show that the co-interior angles formed by parallel lines and a transversal are supplementary.
5) To show that alternate interior angles formed by two parallel lines and a transversal are equal.

6) To show that the angles opposite to equal sides of an isosceles triangle are equal.
7) To verify the Mid Point theorem. |

		. 4. (Motivate) A quadrilateral is a parallelogram if a pair of its opposite sides is parallel and equal. 5. (Motivate) In a parallelogram, the diagonals bisect each other and conversely. 6. (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.	
AUGUST (21)		**AREA** Review concept of area, recall area of a rectangle. 1. (Prove) Parallelograms on the same base and between the same parallels have equal area. 2. (Motivate) Triangles on the same base (or equal bases) and between the same parallels are equal in area. **CIRCLES** Through examples, arrive at definition of circle and related concepts-radius, circumference, diameter, chord, arc, secant, sector, segment, subtended angle. 1. (Prove) Equal chords of a circle subtend equal angles at the center and (motivate) its converse. 2. (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. 3. (Motivate) There is one and only one circle passing through three given non-collinear points. 4. (Motivate) Equal chords of a circle (or of congruent circles) are equidistant from the center (or their respective centers) and conversely. 5. (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. 6. (Motivate) Angles in the same segment of a circle are equal. 7. (Motivate) If a line segment joining two points subtends equal angle at two other points lying on the same side of the line containing the segment, the four points lie on a circle. 8. (Motivate) The sum of either of the pair of the opposite angles of a cyclic quadrilateral is 180° and its converse.	**1)** To verify that parallelograms on the same base and between the same parallels are equal. 2) To verify that the angle subtended by an arc of a circle at the centre is double the angle subtended by the same arc on the remaining part of the circle.
SEPTEMBER (20)		Revision of term 1	

TERM II			
OCTOBER (15)	UNITV: MENSU-RATION	**CONSTRUCTIONS** 1. Construction of bisectors of line segments and angles of measure 60 , 90, 45 etc., equilateral triangles. 2. Construction of a triangle given its base, sum/difference of the other two sides and one base angle. 3. Construction of a triangle of given perimeter and base angles. **AREAS** Area of a triangle using Heron's formula (without proof) and its application in finding the area of a quadrilateral. **SURFACE AREAS AND VOLUMES** Surface area of cuboid, cube, cylinder, cone, sphere and hemisphere.	3) To derive the TSA of a cube
NOVEMBER (20)		**SURFACE AREAS AND VOLUMES** • Volume of cuboid, cube, cylinder, cone, sphere and hemisphere.	
DECEMBER (18)	UNIT VI: STATIS-TICS & PROBA-BILITY	**STATISTICS** Introduction to Statistics: Collection of data, presentation of data — tabular form, ungrouped /grouped, bar graphs, histograms (with varying base lengths), frequency polygons. Mean, median and mode of ungrouped data.	
JANUARY (15)	UNIT VI: STATIS-TICS & PROBA-BILITY	• CH – PROBABILITY History, Repeated experiments and observed frequency approach to probability. Focus is on empirical probability. (A large amount of time to be devoted to groupand toindividual activities to motivate the concept; the experiments to be drawn from real - life situations, and from examples used in the chapter on statistics. Introduction to probability, an experimental approach	
FEBRURARY (19)		• Revision & Practicals	

SUBJECT: SCIENCE

MONTH & WORKING DAYS	UNIT	SUB TOPICS	PRACTICALS/ PROJECTS/ACTIVITIES
		TERM I	
APRIL (20)	Ch-1 Matter in our sur-roundings	Physical nature of matter, characteristics of parti-cles of matter, states of matters,	
	Ch-8 Motion	Distance and displacement, velocity; uniform and non-uniform motion along straight line; accelera-tion.	
	Ch-5 The fundamental unit of life	Plant cell and animal cells. Plasma membrane, cell wall, nucleus, Cell organelles and their functions	1)Preparation of stained temporary mounts of onion peel and human cheek cells
MAY (18)	Ch-1 Matter in our sur-roundings	Evaporation and factors affecting. Names and Symbols of ions(H^-,Cl^-,Br^-,I^-,O^{2-} ,S^{2-} ,N^{3-})	1)To determine the melting point of ice and the boiling point of water 2)To prepare (i)a true solution (ii)a suspension (iii)a colloidal solution and distinguish between them on the basis of: a)transparency b)filtration c)stability
	Ch-8 Motion (in continua-tion).	Distance-time, velocity- time, graphs for uniform motion and uniformly accelerated motion,Graph for different situation. Derivation of equations of motion by graphical method.	
	Ch-15 Im-provement in food re-sources .	Crop variety improvement. Crop production management.	
JUNE	SUMMER VACATION		

JULY (23)	Ch-9 Forces and laws of motion	Force and Motion, Newton's law of motion, inertia of a body, inertia and mass, momentum, force and acceleration. Applications of laws of motion, conservation of momentum.	1)To prepare (i)a mixture (ii)a compound Using iron filings and sulphur powder and distinguish between them on basis of a)appearance b)behaviour towards magnet c)behaviour towards CS_2 as solvent d)effect of heat.
	Ch-2 Is matter around us pure	Mixtures and types, Solutions and types, Methods to separate the components of a mixture Names and Symbols of ions(CO_3^{2-} HCO_3^-, SO_3^{2-}, SO_4^{2-})	
	Ch-15 (In continuation) Improvement in food resources	Crop protection management, Animal husbandary-Apiculture, pisciculture, cattle farming, poultry farming	
AUGUST (21)	Ch-10 Gravitation	Universal law of gravitation, Gravity and acceleration due to gravity. Mass & weight, Comparison of weight on moon and earth	1)Determination of the density of solid by using spring balance and a measuring cylinder. 2)To carry out the following reactions and classify them as physical or chemical changes: (i)iron with copper sulphate solution (ii)burning of magnesium in air (iii)Zinc with dil.sulphuric acid (iv)heating of copper sulphate (v)sodium sulphate and barium chloride solution. 3)Study the slides of permanent tissues of plant and animals tissues.
	Is matter around us pure (continue)	Physical and Chemical changes, Elements and Compounds Names and Symbols of ions (NO_3^-, OH^-, PO_4^{3-})	
	Ch-6 Tissue	Plant tissues: Meristematic tissue and permanent tissue. Animal tissues: connective tissue, muscular tissue, nervous tissue and epithelial tissue	
SEPTEMBER (20)		Revision for Term-I	

TERM II			
OCTOBER (15)	Ch-3 Atoms and molecules	Names and Symbols of ions (cations) Laws of chemical combination, Dalton's atomic theory, Atom, Atomic mass Molecule,Atomicity, Writing Chemical formula	1)To separate the components of a mixture of sand, common salt and ammonium chloride. 2) Verification of the law of conservation of mass in a chemical reaction.
	Ch-10 Gravitation	Flotation: Thrust & pressure, Archimedes Principle, Buoyant force, Density, Relative density	3)Establishing the relation between the loss in weight of a solid when fully immersed in tapwater.
	Ch -Diversity in Living Organisms	Classification,5 kingdom classification, Plant kingdom – Thallophyta, bryophyte, pteridophyta, angiosperm and gymnosperm	4) To study the plants and animals specimens.
NOVEMBER (20)	Atoms and molecules (continues)	mole concept ,Numericals	
	Ch-4 Structure of atom	Thomson's model of atom, Rutherford's experiment , Bohr's model of atom.	
	Ch11- Work, energy and Power		Determine the speed of pulse propagated through a stretched string/slinky.
		Work done by force, energy, power; kinetic and potential energy; Law of conservation of energy.	
	Ch -Diversity in Living Organisms (in continuation)	Animal kingdom-nonchordata, protochordata and chordata.	

DECEMBER (18)	Structure of atom (continue)	Distribution of electrons in shells, Valency, Atomic number, Mass number, Isotopes and isobars.	Verification of laws of reflection of sound.
	Ch-12 Sound	Nature of sound and its propagation in various media, speed of sound, range of hearing in human.	
	Ch-13 Why do we fall ill?	Types of diseases , Mean of spread of diseases. Prevention of diseases and prevention of treatment,	
JANUARY (15)	Ch.14 Natural resources Ch-12 Sound	Natural resources, Air pollution, water pollution, water cycle, oxygen cycle, Nitrogen cycle, Carbon dioxide cycle. ultrasound; reflection of sound; echo and SONAR. Structure of the human ear.	
FEBRUARY (19)		Revision	

SUBJECT: SOCIAL SCIENCE

MONTH & WORKING DAYS	UNIT /SUB TOPICS	PRACTICALS/ PROJECTS/ ACTIVITIES
	TERM I	
APRIL (20)	**Geo.**Ch-1 India-Size and Location :-India's neighbours, relations with the world, Indian subcontinent **Geo.**Ch-2 Physical features of India :- major physiographic divisions of India **Pol. Sc.**Ch-2 What is Democracy? Why Democracy? :- Features of Democracy, arguments for & against democracy	Map as per CBSE Syllabus/ NCERT books
MAY (18)	**Eco.** Ch-1 The Story Of Village Palampur :-Factors of Production, Economic activities, Green Revolution- advantages and drawbacks.	Case study on an imaginary village Palampur
JUNE	SUMMER VACATION	
JULY (23)	**Hist.**Ch-1 The French Revolution: - French Society, Causes of French revolution, the revolution and everyday life. **Eco.**Ch-2 People As A Resource:- importance of education, health in human capital formation, unemployment – causes and strategies to mitigate unemployment. **Geo.** Ch-3 Drainage: - major rivers & tributaries, lakes, features of river systems, river pollution. **Pol. Sc.**Ch-3 Constitutional Design: - Apartheid, need of Constitution, making of Indian constitution & its guiding values.	Map work as per CBSE map syllabus Map work as per CBSE map syllabus
AUGUST (21)	**Hist.**Ch-2 Socialism in Europe and the Russian Revolution:- The Russian revolution & its global influence, February revolution. **Pol. Sc.**Ch-4 Electoral Politics: - Meaning & our system of elections, challenges to free and fair elections. **Eco.**Ch-3 Poverty As A Challenge: - causes and anti- poverty measures, types of poverty, vulnerable groups, interstate disparities, global poverty scenario.	Map work as per CBSE map syllabus
SEPTEMBER (20)	**Hist.**Ch-3 Nazism and the rise of Hitler: - Hitler's rise to power, Nazi worldview, youth in Nazi Germany, ordinary people & crimes against humanity. **Hist.**Ch-4 Forest Society And Colonialism:- Why deforestation, the rise of Commercial forestry, rebellion in the forest, Forest transformation in Java and Bastar.	Map work as per CBSE map syllabus Case studies on Bastar and Java

	TERM II	
OCTOBER (15)	**Geo.**Ch-4 Climate:- concept, climatic controls, the Indian Monsoon, Monsoon as a unifying bond **Pol. Sc.**Ch-5 Working Of Institutions:- Parliament, political and permanent executive, Judiciary, Prime Minister, President. **Eco.**Ch-4 Food Security In India:- Meaning and need of food security, Buffer Stock, PDS & its current status.	Map work as per CBSE map syllabus Role play
NOVEMBER (20)	**Geo.**Ch-5 Natural Vegetation And Wild Life: - Factors affecting vegetation, types of vegetation, wildlife and conservation.	Map of national parks and wildlife sanctuaries
DECEMBER (18)	**Pol. Sc.**Ch-6 Democratic Rights:- Life without rights, Rights in a democracy, description of the fundamental rights. **Geo.**Ch-6 Population:- size, distribution, migration: internal and international, population growth and processes of population Change.	Case studies: Kosovo, Guantanamo bay, Saudi Arabia Map work as per CBSE map syllabus
JANUARY (15)	Revision	
FEBRUARY (19)	Revision	