

# ACADEMIC HEIGHTS PUBLIC SCHOOL

Session 2019-20

## Subject - Physics

Month	W. Days	Topics	Activity
April	24	<b>Electricity:</b> Electric current and circuit, Electric potential and potential difference, circuit diagram, Ohm's Law. Resistance, factors on which it depends, resistance of a system of resistances. Resistivity.	Electric circuit open & closed. Electrostatic circuit diagram, verification of Ohm's law.
May	17	Series and parallel combination of resistors and its application. Resistance of a system of Resistors, Series and Parallel combination of Resistors. Heating effect of electric current,	
Periodic Test - 1			
June	15	Practical application of heating effect of electric current, practical application of heating effect of electric between P.V.I. and R.current, Electric power, Inter relation	Combination of resistances in series and parallel. Heating effect of current, KWH
July	27	<b>Magnetic Effects of Electric Current:</b>	Magnetic field lines of magnet. Straight conductor, loop, coil, solenoid.
		Magnetic field, field lines, Magnetic field due to a current carrying conductor, coil, solenoid. Force exerted by a current carrying conductor placed in a Uniform magnetic field, Right hand thumb rule, Fleming's left and right hand rule, electromagnetic induction, induced, Potential difference, Induced current, Domestic electric circuits, Direct current, Alternating current, Frequency of AC, Advantage of AC over DC.	
Periodic Test - 2			
August	24	<b>Sources of Energy :</b> Different forms of energy, Conventional and Nonconventional sources of energy, fossil fuels, Solar energy, Biogas wind, water and tidal energy, Nuclear energy, Renewable and non renewable sources of energy. Improvement in the technology for using conventional sources of energy, bio-mass, wind energy, Alternate or nonconventional sources of energy, energy from sea, wind, wave, ocean, thermal, geothermal, Nuclear energy, Environmental consequences, How long will energy sources last in. Renewable versus non-renewable sources of energy.	Fleming's left hand rule, Right hand rule. Electric motor, generator, domestic wiring
Periodic Test - 3			
Sept	22	<b>Light :</b> Properties of light & Nature of light, Reflection of light, Spherical mirror- convex and concave, Image formation by mirrors, Sign convention, Uses of convex and concave mirror, mirror formula, magnification	Focal length of concave mirror, dispersion of light by prism, Rectangular glass slab.

Sept.	22	<b>Light</b> : Refraction of light, Refraction through rectangular slab, Snell's law, Refractive index lens, Convex and concave lens, Image formation by lenses, Ray diagram, Sign convention, Lens formula, Magnification, Power of lens	Focal length of convex lens, rainbow.
		<b>Human Eye</b> : Human eye, Power of accommodation, Defects of vision & correction, Refraction of light through prism, Dispersion, Recombination, Atmospheric refraction, Scattering of light, Tyndal effect, Colour of sun at sunrise and sunset.	Defects of vision and its correction, Tyndal effect.
Annual Exam			

# ACADEMIC HEIGHTS PUBLIC SCHOOL

Session 2019-20

## Subject - Chemistry

Month	W. Days	Topics	Activity
April	24	Chemical reactions and equations	To Study different types of reactions, combination, decomposition, displacement and precipitation reaction etc. Importance of Neutralization in Everyday life.
Periodic Test - 1			
May + June	18	Periodic Classification of elements	1. To find out pH of the various samples (HCL, NaOH, CH <sub>3</sub> COOH, lemon juice, NaHCO <sub>3</sub> , H <sub>2</sub> O etc.
June + July	27	Acid, Bases and Salts	2. To Characterize an acid on the basis of the following test : (i) Litmus (ii) Zn Piece (iii) Solid NaHCO <sub>3</sub> 3. To Characterize the base on the basis of properties like reaction on litmus, Zn Metal, Solid NaHCO <sub>3</sub>
Periodic Test - 2			
July + Aug + Sept	33	Carbon and its compounds	Inclusive :- Harmful effects of alcohols in body 5. To study the saponification reaction for the preparation of soap.
Periodic Test - 3			
Sept + Oct	21	Metals and Non Metals	6. To Study the action of Zn, Fe, Cu & Al on ZnSO <sub>4</sub> , CuSO <sub>4</sub> , FeSO <sub>4</sub> & Al <sub>2</sub> (SO <sub>4</sub> ) <sub>3</sub> and arrange these metals in decreasing order of reactivity.
Annual Exam			

# ACADEMIC HEIGHTS PUBLIC SCHOOL

Session 2019-20

## Subject - Biology

Month	W. Days	Chapter	Activity
April	24	<b>Life Process</b>	
May	17	Nutrition - Modes of nutrition, Nutrition in plants, Photosynthesis, structure of a leaf (cellular), Opening & closing of stomata, Factors affecting photosynthesis. Nutrition in lower Nutrition in human beings- Human digestive system, animals(Amoeba, Paramecium etc), absorption and assimilation. Dental caries. absorption and assimilation. Dental caries.	1. To prepare a temporary mount of leaf peel to show stomata.
			2.To show experimentally that light is necessary for photosynthesis.
		<b>Respiration</b> – Introduction : Respiration - Types of respiration(aerobic & anaerobic) Concept of ATP breakdown; Exchange of gases in plants, lower animals, aquatic & terrestrial organism;	3. To show experimentally that Carbondioxide is given out during respiration.
		Human respiratory system- structure & mechanism.	
		Transportation	
		Transportation in human beings – Blood, Our pump - the heart (Introduction)	
		Transportation (continued...)	
		Human heart(structure and function);	
		Exchange and transport of gases by blood, structure and function of blood vessels, Maintenance by platelets(blood clotting) , lymph	
		Transportation in plants –	
		Transport of water, Transport of food and other substances , Role of xylem and phloem.	
		Excretion :-	
		Excretion in human beings - Excretory system in human beings, Structure of a nephron,	
		Excretion (continued...)	
		Osmoregulation, Artificial kidney(Hemodialysis), excretion in plants.	
<b>Periodic Test - 1</b>			
Jun +	15	<b>Heredity &amp; Evolution</b>	

July	27	Heredity,Transmission of charactors, Variation, Chromosomes, Genes, Mendel's laws, Blood groups and its inheritance, Sex Chromosome, Inheritance of Sex (Sex determination), Evolution, Evidence of Evolution, Homologous organ, Analagous organ, Lamarck Theory, Darwin theory (Natural selection), Speciation, Human Evoluton, Origin of life on earth.	
		Control & Coordination	
		Animals - Nervous system	Movement of plant towards light
		Parts of nervous system(structure of neuron & neuromuscular junction) ; reflex action(path, functions & examples ) ; human brain(structure & functions of main components ) ; Protection of brain.	Show a plant which climbup with a support of tendrils
		Role of nervous tissue in causing action.	
		Coordination in Plants -	
		Immediate response to stimulus, movement due to growth, plant hormones	Germination of seeds
		Hormones in animals – Endocrine glands in human beings(position and function in both male & female)	
Periodic Test -2			
Aug +	24	How do organisms Reproduction	
		Reproduction, Types of Reproduction, Asexual reproduction, Sexual Reproduction, Sexual reproduction in flowereing plants, Pollination and its types, Fertilization, Sexeul reproduction in animal, Male gametes, Female gametes, fertilazation , Sexual cycle in female, Birth control method, Sexually transmitted disease.	Board activity based on this chapter
Periodic Test - 3			
Sept	22	Our Environment	
		Biodegradable and Non biodegradable waste, Ecosystem and its types , Function of an Ecosystem, Producer, Consumer and Decomposer, Food chain and Food web, tropic levels, Lindemans laws, Biological magnification, Ozone depletion, Method of disposal the garbage,	
		Management of Natural Resources	
		Natural resources, our natural resources, Conservation of Biodiversity, Deforestation, Conservation of wild life, Pollution of water, Acid rain and its effects	
Annual Exam			

# ACADEMIC HEIGHTS PUBLIC SCHOOL

Session 2019-20

## Subject - Maths

Month	W. Days	Chapter Name	Activities
April + May	24+17	Real Numbers	To obtain the conditions for consistency of a system of linear equations in two variables by graphical method.
		Polynomials	
		Linear equation in two variables	
		Quadratic Equation	
Periodic Test - 1			
June+ Jul	19+27	Progression	To verify that the sum of first n natural numbers is $n(n + 1) / 2$ , that is $\Sigma n = n (n + 1) / 2$ , by graphical method.
		Trigonometry	
		Heights & Distance	
Periodic Test - 2			
Aug + Sep	24+22	Coordinate Geometry	1. To verify the Basic Proportionality Theorem using parallel line board and triangle cut-outs
		Triangles	
		Circles	2. To verify the Pythagoras Theorem by the method of paper folding, cutting and pasting
		Construction	
Periodic Test - 3			
Oct	21	Area Related To Circles	1. To verify the Alternate Segment Theorem by paper cutting, pasting and folding.
		Surface Areas and Volumes	
		Statistics	2. To make a cone of given slant length (l) and base circumference (2pr) .
		Probability	3. To give a suggestive demonstration of the formula for the volume of a right circular cone.
			4. To give a suggestive demonstration of the formula for the volume of a sphere in terms of its radius.
Annual Exam			

# ACADEMIC HEIGHTS PUBLIC SCHOOL

Session 2019-20

## Subject - S.Science

Months	W. Days	Subject	Chapter Name/Topic	Activity
April	24	History	<b>Print culture and Modern World</b> - Print culture in Modern World, The growth of press.	
		Geography	<b>Resource and Development</b> - Resources types and planning, Land and soil as resources.	Prepare a chart on Resources and Map work.
		Civics	<b>Power Sharing</b> - Case study belgium and sri lanka, Need and forms of power sharing.	
		Economics	<b>Developemnt</b> - National development, Public facilities, Sustainability of development.	
		Civics	<b>Federalism</b> - India a federal country, Features, Practice of federalism in India, Decentrasation in India	Preparation of file on governece system in federal countries.
May	17	History	<b>Work, Life and Leisure</b> - London in the 19 <sup>th</sup> and 20 <sup>th</sup> century, Bombay in the 19 <sup>th</sup> and 20 <sup>th</sup> century.	
		Geography	<b>Agriculture</b> - Types of farming major crops, Technological and institutional reforms.	Map work on major crops producing states.
		Civics	<b>Federalism contd.....</b> -Panchayati Raj system, Municipal corporation.	
		Economics	<b>Sectors of Indian Economy</b> - Economic activities discussion, How to create more on different employment? Organised and unorganised sectors	Discussion on different occupation in different sectors.
<b>Periodic Test - 1</b>				
June	15	History	<b>Making of Global Work</b> - Global economy and colonisalism, The Inter-war and Post economy.	
		Geography	<b>Minerals and Energy Resources</b> - Minerals and their occurance, Ferrous and Non-Ferrous minerals and their conservation.	
		Civics	<b>Gender religion and caste</b> - Gender and politics, Religion, Communilism and Politics.	
		Economics	<b>Money and Credit</b> - Money, Modern forms of money,Credit, Credit terms and types	Preparation of project on formal and informal sources of credit.
July	27	History	<b>The Nationalist movement in India China</b> - French colonism in Indo China, Phases of struggle against French, Ideas of Phanchu, Trinh, Phan Boi Hau and Ho Chi Minh, America and the vietnam war.	Time line chart on events of India-China movement
		Geography	<b>Minerals and Energy Resources contd...</b> Convenctional sources of energy, Non-convectinal sources of energy	Map work activity on minerlas.
		Civics	<b>General religioon and caste cont....</b> Caste and Politics, Caste reforms.	
			<b>Political Parties</b> - An Introduction, Types of party system, National and Regional Parties.	

		Economics	<b>Globlisation and the Indian Economy</b> - Globlisation, Impacts and challenges, Factors that Enabled globalisation.	
<b>Periodic Test - 2</b>				
Aug	24	History	<b>Nationalism in India</b> - The first world war, Khilafat movement and non cooperation movement, Civil disobedience movement.	
		Geography	<b>Manufacturing Industries</b> - Introdution, Classification and location, Agro and mineral based Industries, Industrial pollution and Environmental degradation.	Map activity
		Civics	<b>Political Parties contd.....</b> - Challenges faced by political parties, Political reforms.	
		Economics	<b>Globlisation and the Indian Economy contd.....</b> - Formation of SEZ's	Prepare a file report on New economical policy and formation of SEZ's
<b>Periodic Test - 3</b>				
Sept	22	History	<b>Nationalism in India contd.....</b> - People's participation in the movement, Sense of collective belonging.	
		Geography	<b>Life Lines of India Economy</b> - Means of Transport, Means of communication, Internation Trade and Tourism.	
		Civics	<b>Outcomes of Democracy</b> - How do assess democracy?, Polication, Social and Economical outcomes.	
		Economics	<b>Explanation of Remaining Topics</b> (If any)	
			Revision	
<b>Annual Exam</b>				



# ACADEMIC HEIGHTS PUBLIC SCHOOL

Session 2019-20

## Subject - English

Month	W. Days	Book	Chapter	Activity
April	24	First Flight	1. A letter to God	PPT on grammar tree
			2. Nelson Mandela : Long walk of Freedom	
		Supplementary	1. A Triumph of Surgery	
			2. The Thief's Story	
		Poem	1. Dust of Snow	
			2. Fire and Ice	
		Grammar	Tense - Sequence of Tense, Conditional Sentences	
May	15	First Flight	3. Two Stories about Flying	Travelogue
			1. First Flight	
			2. Black Aeroplane	
			3. From the Diary of Anne Frank	
		Grammar	Agreement of Verb, Conditional Sentences	
Periodic Test - 1				
June	8	First Flight	3. The Midnight Visitor	Speech writing
			4. A questions of Trust	
		Poem	1. A tiger in Zoo	
			2. How to tell wild animals	
			3. The Ball Poem	
July	18	First Flight	5. The Hundred Dresses - I	Poster making
		Supplementary	5. Foot print without Feet	
		Poem	1. Amanda	
		Grammar	Letter writing, short story, Active Passive Voice, Diary Entry	
Periodic Test - 2				
August	24	First Flight	6. The Hundred Dresses - II	Debate
		Poem	1. Animals	
		Grammar	Modals, clauses, conjunction	
		First Flight	7. Glimpses of India	
			I. A Baker from Goa	
			II. Coorge	
			III. Tea from Assam	
		Poem	The Trees	
Sept	13	Supplementary	6. The Making of a Scientist	Dialogue writing
		Grammar	Article writing, Report, writing, Determiners	
		First Flight	8. Mijbil the other	
			9. Madan Rides the Bus	
			7. The Necklace	

Periodic Test - 3				
Oct	21	Poem	1. Fog	Paragraph on 'Adult Education"
			The Tale of Custard	
			The Dragon	
		First Flight	10. The Sermon of Benares	
			8. The Hack Driver	
			9. Bholi	
			11. The Proposal	
			10. The Book that saved the Earth	
			1. For Anne Gregory	
			Transformation	
			Revision	
Annual Exam				

# ACADEMIC HEIGHTS PUBLIC SCHOOL

Session 2019-20

## Subject - Reasoning

Months	W. Days	Chapter Name/Topic
April	24	Clock
		Calendar
		Figure counting
		Cube and Cuboid
May	17	Syllogism
		Ranking and ordering
		Die
Periodic Test - 1		
June	15	Blood Relation
		Direction sense test
		Coding and Decoding
July	27	English Alphabet
		Alpha numeric series
		Analogy
		Classification
Periodic Test - 2		
Aug	24	Mathematical operation
		Simplification
		Venn diagram
		Matrix
Periodic Test - 3		
Sept	22	Sitting arrangement
		Missing number term
		Mirror image
		Water image
		Revision
Annual Exam		