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PKG	Category	Sub Category	Topic #	Topic	Video Duration	Sim	Int
ES	Science as Inquiry	Understandings about Scientific Inquiry	1.	Lenses	0:05:20	✓	
ES	Physical Science	Properties of Objects and Materials	1.	Matter and its Properties	0:02:46		
ES	Physical Science	Properties of Objects and Materials	2.	Properties of Materials (Colours and Shapes)		✓	
ES	Physical Science	Properties of Objects and Materials	3.	Physical Characteristics of Different Materials		✓	
ES	Physical Science	Properties of Objects and Materials	4.	Distinguishing a Physical Change from a Chemical Change	0:03:14		
ES	Physical Science	Properties of Objects and Materials	5.	Temperature Units and their Inter- Conversion	0:04:14	✓	
ES	Physical Science	Properties of Objects and Materials	6.	Density (Part-1)	0:05:09	✓	
ES	Physical Science	Properties of Objects and Materials	7.	Kinetic Theory of Matter-1 (SOLID)	0:05:27		
ES	Physical Science	Properties of Objects and Materials	8.	Floating and Sinking	0:03:42	✓	
ES	Physical Science	Properties of Objects and Materials	9.	Separation of Mixtures using Sublimation	0:01:51		
ES	Physical Science	Properties of Objects and Materials	10.	Separation of Soluble Components from a Mixture	0:02:45		
ES	Physical Science	Properties of Objects and Materials	11.	Physical Nature of Matter	0:02:19		
ES	Physical Science	Properties of Objects and Materials	12.	Molecular Arrangement in Three States of Matter	0:03:16		
ES	Physical Science	Properties of Objects and Materials	13.	Molecular Arrangement in Gases	0:03:13		
ES	Physical Science	Properties of Objects and Materials	14.	Molecular Arrangement in Liquids	0:02:53		
ES	Physical Science	Properties of Objects and Materials	15.	Molecular Arrangement in Solids	0:02:53		
ES	Physical Science	Properties of Objects and Materials	16.	The Three States of Matter	0:02:44		
ES	Physical Science	Properties of Objects and Materials	17.	The Three Phases of Water	0:02:46		
ES	Physical Science	Properties of Objects and Materials	18.	States of Matter	0:03:16		
ES	Physical Science	Properties of Objects and Materials	19.	States of Matter (Part - II)	0:02:45	✓	
ES	Physical Science	Position and Motion of Objects	1.	Forces and Motion	0:05:16		
ES	Physical Science	Position and Motion of Objects	2.	Gravity	0:02:33		
ES	Physical Science	Position and Motion of Objects	3.	Force: A Push or a Pull	0:02:22		
ES	Physical Science	Position and Motion of Objects	4.	Effects of Force	0:03:01		
ES	Physical Science	Position and Motion of Objects	5.	Sound and Hearing	0:04:48		
ES	Physical Science	Position and Motion of Objects	6.	Loud and Soft Sound	0:03:12		
ES	Physical Science	Position and Motion of Objects	7.	Transmission of Sound	0:05:12	✓	
ES	Physical Science	Position and Motion of Objects	8.	Sound	0:03:52		
ES	Physical Science	Position and Motion of Objects	9.	The Propagation of Sound Waves through Air	0:04:34		
ES	Physical Science	Position and Motion of Objects	10.	Propagation of Sound Waves through Different Media	0:02:47	✓	
ES	Physical Science	Light, Heat, Electricity and Magnetism	1.	Light and Shadow	0:03:39		
ES	Physical Science	Light, Heat, Electricity and Magnetism	2.	Transparent, Translucent, and Opaque Objects	0:02:39		
ES	Physical Science	Light, Heat, Electricity and Magnetism	3.	Colour of Objects	0:05:21	✓	
ES	Physical Science	Light, Heat, Electricity and Magnetism	4.	Reflection of Light and its Laws	0:04:08	✓	
ES	Physical Science	Light, Heat, Electricity and Magnetism	5.	Curved Mirrors	0:03:24	✓	
ES	Physical Science	Light, Heat, Electricity and Magnetism	6.	Lenses	0:05:20	✓	
ES	Physical Science	Light, Heat, Electricity and Magnetism	7.	Image Formation in a Convex Lens	0:05:16	✓	
ES	Physical Science	Light, Heat, Electricity and Magnetism	8.	Periscope	0:05:43		
ES	Physical Science	Light, Heat, Electricity and Magnetism	9.	Thermal Conductors and Insulators	0:02:19		
ES	Physical Science	Light, Heat, Electricity and Magnetism	10.	Heat Energy	0:03:47		
ES	Physical Science	Light, Heat, Electricity and Magnetism	11.	Transfer of Heat (Conduction)	0:04:12	✓	
ES	Physical Science	Light, Heat, Electricity and Magnetism	12.	Electricity Around Us	0:05:15		



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PKG	Category	Sub Category	Topic #	Topic	Video Duration	Sim	Int
ES	Physical Science	Light, Heat, Electricity and Magnetism	13.	Bulb Connected to a Cell	0:03:50		
ES	Physical Science	Light, Heat, Electricity and Magnetism	14.	Electric Components and Symbols		√	
ES	Physical Science	Light, Heat, Electricity and Magnetism	15.	Electric Bell	0:03:30	√	√
ES	Physical Science	Light, Heat, Electricity and Magnetism	16.	Direct and Alternating Current	0:07:24	√	
ES	Physical Science	Light, Heat, Electricity and Magnetism	17.	Magnetic Field due to a Straight Wire Carrying Current (Part-1)	0:06:02	√	
ES	Physical Science	Light, Heat, Electricity and Magnetism	18.	Magnetic Field due to a Straight Wire Carrying Current (Part-2)	0:03:09	√	
ES	Physical Science	Light, Heat, Electricity and Magnetism	19.	Make Your Own Magnet	0:01:57		
ES	Physical Science	Light, Heat, Electricity and Magnetism	20.	Magnetic Properties of Iron and Steel	0:01:15		
ES	Life Science	The Characteristics of Organisms	1.	What is a Habitat?	0:05:42		
ES	Life Science	The Characteristics of Organisms	2.	Living and Non-Living Things		√	
ES	Life Science	The Characteristics of Organisms	3.	Parts of Animal		√	
ES	Life Science	The Characteristics of Organisms	4.	Parts of Plant			√
ES	Life Science	The Characteristics of Organisms	5.	Parts of the Body		√	
ES	Life Science	The Characteristics of Organisms	6.	Leaves of Plants	0:07:51		
ES	Life Science	The Characteristics of Organisms	7.	The Beautiful Flower	0:02:22		
ES	Life Science	The Characteristics of Organisms	8.	Primary Functions of Roots	0:04:23		
ES	Life Science	The Characteristics of Organisms	9.	Muscular System	0:02:24		
ES	Life Science	The Characteristics of Organisms	10.	Incredible Human Machine (I)	0:02:58		
ES	Life Science	The Characteristics of Organisms	1.	Locomotion in animals	0:02:48		
ES	Life Science	Life Cycles of Organisms	1.	Life Cycle of a Butterfly	0:04:40		
ES	Life Science	Life Cycles of Organisms	2.	Pollination and Fertilization	0:05:18		
ES	Life Science	Organisms and Environments	1.	Food Chain	0:04:00		
ES	Life Science	Organisms and Environments	2.	The Food Web	0:05:55		
ES	Earth and Space Science	Properties of Earth Materials	1.	Rock Cycle	0:03:57		
ES	Earth and Space Science	Properties of Earth Materials	2.	Groundwater		√	
ES	Earth and Space Science	Properties of Earth Materials	3.	Layers of the Earth's Atmosphere	0:06:00	√	
ES	Earth and Space Science	Properties of Earth Materials	4.	Importance of Forests	0:04:45		
ES	Earth and Space Science	Properties of Earth Materials	5.	Clastic Sedimentary Rocks	0:04:44		
ES	Earth and Space Science	Properties of Earth Materials	6.	Chemical and Organic Sedimentary Rocks	0:06:09		
ES	Earth and Space Science	Properties of Earth Materials	7.	Igneous Rocks	0:04:05		
ES	Earth and Space Science	Properties of Earth Materials	8.	Metamorphic Rocks	0:03:08		
ES	Earth and Space Science	Properties of Earth Materials	9.	Properties of Soil and its Uses	0:05:41		
ES	Earth and Space Science	Properties of Earth Materials	10.	Soil Horizons	0:05:17		
ES	Earth and Space Science	Properties of Earth Materials	11.	Composition of Soil	0:04:38		
ES	Earth and Space Science	Properties of Earth Materials	12.	Sandy Soil	0:03:43		
ES	Earth and Space Science	Properties of Earth Materials	13.	Clay Soil	0:04:40		
ES	Earth and Space Science	Properties of Earth Materials	14.	Silt Soil	0:03:46		
ES	Earth and Space Science	Properties of Earth Materials	15.	Causes of Soil Damage and its Conservation	0:06:55		
ES	Earth and Space Science	Objects in the Sky	1.	Day and Night Cycle	0:03:08		
ES	Earth and Space Science	Objects in the Sky	2.	Comet		√	
ES	Earth and Space Science	Objects in the Sky	3.	Eclipse		√	
ES	Earth and Space Science	Objects in the Sky	4.	Formation and Types of Clouds	0:04:12	√	
ES	Earth and Space Science	Objects in the Sky	5.	The Moon	0:03:19		



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PKG	Category	Sub Category	Topic #	Topic	Video Duration	Sim	Int
ES	Earth and Space Science		6.	The Sun in the Sky	0:03:19		
ES	Earth and Space Science		7.	The Sun (Part-1)	0:05:15		√
ES	Earth and Space Science		8.	The Sun (Part-2)	0:05:25		√
ES	Earth and Space Science		9.	Phases of the Moon		√	
ES	Earth and Space Science		10.	Solar Energy	0:05:38		
ES	Earth and Space Science	Changes in The Earth and Sky	1.	Chemical Weathering	0:03:14		
ES	Earth and Space Science	Changes in The Earth and Sky	2.	Earthquake	0:04:13		
ES	Earth and Space Science	Changes in The Earth and Sky	3.	Erosion	0:03:00		
ES	Earth and Space Science	Changes in The Earth and Sky	4.	Biological Weathering	0:03:11		
ES	Earth and Space Science	Changes in The Earth and Sky	5.	Physical Weathering	0:03:14		
ES	Earth and Space Science	Changes in The Earth and Sky	6.	What must you do During an Earthquake?	0:01:53		
ES	Earth and Space Science	Changes in The Earth and Sky	7.	Fold and Fault Block Mountains	0:03:41		
ES	Earth and Space Science	Changes in The Earth and Sky	8.	Hotspot Volcanism (Formation of the Hawaiian Islands)	0:03:40		
ES	Earth and Space Science	Changes in The Earth and Sky	9.	Water Cycle	0:02:36		
ES	Earth and Space Science	Changes in The Earth and Sky	10.	What is Weather?	0:05:57	√	
ES	Earth and Space Science	Changes in The Earth and Sky	11.	Climate Change	0:05:20		
ES	Earth and Space Science	Changes in The Earth and Sky	12.	Fronts and Weather Conditions	0:05:11		
ES	Earth and Space Science	Changes in The Earth and Sky	13.	Air Masses	0:04:27		
ES	Earth and Space Science	Changes in The Earth and Sky	14.	What is Climate?	0:05:37		
ES	Earth and Space Science	Changes in The Earth and Sky	15.	What Influences Climate?	0:04:47		
ES	Earth and Space Science	Changes in The Earth and Sky	16.	Temperature of the Earth	0:04:21		
ES	Earth and Space Science	Changes in The Earth and Sky	17.	Seasons	0:04:15	√	
ES	Earth and Space Science	Changes in The Earth and Sky	18.	Lunar Phases	0:05:17		
ES	Earth and Space Science	Changes in The Earth and Sky	19.	Eclipse		√	
ES	Earth and Space Science	Changes in The Earth and Sky	20.	Phases of the Moon		√	
ES	Science and Technology	Understanding about Science and Technology	1.	Inclined Plane	0:02:52		
ES	Science and Technology	Understanding about Science and Technology	2.	Wheel and Axle	0:02:33		
ES	Science and Technology	Understanding about Science and Technology	3.	Lever	0:03:02	√	
ES	Science and Technology	Understanding about Science and Technology	4.	Pulley	0:03:45		
ES	Science and Technology	Understanding about Science and Technology	5.	Wedges and Screws	0:03:11	√	
ES	Science and Technology	Personal Health	1.	Taking Care of your Teeth	0:05:41	√	
ES	Science and Technology	Personal Health	2.	Germs and Diseases	0:04:27		
ES	Science and Technology	Personal Health	3.	Oral care	0:01:46		
ES	Science and Technology	Personal Health	4.	Microbes - Tiny but Deadly	0:03:31		
ES	Science and Technology	Personal Health	5.	Passive smoking and Bronchitis	0:02:31	√	
ES	Science and Technology	Types of Resources	1.	Recycling Waste	0:04:13		√
ES	Science and Technology	Types of Resources	2.	Rubbish and Litter	0:04:48		
ES	Science and Technology	Types of Resources	1.	Saving Energy and the Environment	0:05:57		
ES	Science and Technology	Types of Resources	2.	Improving our School Environment	0:03:37		
ES	Science and Technology	Types of Resources	3.	Noise Pollution	0:03:54		
ES	Add-On Categories	Life Science	1.	The Living Cell	0:04:46		
ES	Add-On Categories	Life Science	2.	Cell - A living unit	0:05:05		
ES	Add-On Categories	Life Science	3.	World of cells	0:02:28		



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PKG	Category	Sub Category	Topic #	Topic	Video Duration	Sim	Int
ES	Add-On Categories	Life Science	4.	Incredible Human Machine (I)	0:02:58		
ES	Add-On Categories	Life Science	5.	Incredible Human Machine (II)	0:02:24		
ES	Add-On Categories	Life Science	6.	Brain- The Human Computer	0:02:11		
ES	Add-On Categories	Life Science	7.	Neurons	0:01:52		
ES	Add-On Categories	Life Science	8.	Heart - an amazing pump	0:02:43		
ES	Add-On Categories	Life Science	9.	Respiration (Breathing)	0:03:37		
ES	Add-On Categories	Life Science	10.	Digestive System	0:02:56		
ES	Add-On Categories	Life Science	11.	Muscular System	0:02:24		
ES	Add-On Categories	Life Science	12.	Kidney- The Body Filters	0:02:29		
ES	Add-On Categories	Life Science	13.	Attacking the Invaders	0:02:18		
ES	Add-On Categories	Life Science	14.	Plant	0:03:16		
ES	Add-On Categories	Life Science	15.	The Beautiful Flower	0:02:22		
MS	Physical Science	Properties and Changes of Properties in Matter	1.	Distinguishing Between a Mixture and a Compound			√
MS	Physical Science	Properties and Changes of Properties in Matter	2.	Distinguishing Between Solutions			√
MS	Physical Science	Properties and Changes of Properties in Matter	3.	Desalination of water (Simple Distillation)	0:03:28		√
MS	Physical Science	Properties and Changes of Properties in Matter	4.	Physical Properties of Alkali Metals	0:03:13		
MS	Physical Science	Properties and Changes of Properties in Matter	5.	Physical Properties of Aldehydes and Ketones	0:05:58		
MS	Physical Science	Properties and Changes of Properties in Matter	6.	Physical Properties of Amines	0:03:22		
MS	Physical Science	Properties and Changes of Properties in Matter	7.	Physical Properties of Bases	0:02:23		
MS	Physical Science	Properties and Changes of Properties in Matter	8.	Melting and Boiling Point of Water	0:02:47		
MS	Physical Science	Properties and Changes of Properties in Matter	9.	Physical and Chemical Changes	0:03:14		
MS	Physical Science	Properties and Changes of Properties in Matter	10.	Determining Melting and Boiling Points			√
MS	Physical Science	Properties and Changes of Properties in Matter	11.	States of Matter	0:03:16		
MS	Physical Science	Properties and Changes of Properties in Matter	12.	States of Matter (Part - II)	0:02:45		√
MS	Physical Science	Properties and Changes of Properties in Matter	13.	Effect of Temperature on the Solubility of Gases and Thermal Pollution	0:04:49		
MS	Physical Science	Properties and Changes of Properties in Matter	14.	Factors Affecting Pressure of the Gas	0:04:01		√
MS	Physical Science	Properties and Changes of Properties in Matter	15.	Effect of Temperature on the Liquid State of Matter	0:03:36		√
MS	Physical Science	Properties and Changes of Properties in Matter	16.	Effect of Pressure on the Gaseous State of Matter	0:02:46		√
MS	Physical Science	Properties and Changes of Properties in Matter	17.	Physical Nature of Matter	0:02:19		
MS	Physical Science	Properties and Changes of Properties in Matter	18.	Sublimation	0:01:52		
MS	Physical Science	Properties and Changes of Properties in Matter	19.	Thin Layer Chromatography			√
MS	Physical Science	Properties and Changes of Properties in Matter	20.	Deionization Process			√
MS	Physical Science	Properties and Changes of Properties in Matter	21.	Crystal Hydrate	0:04:02		
MS	Physical Science	Properties and Changes of Properties in Matter	22.	Does Mass Change in a Chemical Reaction?	0:03:34		
MS	Physical Science	Properties and Changes of Properties in Matter	23.	Changes accompanying Chemical Reactions	0:03:37		
MS	Physical Science	Properties and Changes of Properties in Matter	24.	Chemical Reactions and their Characteristics	0:02:24		
MS	Physical Science	Properties and Changes of Properties in Matter	25.	Metallic and Non-Metallic Properties in a Period	0:02:19		
MS	Physical Science	Properties and Changes of Properties in Matter	26.	Introduction to Modern Periodic Table			√
MS	Physical Science	Properties and Changes of Properties in Matter	27.	General Characteristics of Groups	0:01:23		
MS	Physical Science	Properties and Changes of Properties in Matter	28.	General Characteristics of Periods	0:03:49		
MS	Physical Science	Properties and Changes of Properties in Matter	29.	Chemical Equations	0:06:10		
MS	Physical Science	Properties and Changes of Properties in Matter	30.	The Law of Conservation of Mass	0:01:26		
MS	Physical Science	Properties and Changes of Properties in Matter	31.	Chemical Properties of Carbon	0:02:19		



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PKG	Category	Sub Category	Topic #	Topic	Video Duration	Sim	Int
MS	Physical Science	Properties and Changes of Properties in Matter	32.	Chemical Properties of Iron	0:03:18		
MS	Physical Science	Properties and Changes of Properties in Matter	33.	Chemical Properties of Sulphur Dioxide - I	0:06:05		
MS	Physical Science	Properties and Changes of Properties in Matter	34.	Chemical Properties of Sulphur Dioxide-II	0:06:31		
MS	Physical Science	Properties and Changes of Properties in Matter	35.	Chemical Properties of Dilute Sulphuric Acid	0:02:04		
MS	Physical Science	Properties and Changes of Properties in Matter	36.	Chemical Properties of Phosphorus	0:03:34		
MS	Physical Science	Properties and Changes of Properties in Matter	37.	Chemical Properties of Alkaline Earth Metals	0:02:58		
MS	Physical Science	Properties and Changes of Properties in Matter	38.	Chemical Properties of Metals and Non metals (Reaction with Oxygen)	0:03:37		
MS	Physical Science	Properties and Changes of Properties in Matter	39.	Chemical Properties of Phenol	0:03:57		
MS	Physical Science	Properties and Changes of Properties in Matter	40.	Chemical Properties of Phenol - II	0:03:12		
MS	Physical Science	Properties and Changes of Properties in Matter	41.	Physical Properties of Non-metals	0:04:21		
MS	Physical Science	Properties and Changes of Properties in Matter	42.	Natural Indicators	0:04:02		
MS	Physical Science	Properties and Changes of Properties in Matter	43.	Reactions of Metals with Water		√	
MS	Physical Science	Properties and Changes of Properties in Matter	44.	Reaction of Metals with Acids	0:04:41		
MS	Physical Science	Properties and Changes of Properties in Matter	45.	Reaction of Metal Oxides with Acid	0:01:20		
MS	Physical Science	Properties and Changes of Properties in Matter	46.	Reaction of Metal Carbonates with Acids	0:02:31		
MS	Physical Science	Properties and Changes of Properties in Matter	47.	Sulphur	0:02:22		
MS	Physical Science	Properties and Changes of Properties in Matter	48.	Laboratory Preparation of Sulphur Dioxide	0:03:05	√	
MS	Physical Science	Properties and Changes of Properties in Matter	49.	Laboratory Preparation of Hydrogen Gas	0:01:27	√	
MS	Physical Science	Properties and Changes of Properties in Matter	50.	Laboratory Preparation of Ammonia	0:03:55	√	
MS	Physical Science	Properties and Changes of Properties in Matter	51.	Law of Definite Proportions or Constant Composition	0:04:51	√	
MS	Physical Science	Properties and Changes of Properties in Matter	52.	Law of Multiple Proportions	0:05:02		
MS	Physical Science	Properties and Changes of Properties in Matter	53.	Molecular Formula	0:02:22	√	
MS	Physical Science	Properties and Changes of Properties in Matter	54.	Balancing of Equations	0:02:40	√	
MS	Physical Science	Properties and Changes of Properties in Matter	55.	Preparation of Oxygen from Hydrogen Peroxide	0:01:16	√	
MS	Physical Science	Properties and Changes of Properties in Matter	56.	Laboratory Preparation of Chlorine	0:02:02	√	
MS	Physical Science	Properties and Changes of Properties in Matter	57.	Preparation of Carbon Dioxide	0:01:28		√
MS	Physical Science	Properties and Changes of Properties in Matter	58.	Haber Process		√	
MS	Physical Science	Properties and Changes of Properties in Matter	59.	Chemical Bonding	0:05:11	√	
MS	Physical Science	Properties and Changes of Properties in Matter	60.	Atoms, Molecules and Ions	0:07:04		
MS	Physical Science	Properties and Changes of Properties in Matter	61.	Reaction of Metals with Oxygen	0:04:34		
MS	Physical Science	Properties and Changes of Properties in Matter	62.	Reaction of Metals with Hydrogen	0:01:08		
MS	Physical Science	Properties and Changes of Properties in Matter	63.	Combination Reactions	0:02:11		
MS	Physical Science	Properties and Changes of Properties in Matter	64.	Decomposition Reactions	0:01:39		
MS	Physical Science	Properties and Changes of Properties in Matter	65.	Corrosion	0:04:08		
MS	Physical Science	Properties and Changes of Properties in Matter	66.	Galvanization	0:07:15		
MS	Physical Science	Properties and Changes of Properties in Matter	67.	Density (Part-1)	0:05:09	√	
MS	Physical Science	Properties and Changes of Properties in Matter	68.	Density (Part-2)	0:04:21	√	
MS	Physical Science	Properties and Changes of Properties in Matter	69.	Buoyancy		√	
MS	Physical Science	Properties and Changes of Properties in Matter	70.	Archimedes' Principle: The Experiment		√	
MS	Physical Science	Properties and Changes of Properties in Matter	1.	Acids and Bases		√	
MS	Physical Science	Properties and Changes of Properties in Matter	2.	What are Acids and Bases?	0:02:20		
MS	Physical Science	Properties and Changes of Properties in Matter	3.	The Common Component of all Acids	0:08:13		
MS	Physical Science	Properties and Changes of Properties in Matter	4.	Henry's Law		√	



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PKG	Category	Sub Category	Topic #	Topic	Video Duration	Sim	Int
MS	Physical Science	Properties and Changes of Properties in Matter	5.	Separating the Components of a Mixture		√	
MS	Physical Science	Properties and Changes of Properties in Matter	6.	Formation of a Solution	0:03:36		
MS	Physical Science	Motions and Forces	1.	Acceleration	0:08:49		
MS	Physical Science	Motions and Forces	2.	Inertia	0:03:48		
MS	Physical Science	Motions and Forces	3.	Newton's First Law of Motion	0:03:11		
MS	Physical Science	Motions and Forces	4.	Balanced Forces	0:04:24		
MS	Physical Science	Motions and Forces	5.	Effects of Force	0:03:01		
MS	Physical Science	Motions and Forces	6.	Newton's Second Law of Motion	0:07:07		
MS	Physical Science	Motions and Forces	7.	Newton's Third Law of Motion	0:04:09		
MS	Physical Science	Motions and Forces	8.	Third Law of Motion using Two Spring Balances		√	
MS	Physical Science	Motions and Forces	1.	Increasing and Reducing Friction	0:05:00		
MS	Physical Science	Motions and Forces	2.	Pressure Exerted by a Solid		√	
MS	Physical Science	Motions and Forces	3.	Distance and Displacement	0:05:10		
MS	Physical Science	Motions and Forces	4.	Period of a Simple Pendulum		√	
MS	Physical Science	Transfer of Energy	1.	Heat Change During Chemical Reactions	0:01:30		
MS	Physical Science	Transfer of Energy	2.	Kinetic Energy	0:05:16		
MS	Physical Science	Transfer of Energy	3.	Nuclear Fusion	0:04:06		
MS	Physical Science	Transfer of Energy	4.	Sound	0:03:52		
MS	Physical Science	Transfer of Energy	5.	Conservation of Energy	0:06:44		
MS	Physical Science	Transfer of Energy	6.	Transformation of Energy	0:08:02		
MS	Physical Science	Transfer of Energy	7.	Solar Energy (Passive Solar Heating and Photovoltaic Devices)	0:05:55	√	√
MS	Physical Science	Transfer of Energy	8.	Hydroelectric Power	0:05:47		
MS	Physical Science	Transfer of Energy	9.	Transfer of Heat (Conduction)	0:04:12	√	
MS	Physical Science	Transfer of Energy	10.	Kinetic Theory of Matter-1 (SOLID)	0:05:27		
MS	Physical Science	Transfer of Energy	11.	Thermal Conductivity	0:06:35	√	
MS	Physical Science	Transfer of Energy	12.	Heat Conduction and Steady State	0:04:38	√	
MS	Physical Science	Transfer of Energy	13.	Emission Spectra and the Flame Test	0:06:02	√	
MS	Physical Science	Transfer of Energy	14.	Transparent, Translucent, and Opaque Objects	0:02:39		
MS	Physical Science	Transfer of Energy	15.	Refraction of Light through a Prism	0:04:56	√	
MS	Physical Science	Transfer of Energy	16.	Atmospheric Refraction	0:07:03		
MS	Physical Science	Transfer of Energy	17.	Diffraction of Light	0:06:51		
MS	Physical Science	Transfer of Energy	18.	Reflection of Light and its Laws	0:04:08	√	
MS	Physical Science	Transfer of Energy	19.	Lenses	0:05:20	√	
MS	Physical Science	Transfer of Energy	20.	Curved Mirrors	0:03:24	√	
MS	Physical Science	Transfer of Energy	21.	Converging Lenses	0:07:36	√	
MS	Physical Science	Transfer of Energy	22.	Diverging Lenses	0:07:36	√	
MS	Physical Science	Transfer of Energy	23.	Images Formed by a Concave Mirror	0:05:45	√	
MS	Physical Science	Transfer of Energy	24.	Image Formation in a Plane Mirror	0:03:54		
MS	Physical Science	Transfer of Energy	25.	Rotation of a Plane Mirror		√	
MS	Physical Science	Transfer of Energy	26.	Images Formed by a Convex Mirror	0:04:42	√	
MS	Physical Science	Transfer of Energy	27.	Real and Virtual Images	0:07:20		
MS	Physical Science	Transfer of Energy	28.	Colour of Objects	0:05:21	√	
MS	Physical Science	Transfer of Energy	29.	Primary Colours of Light		√	



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PKG	Category	Sub Category	Topic #	Topic	Video Duration	Sim	Int
MS	Physical Science	Transfer of Energy	30.	Dispersion of White Light	0:02:47	√	
MS	Physical Science	Transfer of Energy	31.	Total Internal Reflection (Part-2)	0:04:01	√	
MS	Physical Science	Transfer of Energy	32.	Compound Microscope	0:04:40	√	√
MS	Physical Science	Transfer of Energy	33.	Reflecting Telescope		√	
MS	Physical Science	Transfer of Energy	34.	New Cartesian Sign Convention (Spherical Mirrors and Lenses)	0:06:10		
MS	Physical Science	Transfer of Energy	35.	Defects of Vision and their Correction	0:07:45		
MS	Physical Science	Transfer of Energy	36.	Electroplating		√	
MS	Physical Science	Transfer of Energy	37.	Electric Bell	0:03:30	√	√
MS	Physical Science	Transfer of Energy	38.	Electric Fuse	0:03:19		
MS	Physical Science	Transfer of Energy	39.	Electroplating	0:02:56		
MS	Physical Science	Transfer of Energy	40.	Bulb Connected to a Cell	0:03:50		
MS	Physical Science	Transfer of Energy	41.	Assembling Basic Electric Circuit		√	
MS	Physical Science	Transfer of Energy	42.	Radioactivity and Group Displacement Law		√	
MS	Physical Science	Transfer of Energy	43.	Heat of Solution	0:03:40	√	
MS	Physical Science	Transfer of Energy	44.	Fundamentals of a DC Motor	0:07:31	√	√
MS	Physical Science	Transfer of Energy	45.	AC Motor	0:05:13		√
MS	Physical Science	Transfer of Energy	46.	AC Generator	0:06:05	√	√
MS	Physical Science	Transfer of Energy	47.	Nuclear Chain Reaction	0:06:37		
MS	Physical Science	Transfer of Energy	48.	Temperature of the Earth	0:04:21		
MS	Physical Science	Transfer of Energy	49.	The Sun (Part-1)	0:05:15		√
MS	Physical Science	Transfer of Energy	50.	The Sun (Part-2)	0:05:25		√
MS	Physical Science	Transfer of Energy	51.	Thermal Radiation	0:03:15		
MS	Physical Science	Transfer of Energy	52.	Electromagnetic Spectrum (Part - 1)	0:05:19		
MS	Physical Science	Transfer of Energy	53.	Electromagnetic Spectrum (Part - 2)	0:03:51		
MS	Physical Science	Transfer of Energy	54.	Solar Energy (Active Solar Systems)	0:04:48	√	√
MS	Physical Science	Transfer of Energy	1.	Renewable Resources of Energy	0:04:35		
MS	Life Science	Structure & Function in Living Systems	1.	Cells to organism	0:02:52		
MS	Life Science	Structure & Function in Living Systems	2.	Amoeba	0:01:16		√
MS	Life Science	Structure & Function in Living Systems	3.	Animal cell	0:05:25	√	
MS	Life Science	Structure & Function in Living Systems	4.	Cell structure (Plant cell)	0:02:04	√	√
MS	Life Science	Structure & Function in Living Systems	5.	Prokaryota and Eukaryota			√
MS	Life Science	Structure & Function in Living Systems	6.	Shape of cells	0:04:37		√
MS	Life Science	Structure & Function in Living Systems	7.	Number and size of cells	0:03:36		
MS	Life Science	Structure & Function in Living Systems	8.	Cell division (Mitosis)	0:04:15	√	
MS	Life Science	Structure & Function in Living Systems	9.	Meiosis	0:06:12		
MS	Life Science	Structure & Function in Living Systems	10.	Structure of Mitochondria	0:02:38	√	
MS	Life Science	Structure & Function in Living Systems	11.	Epithelial tissue	0:04:31		√
MS	Life Science	Structure & Function in Living Systems	12.	Connective tissues	0:02:08		
MS	Life Science	Structure & Function in Living Systems	13.	Areolar Connective tissues	0:02:52		
MS	Life Science	Structure & Function in Living Systems	14.	Plant tissues (Meristematic tissues)	0:01:57		
MS	Life Science	Structure & Function in Living Systems	15.	Plant tissue system	0:03:33		
MS	Life Science	Structure & Function in Living Systems	16.	Simple tissues	0:02:33		√
MS	Life Science	Structure & Function in Living Systems	17.	Digestive and excretory system	0:02:33	√	



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PKG	Category	Sub Category	Topic #	Topic	Video Duration	Sim	Int
MS	Life Science	Structure & Function in Living Systems	18.	Respiratory system	0:03:47	√	√
MS	Life Science	Structure & Function in Living Systems	19.	Mechanism of breathing in man	0:02:20	√	√
MS	Life Science	Structure & Function in Living Systems	20.	Respiratory and circulatory systems	0:02:24	√	√
MS	Life Science	Structure & Function in Living Systems	21.	Muscular system	0:02:41		
MS	Life Science	Structure & Function in Living Systems	22.	Excretory system	0:03:50	√	
MS	Life Science	Structure & Function in Living Systems	23.	The Skeletal system	0:02:25		
MS	Life Science	Structure & Function in Living Systems	24.	Fixed joints and muscles	0:05:17		√
MS	Life Science	Structure & Function in Living Systems	25.	Role of Muscles in Bone Movement	0:03:39		
MS	Life Science	Structure & Function in Living Systems	26.	Nervous system	0:03:13	√	
MS	Life Science	Structure & Function in Living Systems	27.	Exocrine glands and Endocrine glands	0:05:07	√	
MS	Life Science	Structure & Function in Living Systems	28.	Skin	0:03:08	√	
MS	Life Science	Structure & Function in Living Systems	29.	Skeletal Muscles and bones	0:03:07		
MS	Life Science	Structure & Function in Living Systems	30.	The eye	0:03:41		
MS	Life Science	Structure & Function in Living Systems	31.	The Ear (Anatomy)		√	
MS	Life Science	Structure & Function in Living Systems	32.	Male reproductive system (Anatomy and physiology)	0:04:14	√	
MS	Life Science	Structure & Function in Living Systems	33.	Female reproductive anatomy	0:03:29	√	
MS	Life Science	Structure & Function in Living Systems	34.	Structure of bone		√	√
MS	Life Science	Structure & Function in Living Systems	35.	Ligaments			√
MS	Life Science	Structure & Function in Living Systems	36.	Chickenpox	0:03:35		√
MS	Life Science	Structure & Function in Living Systems	37.	Influenza	0:01:41		√
MS	Life Science	Structure & Function in Living Systems	38.	Polio	0:01:40		
MS	Life Science	Structure & Function in Living Systems	39.	Diarrhoea	0:03:11		
MS	Life Science	Structure & Function in Living Systems	40.	Bacteria and Virus	0:03:38		
MS	Life Science	Structure & Function in Living Systems	1.	Heart	0:01:59	√	
MS	Life Science	Structure & Function in Living Systems	2.	Heart – An Amazing Pump		√	
MS	Life Science	Structure & Function in Living Systems	3.	Heart - Cardiac pacemaker		√	
MS	Life Science	Structure & Function in Living Systems	4.	Anatomy of heart	0:04:32	√	
MS	Life Science	Structure & Function in Living Systems	5.	Heart and blood circulation	0:03:35	√	
MS	Life Science	Structure & Function in Living Systems	6.	Arteries and veins	0:04:59	√	
MS	Life Science	Structure & Function in Living Systems	7.	Blood Vessel Networking	0:04:59		
MS	Life Science	Structure & Function in Living Systems	8.	Blood Composition	0:06:13	√	
MS	Life Science	Structure & Function in Living Systems	9.	Blood - The RBC Story	0:03:43		
MS	Life Science	Structure & Function in Living Systems	10.	Haemoglobin			√
MS	Life Science	Structure & Function in Living Systems	11.	Blood corpuscles (Human blood)	0:03:24	√	
MS	Life Science	Structure & Function in Living Systems	12.	Study of WBCs	0:03:22		
MS	Life Science	Structure & Function in Living Systems	13.	Functions of leucocytes	0:02:28	√	
MS	Life Science	Structure & Function in Living Systems	14.	Blood Clotting		√	
MS	Life Science	Structure & Function in Living Systems	15.	Teeth	0:04:00	√	√
MS	Life Science	Structure & Function in Living Systems	16.	Detailed digestive system II	0:01:48	√	
MS	Life Science	Structure & Function in Living Systems	17.	Physiology of digestion	0:03:44	√	
MS	Life Science	Structure & Function in Living Systems	18.	Gallbladder	0:03:03		√
MS	Life Science	Structure & Function in Living Systems	19.	Organs of the Excretory System	0:03:41		
MS	Life Science	Structure & Function in Living Systems	20.	Types of muscle fibers	0:04:15		√





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PKG	Category	Sub Category	Topic #	Topic	Video Duration	Sim	Int
MS	Life Science	Structure & Function in Living Systems	21.	Gaseous transport	0:06:32	√	√
MS	Life Science	Structure & Function in Living Systems	22.	Appendicular skeleton (Forelimbs and Hind limbs)	0:03:26	√	
MS	Life Science	Structure & Function in Living Systems	23.	Joints	0:03:14		√
MS	Life Science	Structure & Function in Living Systems	24.	Fracture	0:02:46		
MS	Life Science	Structure & Function in Living Systems	25.	Types of fractures			√
MS	Life Science	Structure & Function in Living Systems	26.	Harmful micro-organisms			
MS	Life Science	Structure & Function in Living Systems	27.	Haemoglobin and Sickle cell anaemia	0:03:30		√
MS	Life Science	Structure & Function in Living Systems	28.	Female Anopheles			√
MS	Life Science	Structure & Function in Living Systems	29.	Mycoplasma	0:02:10		
MS	Life Science	Structure & Function in Living Systems	30.	Exhalation of CO2 During Respiration		√	
MS	Life Science	Structure & Function in Living Systems	31.	Liver			√
MS	Life Science	Structure & Function in Living Systems	32.	Anatomy of Liver			√
MS	Life Science	Structure & Function in Living Systems	33.	Neuromuscular junction	0:02:52		√
MS	Life Science	Structure & Function in Living Systems	34.	Myoneural Junction		√	√
MS	Life Science	Structure & Function in Living Systems	35.	Ciliated epithelium			√
MS	Life Science	Structure & Function in Living Systems	36.	Cuboidal epithelium			√
MS	Life Science	Structure & Function in Living Systems	37.	Bones	0:03:45	√	√
MS	Life Science	Structure & Function in Living Systems	38.	Girdle bones	0:02:46	√	
MS	Life Science	Structure & Function in Living Systems	39.	Vertebral column	0:01:36	√	√
MS	Life Science	Structure & Function in Living Systems	40.	The Skull	0:01:19	√	√
MS	Life Science	Reproduction and Heredity	1.	Fertilization	0:03:16	√	
MS	Life Science	Reproduction and Heredity	2.	Bacterial transformation and conjugation	0:02:47		
MS	Life Science	Reproduction and Heredity	3.	Chromosomes, genes and DNA	0:03:50		√
MS	Life Science	Reproduction and Heredity	1.	Fertilization and implantation in humans	0:03:44	√	
MS	Life Science	Reproduction and Heredity	2.	Male reproductive system	0:04:14	√	
MS	Life Science	Reproduction and Heredity	3.	Female reproductive system	0:02:48	√	
MS	Life Science	Reproduction and Heredity	4.	Oogenesis			√
MS	Life Science	Reproduction and Heredity	5.	Twins	0:04:00		
MS	Life Science	Regulation and Behavior	1.	Thermoregulation by the skin	0:03:08	√	√
MS	Life Science	Populations and Ecosystems	1.	Food chain	0:02:52		
MS	Life Science	Populations and Ecosystems	2.	Aphids	0:01:27		√
MS	Life Science	Populations and Ecosystems	3.	Energy flow in an ecosystem	0:03:48		
MS	Life Science	Populations and Ecosystems	4.	Pond - The Underwater Ecosystem	0:03:28		
MS	Earth and Space Science	Structure of the Earth System	1.	Hotspot Volcanism (Formation of the Hawaiian Islands)	0:03:40		
MS	Earth and Space Science	Structure of the Earth System	2.	Fold and Fault Block Mountains	0:03:41		
MS	Earth and Space Science	Structure of the Earth System	3.	Earthquake	0:04:13		
MS	Earth and Space Science	Structure of the Earth System	4.	Chemical Weathering	0:03:14		
MS	Earth and Space Science	Structure of the Earth System	5.	Physical Weathering	0:03:14		
MS	Earth and Space Science	Structure of the Earth System	6.	Biological Weathering	0:03:11		
MS	Earth and Space Science	Structure of the Earth System	7.	Erosion	0:03:00		
MS	Earth and Space Science	Structure of the Earth System	8.	Rock Cycle	0:03:57		
MS	Earth and Space Science	Structure of the Earth System	9.	Importance of Soil and its Formation	0:04:44		
MS	Earth and Space Science	Structure of the Earth System	10.	Properties of Soil and its Uses	0:05:41		



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PKG	Category	Sub Category	Topic #	Topic	Video Duration	Sim	Int
MS	Earth and Space Science	Structure of the Earth System	11.	Composition of Soil	0:04:38		
MS	Earth and Space Science	Structure of the Earth System	12.	Soil Horizons	0:05:17		
MS	Earth and Space Science	Structure of the Earth System	13.	Water Cycle		√	
MS	Earth and Space Science	Structure of the Earth System	14.	Layers of the Earth's Atmosphere	0:06:00	√	
MS	Earth and Space Science	Structure of the Earth System	15.	Temperature and Surface Tension		√	
MS	Earth and Space Science	Structure of the Earth System	16.	Layers of the Earth's Atmosphere		√	
MS	Earth and Space Science	Structure of the Earth System	17.	Formation and Types of Clouds	0:04:12	√	
MS	Earth and Space Science	Structure of the Earth System	18.	What is Weather?	0:05:57	√	
MS	Earth and Space Science	Structure of the Earth System	19.	Fronts and Weather Conditions	0:05:11		
MS	Earth and Space Science	Structure of the Earth System	20.	Air Masses	0:04:27		
MS	Earth and Space Science	Structure of the Earth System	21.	What is Climate?	0:05:37		
MS	Earth and Space Science	Structure of the Earth System	22.	Climate Change	0:05:20		
MS	Earth and Space Science	Structure of the Earth System	23.	What Influences Climate?	0:04:47		
MS	Earth and Space Science	Structure of the Earth System	24.	Chemical and Organic Sedimentary Rocks	0:06:09		
MS	Earth and Space Science	Structure of the Earth System	25.	Clastic Sedimentary Rocks	0:04:44		
MS	Earth and Space Science	Structure of the Earth System	26.	Igneous Rocks	0:04:05		
MS	Earth and Space Science	Structure of the Earth System	27.	Metamorphic Rocks	0:03:08		
MS	Earth and Space Science	Structure of the Earth System	28.	Chemical Weathering	0:03:14		
MS	Earth and Space Science	Structure of the Earth System	29.	Physical Weathering	0:03:14		
MS	Earth and Space Science	Structure of the Earth System	30.	Biological Weathering	0:03:11		
MS	Earth and Space Science	Earth's History	1.	Fold and Fault Block Mountains	0:03:41		
MS	Earth and Space Science	Earth's History	2.	Erosion	0:03:00		
MS	Earth and Space Science	Earth in the Solar System	1.	Evolution of Solar System	0:01:57	√	
MS	Earth and Space Science	Earth in the Solar System	2.	The Sun (Part-1)	0:05:15		√
MS	Earth and Space Science	Earth in the Solar System	3.	The Sun (Part-2)	0:05:25		√
MS	Earth and Space Science	Earth in the Solar System	4.	Solar System (The Inner Planets)	0:05:36	√	
MS	Earth and Space Science	Earth in the Solar System	5.	Solar System (The Outer Planets)	0:04:42	√	
MS	Earth and Space Science	Earth in the Solar System	6.	Planets in Our Solar System	0:05:59		
MS	Earth and Space Science	Earth in the Solar System	7.	Eclipse		√	
MS	Earth and Space Science	Earth in the Solar System	8.	Phases of the Moon		√	
MS	Earth and Space Science	Earth in the Solar System	9.	Lunar Eclipse	0:05:26		
MS	Earth and Space Science	Earth in the Solar System	10.	Solar Eclipse	0:06:04		
MS	Earth and Space Science	Earth in the Solar System	11.	Kepler's First Law of Planetary Motion	0:03:47	√	
MS	Earth and Space Science	Earth in the Solar System	12.	Kepler's Second Law of Planetary Motion	0:04:15	√	
MS	Earth and Space Science	Earth in the Solar System	13.	Kepler's Third Law of Planetary Motion	0:05:15	√	
MS	Earth and Space Science	Earth in the Solar System	14.	Satellites in Orbits	0:05:12		
MS	Earth and Space Science	Earth in the Solar System	15.	Gravitation		√	
MS	Earth and Space Science	Earth in the Solar System	16.	Centripetal Force		√	
MS	Earth and Space Science	Earth in the Solar System	17.	Mass and Weight	0:05:05		
MS	Earth and Space Science	Earth in the Solar System	18.	Drag Force and Terminal Velocity		√	
MS	Earth and Space Science	Earth in the Solar System	19.	Seasons	0:04:15	√	
MS	Earth and Space Science	Earth in the Solar System	20.	Solar Energy (Active Solar Systems)	0:04:48	√	√
MS	Earth and Space Science	Earth in the Solar System	21.	Solar Energy (Passive Solar Heating and Photovoltaic Devices)	0:05:55	√	√



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PKG	Category	Sub Category	Topic #	Topic	Video Duration	Sim	Int
MS	Earth and Space Science	Earth in the Solar System	1.	Latitude and Longitude	0:07:17	√	
MS	Earth and Space Science	Earth in the Solar System	2.	Time Zones	0:07:10		
MS	Earth and Space Science	Earth in the Solar System	3.	Radio Telescope			
MS	Earth and Space Science	Earth in the Solar System	4.	Application of Latitude and Longitude		√	
MS	Science in Personal and Social Perspectives	Personal Health	1.	Smoking and Emphysema	0:04:21		
MS	Science in Personal and Social Perspectives	Natural Hazards	1.	Earthquake	0:04:13		
MS	Science in Personal and Social Perspectives	Natural Hazards	2.	Hotspot Volcanism (Formation of the Hawaiian Islands)	0:03:40		
MS	Science in Personal and Social Perspectives	Risks and Benefits	1.	Earthquake	0:04:13		
MS	Science in Personal and Social Perspectives	Risks and Benefits	2.	Air pollution	0:02:59	√	
MS	Science in Personal and Social Perspectives	Risks and Benefits	3.	Smoking and Emphysema	0:04:21		
MS	Science in Personal and Social Perspectives	Risks and Benefits	4.	Water pollution and its effect (Eutrophication)	0:03:13		
MS	Science in Personal and Social Perspectives	Risks and Benefits	5.	Smoking - a dangerous habit	0:05:30		
MS	Science in Personal and Social Perspectives	Risks and Benefits	6.	Effect of drug and alcohol on the nervous system	0:05:25		
MS	Add-On Categories	Mechanics	1.	Volume	0:02:23		
MS	Add-On Categories	Mechanics	2.	Volume of an Irregular Object (Part-1)	0:01:30		
MS	Add-On Categories	Mechanics	3.	Volume of Liquids	0:02:50		
MS	Add-On Categories	Electromagnetism	1.	Galvanometer	0:09:05		√
MS	Add-On Categories	Comparing Quantities	1.	Profit and Loss		√	
HS	Physical Science	Structure of Atoms	1.	Physical Nature of Matter	0:02:19		
HS	Physical Science	Structure of Atoms	2.	Atomic Mass, Molecular Mass and Formula Unit Mass	0:06:31		
HS	Physical Science	Structure of Atoms	3.	The Mole Concept	0:04:13	√	
HS	Physical Science	Structure of Atoms	4.	Mole Fraction	0:03:04	√	√
HS	Physical Science	Structure of Atoms	5.	Thomson's Atomic Model	0:04:07		
HS	Physical Science	Structure of Atoms	6.	Rutherford's Atomic Model	0:04:02	√	
HS	Physical Science	Structure of Atoms	7.	Millikan's Oil-Drop Experiment (Charge of an Electron)	0:07:24		
HS	Physical Science	Structure of Atoms	8.	Thermionic Emission	0:08:19		
HS	Physical Science	Structure of Atoms	9.	Properties of Nucleons	0:06:26		
HS	Physical Science	Structure of Atoms	10.	Discharge of Electricity through Gases	0:02:34		
HS	Physical Science	Structure of Atoms	11.	Isotopes of Hydrogen	0:02:07		
HS	Physical Science	Structure of Atoms	12.	Size of Nucleus and Nuclear Density	0:05:02	√	
HS	Physical Science	Structure of Atoms	13.	Atoms, Molecules and Ions	0:07:04		
HS	Physical Science	Structure of Atoms	14.	Nuclear Chain Reaction	0:06:37		
HS	Physical Science	Structure of Atoms	15.	Nuclear Fusion	0:04:06		
HS	Physical Science	Structure of Atoms	16.	Carbon-14 Decay		√	
HS	Physical Science	Structure of Atoms	17.	Radioactivity and Group Displacement Law		√	
HS	Physical Science	Structure of Atoms	18.	Radioactivity	0:07:09		
HS	Physical Science	Structure of Atoms	19.	Radioactive Decay Law	0:06:49		
HS	Physical Science	Structure of Atoms	20.	Alpha Emission	0:05:03		√
HS	Physical Science	Structure of Atoms	21.	Beta Emission	0:06:55		
HS	Physical Science	Structure of Atoms	1.	Formulae of Compounds (Using Valencies)	0:02:48		
HS	Physical Science	Structure of Atoms	2.	Crystalline and Amorphous Solids	0:05:49		



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PKG	Category	Sub Category	Topic #	Topic	Video Duration	Sim	Int
HS	Physical Science	Structure of Atoms	3.	Photoelectric Effect: The Concept	0:07:31		
HS	Physical Science	Structure of Atoms	4.	Applications of Laser (Part-2) (Barcode Reader)	0:02:19		
HS	Physical Science	Structure of Atoms	5.	Lasers and their Uses	0:06:35		√
HS	Physical Science	Structure and Properties of Matter	1.	Valency	0:06:36		
HS	Physical Science	Structure and Properties of Matter	2.	Chemical Bonding	0:05:11	√	
HS	Physical Science	Structure and Properties of Matter	3.	Covalent Bonds	0:05:16		
HS	Physical Science	Structure and Properties of Matter	4.	Types of Covalent Bonds and Lewis Representation	0:03:20		
HS	Physical Science	Structure and Properties of Matter	5.	Shapes of Covalent Molecules		√	
HS	Physical Science	Structure and Properties of Matter	6.	Co-ordinate Bond	0:03:21		
HS	Physical Science	Structure and Properties of Matter	7.	Geometry of Molecules	0:06:43		
HS	Physical Science	Structure and Properties of Matter	8.	Electron Geometry and Molecular Geometry	0:03:33		
HS	Physical Science	Structure and Properties of Matter	9.	VSEPR Theory	0:04:03		
HS	Physical Science	Structure and Properties of Matter	10.	The Sigma ( $\sigma$ ) and the Pi ( $\pi$ ) Bonds	0:07:05	√	
HS	Physical Science	Structure and Properties of Matter	11.	Bonding in Carbon	0:05:05		
HS	Physical Science	Structure and Properties of Matter	12.	Properties of Non-Metals Favouring the Formation of Covalent Bonds	0:06:42		
HS	Physical Science	Structure and Properties of Matter	13.	Bond Energy	0:07:28	√	
HS	Physical Science	Structure and Properties of Matter	14.	Electronegativity and Bond Character	0:03:34		
HS	Physical Science	Structure and Properties of Matter	15.	Atomic Orbitals	0:05:24		√
HS	Physical Science	Structure and Properties of Matter	16.	Factors Favouring the Formation of Ionic Compounds - I	0:05:13		
HS	Physical Science	Structure and Properties of Matter	17.	Factors Favouring the Formation of Ionic Compounds - II	0:05:41		
HS	Physical Science	Structure and Properties of Matter	18.	Hydrogen Molecule : A VBT Approach	0:02:21		
HS	Physical Science	Structure and Properties of Matter	19.	M O Diagram: Homonuclear Diatomic Molecules		√	
HS	Physical Science	Structure and Properties of Matter	20.	The Hydrogen Molecule (Molecular Orbital Diagram)	0:06:02		
HS	Physical Science	Structure and Properties of Matter	21.	Oxygen Molecule (The Molecular Orbital Diagram)	0:03:53		
HS	Physical Science	Structure and Properties of Matter	22.	M O Diagram: Heteronuclear Diatomic Molecules		√	
HS	Physical Science	Structure and Properties of Matter	23.	Molecular Orbitals Diagram of Ions		√	
HS	Physical Science	Structure and Properties of Matter	24.	Bond Order	0:04:15		
HS	Physical Science	Structure and Properties of Matter	25.	Fractional Bond Orders	0:04:01		
HS	Physical Science	Structure and Properties of Matter	26.	Hybridization of Atomic Orbitals			√
HS	Physical Science	Structure and Properties of Matter	27.	Types of Hybridization in Organic Compounds ( $sp^3$ Hybridization in Ethane)	0:04:37		√
HS	Physical Science	Structure and Properties of Matter	28.	Types of Hybridization in Organic Compounds ( $sp^2$ Hybridization in Ethene)	0:03:34		√
HS	Physical Science	Structure and Properties of Matter	29.	Bonding in Acetylene	0:04:19		√
HS	Physical Science	Structure and Properties of Matter	30.	Fission of a Covalent Bond	0:05:25		
HS	Physical Science	Structure and Properties of Matter	31.	$sp^3d$ Hybridization in $PCl_5$	0:01:23		
HS	Physical Science	Structure and Properties of Matter	32.	$sp^3d^2$ Hybridization in $SF_6$	0:01:29		
HS	Physical Science	Structure and Properties of Matter	33.	The Stability of an Expanded Octet of $PCl_5$ (Using the Sjudgen's concept of single	0:04:35		
HS	Physical Science	Structure and Properties of Matter	34.	Elements and their Symbols			√
HS	Physical Science	Structure and Properties of Matter	35.	Electronic Configuration and the Position of an Element in the Periodic Table	0:05:34		√
HS	Physical Science	Structure and Properties of Matter	36.	Introduction to Modern Periodic Table			√



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PKG	Category	Sub Category	Topic #	Topic	Video Duration	Sim	Int
HS	Physical Science	Structure and Properties of Matter	37.	Electronic Configuration of Noble Gases		√	
HS	Physical Science	Structure and Properties of Matter	38.	General Characteristics of Groups	0:01:23		
HS	Physical Science	Structure and Properties of Matter	39.	General Characteristics of Periods	0:03:49		
HS	Physical Science	Structure and Properties of Matter	40.	Fajan's Rule	0:02:30		
HS	Physical Science	Structure and Properties of Matter	41.	Covalent Character in Ionic Bonds	0:05:44		
HS	Physical Science	Structure and Properties of Matter	42.	Hydrogen Bonding	0:06:12		
HS	Physical Science	Structure and Properties of Matter	43.	Types of Hydrogen Bonds	0:01:12		
HS	Physical Science	Structure and Properties of Matter	44.	Atoms, Molecules and Ions	0:07:04		
HS	Physical Science	Structure and Properties of Matter	45.	Distinguishing Between a Mixture and a Compound		√	
HS	Physical Science	Structure and Properties of Matter	46.	Primitive Unit Cells (Part - I)	0:04:47		
HS	Physical Science	Structure and Properties of Matter	47.	Primitive Unit Cells (Part - II)	0:04:21		
HS	Physical Science	Structure and Properties of Matter	48.	Unit Cells in Crystal Lattices or Space Lattices Part - II	0:05:48		
HS	Physical Science	Structure and Properties of Matter	49.	Simple Cubic Crystal Lattices (AAA- Arrangement)	0:03:15		
HS	Physical Science	Structure and Properties of Matter	50.	Face Centred Cubic Crystal Lattice ABCABC Arrangement	0:05:12		
HS	Physical Science	Structure and Properties of Matter	51.	AB Type Ionic Crystals	0:04:52	√	
HS	Physical Science	Structure and Properties of Matter	52.	The Sodium Chloride Lattice	0:04:19		
HS	Physical Science	Structure and Properties of Matter	53.	Density of a Cubic Crystalline Solid		√	
HS	Physical Science	Structure and Properties of Matter	54.	Number of Particles in a Cubic Unit Cell	0:06:32		
HS	Physical Science	Structure and Properties of Matter	55.	The Boiling Points of Alcohols and Hydrogen Bonding	0:05:12		
HS	Physical Science	Structure and Properties of Matter	56.	Dipole-Dipole Interactions	0:04:04		
HS	Physical Science	Structure and Properties of Matter	57.	Attraction Between Molecules - London Dispersion Forces	0:02:52		
HS	Physical Science	Structure and Properties of Matter	58.	Molecular Display			√
HS	Physical Science	Structure and Properties of Matter	59.	3D Representation of Organic Molecules		√	
HS	Physical Science	Structure and Properties of Matter	60.	Determining Melting and Boiling Points		√	
HS	Physical Science	Structure and Properties of Matter	61.	Melting and Boiling Point of Water	0:02:47		
HS	Physical Science	Structure and Properties of Matter	62.	Viscosity	0:03:18		
HS	Physical Science	Structure and Properties of Matter	63.	Measurement of Viscosity		√	
HS	Physical Science	Structure and Properties of Matter	64.	Dipole Moment	0:05:31	√	
HS	Physical Science	Structure and Properties of Matter	65.	Applications of Dipole Moment	0:04:09		
HS	Physical Science	Structure and Properties of Matter	66.	Dipole Moment and Bond Character	0:03:02	√	
HS	Physical Science	Structure and Properties of Matter	67.	Physical Nature of Matter	0:02:19		
HS	Physical Science	Structure and Properties of Matter	68.	States of Matter (Part - II)	0:02:45	√	
HS	Physical Science	Structure and Properties of Matter	69.	Effect of Pressure on the Gaseous State of Matter	0:02:46	√	
HS	Physical Science	Structure and Properties of Matter	70.	Heat of Combustion of a Candle		√	
HS	Physical Science	Structure and Properties of Matter	71.	Effect of Temperature on the Liquid State of Matter	0:03:36		
HS	Physical Science	Structure and Properties of Matter	72.	Diffusion	0:02:50	√	
HS	Physical Science	Structure and Properties of Matter	73.	Partial Pressure	0:04:47		
HS	Physical Science	Structure and Properties of Matter	74.	Maxwell Speed Distribution		√	
HS	Physical Science	Structure and Properties of Matter	75.	Volatile Liquids		√	



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PKG	Category	Sub Category	Topic #	Topic	Video Duration	Sim	Int
HS	Physical Science	Structure and Properties of Matter	76.	Kinetic Theory of Matter-1 (SOLID)	0:05:27		
HS	Physical Science	Structure and Properties of Matter	77.	Kinetic Theory of Matter-2 (Liquids)	0:04:13		
HS	Physical Science	Structure and Properties of Matter	78.	Carbon	0:01:54		
HS	Physical Science	Structure and Properties of Matter	79.	Difference Between Diamond and Graphite	0:04:46	√	
HS	Physical Science	Structure and Properties of Matter	80.	Fullerenes	0:01:25		
HS	Physical Science	Structure and Properties of Matter	81.	Nomenclature of Hydrocarbons		√	
HS	Physical Science	Structure and Properties of Matter	82.	Chemical Properties of Organic Compounds (Part - II)	0:02:31		
HS	Physical Science	Structure and Properties of Matter	83.	Methane	0:01:45		√
HS	Physical Science	Structure and Properties of Matter	84.	Structure of Benzene			√
HS	Physical Science	Structure and Properties of Matter	85.	Classification of Carbon and Hydrogen Atoms in Alkanes	0:02:31	√	
HS	Physical Science	Structure and Properties of Matter	86.	Addition Reactions of Alkenes	0:02:42		
HS	Physical Science	Structure and Properties of Matter	87.	Diene Compounds	0:01:30		
HS	Physical Science	Structure and Properties of Matter	88.	Classification of Functional Groups(Part- 1)	0:04:59		
HS	Physical Science	Structure and Properties of Matter	89.	IUPAC Nomenclature-I (Alkanes)	0:02:09		
HS	Physical Science	Structure and Properties of Matter	90.	Structural Isomerism in Alkanes	0:03:37		
HS	Physical Science	Structure and Properties of Matter	91.	Nomenclature of Geometric Isomers	0:02:26		
HS	Physical Science	Structure and Properties of Matter	92.	Geometrical Isomerism in Hydrocarbons	0:05:16		
HS	Physical Science	Structure and Properties of Matter	93.	IUPAC Nomenclature of Acyclic Organic Compounds	0:06:02	√	
HS	Physical Science	Structure and Properties of Matter	94.	Classification of Functional Groups(Part - II)	0:06:21		
HS	Physical Science	Structure and Properties of Matter	95.	Destructive Distillation of Coal	0:02:45	√	
HS	Physical Science	Structure and Properties of Matter	96.	Alkenes	0:06:11	√	
HS	Physical Science	Structure and Properties of Matter	97.	Biodiesel	0:03:42		
HS	Physical Science	Structure and Properties of Matter	98.	Polythene	0:04:13		
HS	Physical Science	Structure and Properties of Matter	99.	Effect of Heat on Polythene	0:02:45		
HS	Physical Science	Structure and Properties of Matter	100.	Addition Polymerization (Free Radical Polymerization)	0:03:28		
HS	Physical Science	Structure and Properties of Matter	101.	Properties and Uses of Plastics	0:02:58		
HS	Physical Science	Structure and Properties of Matter	102.	Kevlar-The Bullet Resistant Polymer	0:04:03		
HS	Physical Science	Structure and Properties of Matter	103.	Tacticity of Polymers	0:03:16		
HS	Physical Science	Structure and Properties of Matter	104.	Polycyclic Aromatic Hydrocarbons	0:05:30		
HS	Physical Science	Structure and Properties of Matter	105.	Bond Line Structures			√
HS	Physical Science	Structure and Properties of Matter	106.	The Criteria for Aromaticity	0:06:42		√
HS	Physical Science	Structure and Properties of Matter	1.	The Limiting Reactant	0:03:05		√
HS	Physical Science	Structure and Properties of Matter	2.	Ionization Energy	0:02:59		√
HS	Physical Science	Structure and Properties of Matter	3.	Atomic Radius and its Types	0:01:55		√
HS	Physical Science	Structure and Properties of Matter	4.	Electronegativity	0:04:39		√
HS	Physical Science	Structure and Properties of Matter	5.	Periodic Trends in Atomic Radii	0:02:39		√
HS	Physical Science	Structure and Properties of Matter	6.	Factors Affecting Atomic Radii	0:05:16		
HS	Physical Science	Structure and Properties of Matter	7.	Atomic Radius and the Halogen Elements	0:03:24		√
HS	Physical Science	Structure and Properties of Matter	8.	Noble Gases	0:03:57		



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PKG	Category	Sub Category	Topic #	Topic	Video Duration	Sim	Int
HS	Physical Science	Structure and Properties of Matter	9.	Properties of Nitrogen Gas		√	
HS	Physical Science	Structure and Properties of Matter	10.	Quantum Number for 3d Electrons		√	
HS	Physical Science	Structure and Properties of Matter	11.	Quantum Numbers (Part - I)	0:05:38	√	
HS	Physical Science	Structure and Properties of Matter	12.	Quantum Numbers (Part -II)	0:09:29	√	
HS	Physical Science	Structure and Properties of Matter	13.	Rules for Filling of Atomic Orbitals	0:07:09	√	
HS	Physical Science	Structure and Properties of Matter	14.	Formula Weight			√
HS	Physical Science	Structure and Properties of Matter	15.	The Empirical Formula and Molecular Formula of a Compound Part - 1	0:04:07		
HS	Physical Science	Structure and Properties of Matter	16.	The Empirical Formula and Molecular Formula of a Compound Part - 2	0:05:40		
HS	Physical Science	Structure and Properties of Matter	17.	Formality			√
HS	Physical Science	Structure and Properties of Matter	18.	Normality			√
HS	Physical Science	Structure and Properties of Matter	19.	Concentrations of Solutions Molarity (M)	0:05:50	√	
HS	Physical Science	Structure and Properties of Matter	20.	Concentration of Solutions Molality (m)	0:03:11		√
HS	Physical Science	Structure and Properties of Matter	21.	Laboratory Preparation of Hydrogen (Quantitative Aspect)		√	
HS	Physical Science	Structure and Properties of Matter	22.	Flame Test			√
HS	Physical Science	Structure and Properties of Matter	23.	Principles of Extraction of Metals	0:04:53		
HS	Physical Science	Structure and Properties of Matter	24.	Nomenclature of Aliphatic Amines	0:06:31	√	
HS	Physical Science	Structure and Properties of Matter	25.	Basic Nature of Amines	0:05:59		
HS	Physical Science	Structure and Properties of Matter	26.	Tests to Detect Amines	0:04:53		
HS	Physical Science	Structure and Properties of Matter	27.	Preparation of Amines	0:04:38		
HS	Physical Science	Structure and Properties of Matter	28.	Sulphonation of Benzene		√	
HS	Physical Science	Structure and Properties of Matter	29.	Chlorination of Benzene	0:01:56		
HS	Physical Science	Structure and Properties of Matter	30.	Friedel-Crafts Alkylation of Benzene		√	
HS	Physical Science	Structure and Properties of Matter	31.	Friedel-Crafts Acylation of Benzene		√	
HS	Physical Science	Structure and Properties of Matter	32.	Nitration of Benzene		√	
HS	Physical Science	Structure and Properties of Matter	33.	Reactions of Amines with Nitrous Acid	0:02:30		
HS	Physical Science	Structure and Properties of Matter	34.	Azo Coupling Reaction	0:03:00		
HS	Physical Science	Structure and Properties of Matter	35.	Laboratory Preparation and Physical Properties of Phenol	0:03:05	√	
HS	Physical Science	Structure and Properties of Matter	36.	Inductive Effect	0:04:29		
HS	Physical Science	Structure and Properties of Matter	37.	Molecular Size and Solubility	0:02:02		
HS	Physical Science	Structure and Properties of Matter	38.	Factors Affecting the Solubility of a Solute in a Solvent	0:03:49		
HS	Physical Science	Structure and Properties of Matter	39.	Electromeric Effect	0:06:31		
HS	Physical Science	Structure and Properties of Matter	40.	Oxidation of Aldehydes	0:05:08		
HS	Physical Science	Structure and Properties of Matter	41.	Carbonyl Compounds and their Classification		√	
HS	Physical Science	Structure and Properties of Matter	42.	Condensation Reactions of Aldehydes and Ketones (Mechanism)	0:07:04		
HS	Physical Science	Structure and Properties of Matter	43.	Hyperconjugation in Carbocations (No Bond Resonance)	0:02:47		
HS	Physical Science	Structure and Properties of Matter	44.	Carbocation Stability (Inductive Effect)	0:03:36		
HS	Physical Science	Structure and Properties of Matter	45.	Nomenclature of Aldehydes and Ketones	0:05:07	√	
HS	Physical Science	Structure and Properties of Matter	46.	Classification of Ethers	0:02:10		√
HS	Physical Science	Structure and Properties of Matter	47.	Soaps and Detergents	0:03:03		



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PKG	Category	Sub Category	Topic #	Topic	Video Duration	Sim	Int
HS	Physical Science	Structure and Properties of Matter	48.	Applications of Inductive Effect	0:04:41		
HS	Physical Science	Structure and Properties of Matter	49.	Chemiluminescence	0:02:48		
HS	Physical Science	Structure and Properties of Matter	50.	Combustion Analysis (Liebig's method)		√	
HS	Physical Science	Structure and Properties of Matter	51.	Nomenclature of Carboxylic Acid		√	
HS	Physical Science	Structure and Properties of Matter	52.	Laboratory Preparation of Acetylene			√
HS	Physical Science	Structure and Properties of Matter	53.	Isomers and Isomerism		√	
HS	Physical Science	Structure and Properties of Matter	54.	Nomenclature of Phenol		√	
HS	Physical Science	Structure and Properties of Matter	55.	Classification of Carbocations			√
HS	Physical Science	Structure and Properties of Matter	56.	Nomenclature of Ether		√	
HS	Physical Science	Structure and Properties of Matter	57.	Laboratory Preparation of Soap		√	
HS	Physical Science	Structure and Properties of Matter	58.	Classification of Alkyl Halides			√
HS	Physical Science	Structure and Properties of Matter	59.	Nomenclature of Halogenated		√	
HS	Physical Science	Structure and Properties of Matter	60.	C.I.P. Rule		√	
HS	Physical Science	Structure and Properties of Matter	61.	Drawing Resonance Structures	0:05:00		
HS	Physical Science	Structure and Properties of Matter	62.	Formal Charge		√	
HS	Physical Science	Structure and Properties of Matter	63.	Laboratory Preparation of Nitric acid	0:03:03		
HS	Physical Science	Structure and Properties of Matter	64.	Allotropic Forms of Phosphorus	0:03:15		
HS	Physical Science	Structure and Properties of Matter	65.	Construction of a Blast Furnace	0:03:15		
HS	Physical Science	Structure and Properties of Matter	66.	Laboratory Preparation of Nitrogen Gas		√	
HS	Physical Science	Structure and Properties of Matter	67.	Commercial Preparation of Nitrogen Gas		√	
HS	Physical Science	Chemical Reactions	1.	Types of Organic Reactions	0:05:29		
HS	Physical Science	Chemical Reactions	2.	Heat Change During Chemical Reactions	0:01:30		
HS	Physical Science	Chemical Reactions	3.	Enthalpy of Neutralization		√	
HS	Physical Science	Chemical Reactions	4.	Heat of Combustion of a Candle		√	
HS	Physical Science	Chemical Reactions	5.	Heat of Solution	0:03:40	√	
HS	Physical Science	Chemical Reactions	6.	Calorific Value and Fuel Efficiency	0:04:25		
HS	Physical Science	Chemical Reactions	7.	Determination of Calorific Value of Fuels		√	
HS	Physical Science	Chemical Reactions	8.	Fuel Efficiency		√	
HS	Physical Science	Chemical Reactions	9.	Redox Reaction	0:05:11		
HS	Physical Science	Chemical Reactions	10.	Polyatomic Ions	0:02:37		
HS	Physical Science	Chemical Reactions	11.	Disproportionation Reaction	0:03:54		
HS	Physical Science	Chemical Reactions	12.	Physical Properties of Bases	0:02:23		
HS	Physical Science	Chemical Reactions	13.	Physical and Chemical Changes	0:03:14		
HS	Physical Science	Chemical Reactions	14.	Greenhouse Gases	0:04:01	√	
HS	Physical Science	Chemical Reactions	15.	Effect of Temperature on pH of Water		√	
HS	Physical Science	Chemical Reactions	16.	The Common Component of all Acids		√	
HS	Physical Science	Chemical Reactions	17.	Properties of Acetic acid		√	
HS	Physical Science	Chemical Reactions	18.	Determining pH		√	
HS	Physical Science	Chemical Reactions	19.	Properties of Acids and Bases		√	





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PKG	Category	Sub Category	Topic #	Topic	Video Duration	Sim	Int
HS	Physical Science	Chemical Reactions	20.	Physical Properties of Acids	0:03:39		
HS	Physical Science	Chemical Reactions	21.	Classification of Acids, Bases and Salts			√
HS	Physical Science	Chemical Reactions	22.	pH of Rain Water		√	
HS	Physical Science	Chemical Reactions	23.	Acidic Buffer		√	
HS	Physical Science	Chemical Reactions	24.	Basic Buffer		√	
HS	Physical Science	Chemical Reactions	25.	pH Scale and its Limitations	0:08:23		
HS	Physical Science	Chemical Reactions	26.	Salt Hydrolysis		√	
HS	Physical Science	Chemical Reactions	27.	Calculating pH for Strong and Weak Acids		√	
HS	Physical Science	Chemical Reactions	28.	Calculating pH for Strong and Weak Bases		√	
HS	Physical Science	Chemical Reactions	29.	Acid Base Titrations		√	
HS	Physical Science	Chemical Reactions	30.	Neutralization	0:03:14		
HS	Physical Science	Chemical Reactions	31.	Preparation of Soluble Salts	0:05:00		
HS	Physical Science	Chemical Reactions	32.	Preparation of Insoluble Salts	0:02:13		
HS	Physical Science	Chemical Reactions	33.	Nernst Equation	0:03:38		
HS	Physical Science	Chemical Reactions	34.	Electrophilic and Nucleophilic Reagents	0:05:04		
HS	Physical Science	Chemical Reactions	35.	Rate of Reaction		√	
HS	Physical Science	Chemical Reactions	36.	Rate of Reaction (Effect of Surface Area and Catalyst)	0:04:07		
HS	Physical Science	Chemical Reactions	37.	Initial Rate Method		√	
HS	Physical Science	Chemical Reactions	38.	Average and Instantaneous Rates of Reaction	0:07:38		
HS	Physical Science	Chemical Reactions	39.	Kinetics of First Order Reaction		√	
HS	Physical Science	Chemical Reactions	40.	Kinetics of Second Order Reaction		√	
HS	Physical Science	Chemical Reactions	41.	Collision Theory	0:07:19		
HS	Physical Science	Chemical Reactions	42.	Homogeneous Catalysts	0:03:40		
HS	Physical Science	Chemical Reactions	43.	Heterogeneous Catalysts	0:03:19		
HS	Physical Science	Chemical Reactions	44.	Enzymes as biocatalysts	0:03:22	√	
HS	Physical Science	Chemical Reactions	1.	Ion Electron Method		√	
HS	Physical Science	Chemical Reactions	2.	Thermite Reaction	0:04:02		
HS	Physical Science	Motions and Forces	1.	Force: A Push or a Pull	0:02:22		
HS	Physical Science	Motions and Forces	2.	Effects of Force	0:03:01		
HS	Physical Science	Motions and Forces	3.	Newton's First Law of Motion	0:03:11		
HS	Physical Science	Motions and Forces	4.	Newton's Second Law of Motion	0:07:07		
HS	Physical Science	Motions and Forces	5.	Newton's Third Law of Motion	0:04:09		
HS	Physical Science	Motions and Forces	6.	Third Law of Motion using Two Spring		√	
HS	Physical Science	Motions and Forces	7.	Balanced Forces	0:04:24		
HS	Physical Science	Motions and Forces	8.	Gravitation		√	
HS	Physical Science	Motions and Forces	9.	Mass and Weight	0:05:05		
HS	Physical Science	Motions and Forces	10.	Centripetal Force		√	
HS	Physical Science	Motions and Forces	11.	Freely Falling Body		√	
HS	Physical Science	Motions and Forces	12.	Escape Speed	0:09:00		



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PKG	Category	Sub Category	Topic #	Topic	Video Duration	Sim	Int
HS	Physical Science	Motions and Forces	13.	Variation of Gravitational Acceleration with Altitude		✓	
HS	Physical Science	Motions and Forces	14.	Electrostatic Force and Coulomb's Law	0:05:35		
HS	Physical Science	Motions and Forces	15.	Electrostatic Force (A Non-contact Force)	0:04:49		
HS	Physical Science	Motions and Forces	16.	Electric Charge	0:05:14		
HS	Physical Science	Motions and Forces	17.	Properties of Electric Charge	0:05:29		
HS	Physical Science	Motions and Forces	18.	Gold-Leaf Electroscope		✓	
HS	Physical Science	Motions and Forces	19.	Electrostatic Force and Coulomb's Law	0:05:35		
HS	Physical Science	Motions and Forces	20.	Electrostatic Force (A Non-contact Force)	0:04:49		
HS	Physical Science	Motions and Forces	21.	Electric Field	0:04:02		
HS	Physical Science	Motions and Forces	22.	Electric Field Lines	0:02:56		
HS	Physical Science	Motions and Forces	23.	Motion of Charge in a Magnetic Field (Part-1)	0:04:17	✓	
HS	Physical Science	Motions and Forces	24.	Motion of Charge in a Magnetic Field (Part-2)	0:05:23	✓	
HS	Physical Science	Motions and Forces	25.	Fleming's Left Hand Rule	0:02:01		
HS	Physical Science	Motions and Forces	26.	Fundamentals of a DC Motor	0:07:31	✓	✓
HS	Physical Science	Motions and Forces	27.	AC Motor	0:05:13		✓
HS	Physical Science	Motions and Forces	28.	AC Generator	0:06:05	✓	✓
HS	Physical Science	Motions and Forces	29.	Faraday's Laws of Electromagnetic Induction		✓	
HS	Physical Science	Motions and Forces	30.	Torque on a Current Carrying Loop in a Uniform Magnetic Field	0:06:41	✓	
HS	Physical Science	Motions and Forces	31.	Magnetic Field due to a Straight Wire Carrying Current (Part-1)	0:06:02	✓	
HS	Physical Science	Motions and Forces	32.	Magnetic Field due to a Straight Wire Carrying Current (Part-2)	0:03:09	✓	
HS	Physical Science	Motions and Forces	33.	Magnetic Field due to a Current Carrying Circular Coil (Part-1)		✓	
HS	Physical Science	Motions and Forces	34.	Magnetic Field due to a Current Carrying Circular Coil (Part-2)		✓	
HS	Physical Science	Motions and Forces	35.	Lenz's Law	0:04:13	✓	
HS	Physical Science	Motions and Forces	36.	Eddy Currents	0:09:30		
HS	Physical Science	Motions and Forces	37.	Effects Of Eddy Currents (Electromagnetic Damping)	0:09:07		
HS	Physical Science	Motions and Forces	38.	Effects of Eddy Currents (Levitation)	0:04:01		
HS	Physical Science	Motions and Forces	39.	Force on a Current-Carrying Conductor in a Magnetic Field	0:05:14	✓	
HS	Physical Science	Motions and Forces	40.	Reed Switch	0:03:29	✓	✓
HS	Physical Science	Motions and Forces	41.	Electric Current	0:05:40		
HS	Physical Science	Motions and Forces	42.	Electric Power	0:08:45		
HS	Physical Science	Motions and Forces	43.	Conversion of a Galvanometer into Ammeter		✓	
HS	Physical Science	Motions and Forces	44.	Conversion of a Galvanometer into Voltmeter		✓	
HS	Physical Science	Motions and Forces	45.	Wheatstone Bridge		✓	
HS	Physical Science	Motions and Forces	46.	Force between two Parallel Wires Carrying Current		✓	
HS	Physical Science	Motions and Forces	47.	LC Oscillations	0:06:50	✓	
HS	Physical Science	Motions and Forces	48.	RL Circuit (Growth Phase)	0:08:06	✓	
HS	Physical Science	Motions and Forces	49.	RL Circuit (Decay Phase)	0:06:01	✓	
HS	Physical Science	Motions and Forces	50.	Transformers	0:09:18		✓
HS	Physical Science	Motions and Forces	51.	Energy Losses in a Transformer	0:06:20		



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PKG	Category	Sub Category	Topic #	Topic	Video Duration	Sim	Int
HS	Physical Science	Motions and Forces	52.	Magnetic Dipole Moment	0:07:05	√	
HS	Physical Science	Motions and Forces	53.	RC Circuit	0:04:54		
HS	Physical Science	Motions and Forces	1.	Archimedes' Principle	0:06:00		
HS	Physical Science	Conservation of Energy & Increase in Disorder	1.	Transformation of Energy	0:08:02		
HS	Physical Science	Conservation of Energy & Increase in Disorder	2.	Transfer of Heat (Conduction)	0:04:12	√	
HS	Physical Science	Conservation of Energy & Increase in Disorder	3.	Heat Conduction and Steady State	0:04:38	√	
HS	Physical Science	Conservation of Energy & Increase in Disorder	4.	Kinetic Energy	0:05:16		
HS	Physical Science	Conservation of Energy & Increase in Disorder	5.	Hydroelectric Power	0:05:47		
HS	Physical Science	Conservation of Energy & Increase in Disorder	6.	Work and the First Law of Thermodynamics	0:04:23		
HS	Physical Science	Conservation of Energy & Increase in Disorder	7.	Maxwell Speed Distribution		√	
HS	Physical Science	Conservation of Energy & Increase in Disorder	8.	Change in Entropy		√	
HS	Physical Science	Conservation of Energy & Increase in Disorder	9.	Pressure – Volume (P-V) Work		√	
HS	Physical Science	Conservation of Energy & Increase in Disorder	10.	Calorific Value and Fuel Efficiency	0:04:25		
HS	Physical Science	Conservation of Energy & Increase in Disorder	11.	Work Done in a Chemical Systems			√
HS	Physical Science	Conservation of Energy & Increase in Disorder	12.	Electrical Conductivity: Liquids		√	
HS	Physical Science	Conservation of Energy & Increase in Disorder	13.	Thermal Conductivity	0:06:35	√	
HS	Physical Science	Conservation of Energy & Increase in Disorder	14.	Area Expansion in Solids		√	
HS	Physical Science	Interactions of Energy and Matter	1.	Sound	0:03:52		
HS	Physical Science	Interactions of Energy and Matter	2.	The Propagation of Sound Waves through Air	0:04:34		
HS	Physical Science	Interactions of Energy and Matter	3.	Propagation of Sound Waves through Different Media	0:02:47	√	
HS	Physical Science	Interactions of Energy and Matter	4.	Longitudinal Waves		√	
HS	Physical Science	Interactions of Energy and Matter	5.	SONAR	0:06:40		
HS	Physical Science	Interactions of Energy and Matter	6.	Ripple Tank Experiment to Illustrate Interference	0:06:59	√	
HS	Physical Science	Interactions of Energy and Matter	7.	Doppler Effect in Sound	0:06:11		
HS	Physical Science	Interactions of Energy and Matter	8.	Different Cases of Doppler Effect	0:05:32		
HS	Physical Science	Interactions of Energy and Matter	9.	Speed of Sound	0:06:39	√	
HS	Physical Science	Interactions of Energy and Matter	10.	I- V Characteristics of a p-n Junction Diode		√	
HS	Physical Science	Interactions of Energy and Matter	11.	Waves	0:04:10		
HS	Physical Science	Interactions of Energy and Matter	12.	Electromagnetic Spectrum (Part - 1)	0:05:19		
HS	Physical Science	Interactions of Energy and Matter	13.	Electromagnetic Spectrum (Part - 2)	0:03:51		
HS	Physical Science	Interactions of Energy and Matter	14.	X - ray Spectrum	0:06:43		
HS	Physical Science	Interactions of Energy and Matter	15.	Emission Spectra and the Flame Test	0:06:02	√	
HS	Physical Science	Interactions of Energy and Matter	16.	Hydrogen Spectrum and its Explanation by Bohr	0:07:10		
HS	Physical Science	Interactions of Energy and Matter	17.	Atomic Energy levels	0:06:04	√	
HS	Physical Science	Interactions of Energy and Matter	18.	Semiconductors	0:07:05		
HS	Physical Science	Interactions of Energy and Matter	19.	Intrinsic Semiconductors	0:03:42		
HS	Physical Science	Interactions of Energy and Matter	20.	Extrinsic Semiconductor (Part-1)	0:04:02		
HS	Physical Science	Interactions of Energy and Matter	21.	Extrinsic Semiconductor (Part-2)	0:02:51		
HS	Physical Science	Interactions of Energy and Matter	1.	Superposition of Waves		√	



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PKG	Category	Sub Category	Topic #	Topic	Video Duration	Sim	Int
HS	Physical Science	Interactions of Energy and Matter	2.	Wave-Particle Duality	0:07:56		
HS	Life Science	The Cell	1.	Physiology of cell membrane	0:05:06	√	√
HS	Life Science	The Cell	2.	Cell structure			√
HS	Life Science	The Cell	3.	Eukaryotic Cell	0:03:02	√	
HS	Life Science	The Cell	4.	Cell organelles (ER, Golgi body)	0:03:59		√
HS	Life Science	The Cell	5.	Cell organelles (Ribosomes, centrioles)	0:04:05		√
HS	Life Science	The Cell	6.	Chemiosmosis (ATP Synthesis)	0:04:06	√	√
HS	Life Science	The Cell	7.	The role of ATP in active transport	0:02:18		
HS	Life Science	The Cell	8.	Enzymes as biocatalysts	0:03:22	√	
HS	Life Science	The Cell	9.	Cofactors	0:03:51		
HS	Life Science	The Cell	10.	Protein synthesis (Translation)	0:04:35	√	√
HS	Life Science	The Cell	11.	DNA Replication		√	
HS	Life Science	The Cell	12.	Transcription		√	√
HS	Life Science	The Cell	13.	Cell division (Mitosis)	0:04:15	√	
HS	Life Science	The Cell	14.	Photosynthesis (Light reaction)	0:07:16		√
HS	Life Science	The Cell	15.	Embryonic development	0:04:21		
HS	Life Science	The Cell	1.	Prokaryotes	0:03:38	√	
HS	Life Science	The Cell	2.	Cell (shapes and functions)	0:04:05		√
HS	Life Science	The Cell	3.	Role of components of cell membrane			√
HS	Life Science	The Cell	4.	Nucleus			√
HS	Life Science	The Cell	5.	Bulk transport	0:02:28		
HS	Life Science	The Cell	6.	Transport across membranes	0:03:56	√	√
HS	Life Science	The Cell	7.	Plasmolysis	0:02:17		
HS	Life Science	The Cell	8.	Mitosis	0:03:16		
HS	Life Science	The Cell	9.	Structure of Cilia in Paramecium	0:01:15		
HS	Life Science	The Cell	10.	Blood cells	0:04:51	√	
HS	Life Science	The Cell	11.	Neuroglial cell ( Microglial)			√
HS	Life Science	The Cell	12.	Scanning Electron Microscope			√
HS	Life Science	The Cell	13.	Light Microscope		√	
HS	Life Science	The Cell	14.	Darkfield microscopy	0:02:00		√
HS	Life Science	The Cell	15.	Microscope and Cells	0:02:28	√	
HS	Life Science	The Cell	16.	Structure of Onion peel and Cork cells	0:01:34		
HS	Life Science	The Cell	17.	Preparation of temporary mount of an onion peel		√	
HS	Life Science	The Cell	18.	Preparation of temporary mount of cheek cells		√	
HS	Life Science	The Cell	19.	Temporary Mount of Leaf Peel		√	
HS	Life Science	The Cell	20.	Extracellular and intracellular enzymes	0:02:56		
HS	Life Science	The Molecular Basis of Heredity	1.	DNA Structure	0:02:54	√	√
HS	Life Science	The Molecular Basis of Heredity	2.	DNA Replication		√	
HS	Life Science	The Molecular Basis of Heredity	3.	Bacterial transformation and conjugation	0:02:47		



PKG	Category	Sub Category	Topic #	Topic	Video Duration	Sim	Int
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HS	Life Science	The Molecular Basis of Heredity	4.	Chromosomes, genes and DNA	0:03:50		
HS	Life Science	The Molecular Basis of Heredity	5.	Cell and its DNA	0:03:43		
HS	Life Science	The Molecular Basis of Heredity	6.	Genetic code		√	
HS	Life Science	The Molecular Basis of Heredity	7.	Chromatin Structure	0:01:40		√
HS	Life Science	The Molecular Basis of Heredity	8.	Human sex determination	0:04:05		
HS	Life Science	The Molecular Basis of Heredity	9.	Mutation	0:02:28		√
HS	Life Science	The Molecular Basis of Heredity	10.	Damage Caused By UV Radiation	0:01:37		
HS	Life Science	The Molecular Basis of Heredity	1.	Lac Operon		√	
HS	Life Science	The Molecular Basis of Heredity	2.	Tryptophan Operon		√	
HS	Life Science	The Molecular Basis of Heredity	3.	Structure of DNA	0:02:54	√	√
HS	Life Science	The Molecular Basis of Heredity	4.	Karyotype	0:02:21	√	
HS	Life Science	The Molecular Basis of Heredity	5.	Ribonucleic acid			√
HS	Life Science	The Molecular Basis of Heredity	6.	Principle of dominance		√	
HS	Life Science	The Molecular Basis of Heredity	7.	Law of dominance		√	
HS	Life Science	The Molecular Basis of Heredity	8.	Test cross		√	
HS	Life Science	Biological Evolution	1.	Urey Miller's Experiment	0:03:55		
HS	Life Science	Biological Evolution	2.	Difference between vertebrates and invertebrates			√
HS	Life Science	Biological Evolution	3.	Hydra	0:01:09		√
HS	Life Science	Biological Evolution	4.	Worms	0:02:49		
HS	Life Science	Biological Evolution	5.	General characteristics of insects	0:05:05		√
HS	Life Science	Biological Evolution	6.	Starfish and Snail	0:02:58		√
HS	Life Science	Biological Evolution	7.	Algae and Diatoms	0:02:12		√
HS	Life Science	Biological Evolution	8.	Gymnosperms	0:02:28		
HS	Life Science	Biological Evolution	9.	Types of Fungi	0:03:53		
HS	Life Science	Biological Evolution	10.	Virus (Bacteriophage)	0:01:09	√	√
HS	Life Science	Biological Evolution	11.	Fish	0:04:10		√
HS	Life Science	Biological Evolution	12.	Osteichthyes and Chondrichthyes	0:03:41		√
HS	Life Science	Biological Evolution	13.	Diatoms			√
HS	Life Science	Biological Evolution	14.	Algae (Chlamydomonas)			√
HS	Life Science	Biological Evolution	15.	Spirogyra		√	
HS	Life Science	Biological Evolution	16.	Funaria (Moss)		√	
HS	Life Science	Biological Evolution	17.	Fern		√	
HS	Life Science	Biological Evolution	18.	Angiosperms		√	
HS	Life Science	Biological Evolution	19.	Agaricus (Mushroom)		√	
HS	Life Science	Biological Evolution	1.	Binary fission in amoeba		√	
HS	Life Science	Biological Evolution	2.	Euglena	0:04:33		√
HS	Life Science	Biological Evolution	3.	Filter feeding	0:02:26		
HS	Life Science	Biological Evolution	4.	Shark			√
HS	Life Science	Biological Evolution	5.	Bony fish		√	



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PKG	Category	Sub Category	Topic #	Topic	Video Duration	Sim	Int
HS	Life Science	Biological Evolution	6.	Gaseous exchange in animals			√
HS	Life Science	Biological Evolution	7.	Bird flight	0:03:39		
HS	Life Science	Biological Evolution	8.	Alternation of generation – Spirogyra			√
HS	Life Science	Biological Evolution	9.	Yeast and Fungi	0:02:57		√
HS	Life Science	Biological Evolution	10.	Budding in yeast		√	
HS	Life Science	Biological Evolution	11.	Viral Replication		√	
HS	Life Science	Biological Evolution	12.	Types of pathogenic bacteria			√
HS	Life Science	Biological Evolution	13.	Viruses	0:03:02	√	√
HS	Life Science	Interdependence of Organisms	1.	Energy flow in an ecosystem	0:03:48		
HS	Life Science	Interdependence of Organisms	2.	Food chain	0:02:52		
HS	Life Science	Interdependence of Organisms	3.	Ecological Pyramids	0:05:07		√
HS	Life Science	Interdependence of Organisms	4.	Air pollution	0:02:59	√	
HS	Life Science	Interdependence of Organisms	5.	Water pollution and its effect (Eutrophication)	0:03:13		
HS	Life Science	Interdependence of Organisms	6.	Global warming	0:02:25		
HS	Life Science	Interdependence of Organisms	1.	Xerophytes			√
HS	Life Science	Interdependence of Organisms	2.	Food Web		√	
HS	Life Science	Interdependence of Organisms	3.	Forest ecosystem	0:02:12		
HS	Life Science	Interdependence of Organisms	4.	Aquatic ecosystem	0:02:30		
HS	Life Science	Interdependence of Organisms	5.	Ponds and Lakes	0:02:05		√
HS	Life Science	Interdependence of Organisms	6.	Waste disposal (Vermicomposting)	0:02:50		
HS	Life Science	Interdependence of Organisms	7.	Plastic recycling	0:02:32		
HS	Life Science	Matter, Energy and Organization in Living Systems	1.	Photosynthesis in plants	0:03:50	√	
HS	Life Science	Matter, Energy and Organization in Living Systems	2.	Chemiosmosis (ATP Synthesis)	0:04:06	√	√
HS	Life Science	Matter, Energy and Organization in Living Systems	3.	Carbohydrates	0:02:07	√	
HS	Life Science	Matter, Energy and Organization in Living Systems	4.	Structure of Monosaccharides		√	
HS	Life Science	Matter, Energy and Organization in Living Systems	5.	Monosaccharide and Disaccharide	0:02:56	√	
HS	Life Science	Matter, Energy and Organization in Living Systems	6.	Fats	0:01:12	√	
HS	Life Science	Matter, Energy and Organization in Living Systems	7.	Proteins	0:00:53		
HS	Life Science	Matter, Energy and Organization in Living Systems	8.	Energy flow in an ecosystem	0:03:48		
HS	Life Science	Matter, Energy and Organization in Living Systems	9.	Ecological Pyramids	0:05:07		√
HS	Life Science	Matter, Energy and Organization in Living Systems	1.	Simple tests for carbohydrates, fats and proteins	0:02:18		
HS	Life Science	Matter, Energy and Organization in Living Systems	2.	Detection of starch		√	
HS	Life Science	Matter, Energy and Organization in Living Systems	3.	Chemical analysis of Adulterants		√	
HS	Life Science	Behavior of Organisms	1.	Nervous system	0:03:13	√	
HS	Life Science	Behavior of Organisms	2.	Structure of neuron	0:03:21	√	√
HS	Life Science	Behavior of Organisms	3.	Types of neurons	0:03:49		√
HS	Life Science	Behavior of Organisms	4.	Myelinated neuron			√
HS	Life Science	Behavior of Organisms	5.	Neuroglial cells	0:02:04	√	√
HS	Life Science	Behavior of Organisms	6.	Nerve			√



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PKG	Category	Sub Category	Topic #	Topic	Video Duration	Sim	Int
HS	Life Science	Behavior of Organisms	7.	Cranial Nerves	0:01:56	✓	
HS	Life Science	Behavior of Organisms	8.	Impulse transmission	0:02:57	✓	✓
HS	Life Science	Behavior of Organisms	9.	Brain (Anatomy and function)	0:04:37	✓	
HS	Life Science	Behavior of Organisms	10.	Spinal cord (Myelon)	0:03:31		
HS	Life Science	Behavior of Organisms	11.	Reflex arc	0:03:03		✓
HS	Life Science	Behavior of Organisms	12.	Mechanism of hearing	0:05:13	✓	
HS	Life Science	Behavior of Organisms	13.	Tongue (Organ of taste)	0:04:14	✓	
HS	Life Science	Behavior of Organisms	14.	Olfactory System of Human Beings	0:02:12		
HS	Life Science	Behavior of Organisms	1.	Nervous system of cockroach			✓
HS	Life Science	Behavior of Organisms	2.	Regeneration among animals	0:01:45		
HS	Life Science	Behavior of Organisms	3.	Impulse transmission (Action potential)	0:03:45	✓	✓
HS	Life Science	Behavior of Organisms	4.	Hindbrain or Rhombencephalon			✓
HS	Life Science	Behavior of Organisms	5.	Meninges of brain			✓
HS	Life Science	Behavior of Organisms	6.	Disorders of the brain (Multiple sclerosis)	0:03:41		
HS	Earth & Space Science	Energy in the Earth System	1.	The Sun (Part-1)	0:05:15		✓
HS	Earth & Space Science	Energy in the Earth System	2.	The Sun (Part-2)	0:05:25		✓
HS	Earth & Space Science	Energy in the Earth System	3.	Temperature of the Earth	0:04:21		
HS	Earth & Space Science	Geochemical Cycles	1.	Carbon cycle		✓	
HS	Earth & Space Science	Geochemical Cycles	2.	Water Cycle		✓	
HS	Earth & Space Science	Geochemical Cycles	3.	Atom Economy		✓	
HS	Earth & Space Science	Geochemical Cycles	4.	Layers of the Earth's Atmosphere		✓	
HS	Earth & Space Science	Geochemical Cycles	1.	Magic of Water	0:02:44		
HS	Earth & Space Science	Origin and Evolution of the Earth System	1.	Evolution of Solar System	0:01:57	✓	
HS	Earth & Space Science	Origin and Evolution of the Earth System	2.	The Sun (Part-1)	0:05:15		✓
HS	Earth & Space Science	Origin and Evolution of the Earth System	3.	The Sun (Part-2)	0:05:25		✓
HS	Earth & Space Science	Origin and Evolution of the Earth System	4.	Solar System (The Inner Planets)	0:05:36	✓	
HS	Earth & Space Science	Origin and Evolution of the Earth System	5.	Radioactivity and Group Displacement Law		✓	
HS	Earth & Space Science	Origin and Evolution of the Universe	1.	Nuclear Fusion			
HS	Earth & Space Science	Origin and Evolution of the Universe	1.	Hertzsprung-Russell Diagram		✓	
HS	Science in Personal & Social Perspectives	Personal & Community Health	1.	Cancer	0:03:33		
HS	Science in Personal & Social Perspectives	Personal & Community Health	2.	Cancer therapy (Nanotechnology)	0:04:28	✓	✓
HS	Science in Personal & Social Perspectives	Personal & Community Health	3.	Drug resistance	0:03:44		
HS	Science in Personal & Social Perspectives	Personal & Community Health	4.	Types of Vaccines	0:02:10		
HS	Science in Personal & Social Perspectives	Personal & Community Health	5.	AIDS	0:05:41	✓	✓
HS	Science in Personal & Social Perspectives	Personal & Community Health	6.	High calorie diet and obesity	0:03:09		
HS	Science in Personal & Social Perspectives	Personal & Community Health	1.	Deficiency diseases	0:01:24		
HS	Science in Personal & Social Perspectives	Personal & Community Health	2.	Types of Diabetes	0:03:55		
HS	Science in Personal & Social Perspectives	Personal & Community Health	3.	Complications of diabetes	0:03:46		
HS	Science in Personal & Social Perspectives	Personal & Community Health	4.	Glucose metabolism disorder (Diabetes)	0:03:01		✓



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PKG	Category	Sub Category	Topic #	Topic	Video Duration	Sim	Int
HS	Science in Personal & Social Perspectives	Personal & Community Health	5.	Scoliosis			√
HS	Science in Personal & Social Perspectives	Personal & Community Health	6.	Cholesterol	0:04:01		
HS	Science in Personal & Social Perspectives	Personal & Community Health	7.	Atherosclerosis (Heart Disease)	0:01:57	√	
HS	Science in Personal & Social Perspectives	Personal & Community Health	8.	Disorders of the heart	0:02:13	√	
HS	Science in Personal & Social Perspectives	Personal & Community Health	9.	Bone disorder (Osteoporosis)	0:03:06	√	
HS	Science in Personal & Social Perspectives	Environmental Quality	1.	Air pollution	0:02:59	√	
HS	Science in Personal & Social Perspectives	Environmental Quality	2.	Global warming	0:02:25		
HS	Science in Personal & Social Perspectives	Environmental Quality	3.	Ozone layer	0:03:37		√
HS	Science in Personal & Social Perspectives	Environmental Quality	1.	Air pollution	0:02:59	√	
HS	Science in Personal & Social Perspectives	Environmental Quality	2.	Water pollution and its effect (Eutrophication)	0:03:13		
HS	Add-On Categories	Plant Kingdom	1.	The plant	0:02:38		√
HS	Add-On Categories	Plant Kingdom	2.	Herbs, Shrubs and Trees			√
HS	Add-On Categories	Plant Kingdom	3.	Structure of the leaf	0:04:53		√
HS	Add-On Categories	Plant Kingdom	4.	Leaf of maize	0:03:16		
HS	Add-On Categories	Plant Kingdom	5.	Insectivory	0:03:57		√
HS	Add-On Categories	Plant Kingdom	6.	Leaf			√
HS	Add-On Categories	Plant Kingdom	7.	Anatomy of Root			√
HS	Add-On Categories	Plant Kingdom	8.	Internal structure of dicot root	0:03:11		√
HS	Add-On Categories	Plant Kingdom	9.	Monocot root anatomy	0:03:06		√
HS	Add-On Categories	Plant Kingdom	10.	Flower	0:02:57	√	
HS	Add-On Categories	Plant Kingdom	11.	Parts of a flower	0:01:55	√	
HS	Add-On Categories	Plant Kingdom	12.	Morphology of flower	0:04:08	√	√
HS	Add-On Categories	Plant Kingdom	13.	Typical Flower	0:04:01	√	√
HS	Add-On Categories	Plant Kingdom	14.	Types of flowers			√
HS	Add-On Categories	Plant Kingdom	15.	Floral arrangement	0:04:55		√
HS	Add-On Categories	Plant Kingdom	16.	Position of the ovary	0:03:16	√	
HS	Add-On Categories	Plant Kingdom	17.	Inflorescence-II	0:03:18		
HS	Add-On Categories	Plant Kingdom	18.	Inflorescence-I	0:04:17		
HS	Add-On Categories	Plant Kingdom	19.	Gynoecium: apocarpous and syncarpous	0:00:59	√	√
HS	Add-On Categories	Plant Kingdom	20.	Fabaceae	0:02:41		√
HS	Add-On Categories	Plant Kingdom	21.	Solanaceae	0:02:52		√
HS	Add-On Categories	Plant Kingdom	22.	Liliaceae	0:02:22		√
HS	Add-On Categories	Plant Kingdom	23.	Malvaceae	0:02:57	√	√
HS	Add-On Categories	Plant Kingdom	24.	Asteraceae			√
HS	Add-On Categories	Plant Kingdom	25.	Brassicaceae (Mustard plant)	0:03:35		√
HS	Add-On Categories	Plant Kingdom	26.	Parts of dicot embryo		√	
HS	Add-On Categories	Plant Kingdom	27.	Seed germination			√
HS	Add-On Categories	Plant Kingdom	28.	Fruits	0:04:22		
HS	Add-On Categories	Plant Kingdom	29.	Conditions required for seed germination	0:01:54		





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PKG	Category	Sub Category	Topic #	Topic	Video Duration	Sim	Int
HS	Add-On Categories	Plant Kingdom	30.	Secondary cell wall	0:02:00		
HS	Add-On Categories	Plant Kingdom	31.	Physiology of photoperiodism	0:02:56		
HS	Add-On Categories	Plant Kingdom	32.	Photosynthesis - Trapping light energy	0:02:22		
HS	Add-On Categories	Plant Kingdom	33.	Water potential	0:02:47		√
HS	Add-On Categories	Plant Kingdom	34.	Transpiration	0:02:29	√	
HS	Add-On Categories	Plant Kingdom	35.	Pollen development	0:03:27		
HS	Add-On Categories	Plant Kingdom	36.	Development of female gametophyte	0:02:22		
HS	Add-On Categories	Plant Kingdom	37.	Mangrove			√
HS	Add-On Categories	Plant Kingdom	38.	Support in aquatic plants	0:01:18		√
HS	Add-On Categories	Plant Kingdom	39.	Respiration in plants	0:01:42		
HS	Add-On Categories	Plant Kingdom	40.	Experiment: Heat liberation during respiration	0:02:09		
HS	Add-On Categories	Plant Kingdom	41.	Support system in Aquatic and Terrestrial plants	0:02:02		√
HS	Add-On Categories	Botany, Zoology and Taxonomy	1.	Chloroplast			√
HS	Add-On Categories	Botany, Zoology and Taxonomy	2.	Floral Arrangement: Pea			√
HS	Add-On Categories	Botany, Zoology and Taxonomy	3.	Anatomy of Dicot Stem			√
HS	Add-On Categories	Botany, Zoology and Taxonomy	4.	Identification of frog eggs		√	
HS	Add-On Categories	Botany, Zoology and Taxonomy	5.	Respiration in animals (Hydra and Grasshopper)	0:05:39		
HS	Add-On Categories	Botany, Zoology and Taxonomy	6.	Excretory system (Cockroach)	0:02:11		√
HS	Add-On Categories	Botany, Zoology and Taxonomy	7.	Digestive system of cockroach	0:02:39		√
HS	Add-On Categories	Botany, Zoology and Taxonomy	8.	Cockroach	0:02:47		√
HS	Add-On Categories	Botany, Zoology and Taxonomy	9.	Reproduction in fungi			√
HS	Add-On Categories	Botany, Zoology and Taxonomy	10.	Parasitic nutrition in fungus	0:03:16		
HS	Add-On Categories	Human Body	1.	Sternum and ribs	0:01:34	√	√
HS	Add-On Categories	Human Body	2.	Adrenal gland	0:03:19	√	
HS	Add-On Categories	Human Body	3.	Thyroid gland	0:03:56	√	
HS	Add-On Categories	Human Body	4.	Nephron (Structure and functions)	0:02:43	√	
HS	Add-On Categories	Human Body	5.	Sphygmomanometer			√
HS	Add-On Categories	Human Body	6.	Role of Insulin in Cell Metabolism	0:02:14		
HS	Add-On Categories	Human Body	7.	Endoskeleton			√
HS	Add-On Categories	Human Body	8.	Anatomy of the bone	0:02:33	√	√
HS	Add-On Categories	Human Body	9.	Axial skeleton (Rib cage)	0:02:39	√	√
HS	Add-On Categories	Human Body	10.	Ultrastructure of skeletal muscles	0:03:18		√
HS	Add-On Categories	Human Body	11.	Mechanism of muscle fibre contraction	0:03:33		√
HS	Add-On Categories	Human Body	12.	Ultrastructure of Kidney	0:02:37	√	
HS	Add-On Categories	Human Body	13.	Filtration rate (Kidney)	0:04:16		
HS	Add-On Categories	Human Body	14.	Urine formation	0:06:13	√	
HS	Add-On Categories	Human Body	15.	Respiratory System (Larynx)	0:06:09		√
HS	Add-On Categories	Human Body	16.	Neuroglial cell (Oligodendrocyte)			√
HS	Add-On Categories	Human Body	17.	Eye (Anatomy and physiology)	0:05:13	√	



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PKG	Category	Sub Category	Topic #	Topic	Video Duration	Sim	Int
HS	Add-On Categories	Human Body	18.	Placenta and Foetal haemoglobin	0:04:09		
HS	Add-On Categories	Human Body	19.	Monoclonal Antibodies	0:03:37		
HS	Add-On Categories	Human Body	20.	Structure of antibody	0:03:02	√	√
HS	Add-On Categories	Human Body	21.	Effect of Antibiotics	0:02:05		
HS	Add-On Categories	Human Body	22.	Caffeine addiction and effect			√
HS	Add-On Categories	Human Body	23.	Components of allergic reaction			√
HS	Add-On Categories	Human Body	24.	ECG and EEG	0:04:03		
HS	Add-On Categories	Biotechnology	1.	PCR		√	
HS	Add-On Categories	Biotechnology	2.	Application of genetic engineering	0:03:18		
HS	Add-On Categories	Biotechnology	3.	Gene amplification using PCR	0:02:24		
HS	Add-On Categories	Biotechnology	4.	Application of Antisense Technology	0:04:39		
HS	Add-On Categories	Biotechnology	5.	Somatic hybridization	0:02:47		
HS	Add-On Categories	Biotechnology	6.	Role of Virus in Biotechnology	0:05:25		
HS	Add-On Categories	Biotechnology	7.	Tissue culture	0:03:25		√
HS	Add-On Categories	Biotechnology	8.	Industrial Production of enzymes	0:04:09		√
HS	Add-On Categories	Biotechnology	9.	In vitro fertilization	0:04:34		
HS	Add-On Categories	Biotechnology	10.	Hydroponics	0:02:07		
HS	Add-On Categories	Coordination Chemistry	1.	Coordination Number and Geometry of Complexes	0:02:42		√
HS	Add-On Categories	Coordination Chemistry	2.	Relation Between Geometry and Magnetic Properties of Transition Metal Compl	0:03:30		
HS	Add-On Categories	Coordination Chemistry	3.	Introduction to Coordination Compounds	0:04:32		
HS	Add-On Categories	Coordination Chemistry	4.	Geometry of $K_4[Fe(CN)_6]$ Based on its Magnetic Property	0:03:02		
HS	Add-On Categories	Coordination Chemistry	5.	Classification of Ligands	0:06:02		√
HS	Add-On Categories	Coordination Chemistry	6.	Geometry of $[Fe(H_2O)_6]^{3+}$		√	
HS	Add-On Categories	Coordination Chemistry	7.	Geometry of $[Co(NH_3)_6]^{2+}$		√	
HS	Add-On Categories	Coordination Chemistry	8.	Geometry of $[K_3Fe(CN)_6]$		√	
HS	Add-On Categories	Coordination Chemistry	9.	IUPAC Nomenclature of Coordination Compounds		√	
HS	Add-On Categories	Electrochemistry	1.	Faraday's First Law of Electrolysis	0:07:16	√	
HS	Add-On Categories	Electrochemistry	2.	Faraday's Second Law of Electrolysis	0:02:42		
HS	Add-On Categories	Electrochemistry	3.	Standard Hydrogen Electrode	0:01:47	√	
HS	Add-On Categories	Electrochemistry	4.	Use of Standard Hydrogen Electrode as an Anode	0:06:11	√	
HS	Add-On Categories	Electrochemistry	5.	Use of Standard Hydrogen Electrode as a Cathode	0:04:58	√	
HS	Add-On Categories	Electrochemistry	6.	Electrode Potential and Standard Electrode Potential	0:04:41		
HS	Add-On Categories	Electrochemistry	7.	Daniell Cell		√	
HS	Add-On Categories	Electrochemistry	8.	Calculating emf of Concentration Cell		√	
HS	Add-On Categories	Colligative Properties	1.	Osmosis and Osmotic Pressure	0:04:35	√	
HS	Add-On Categories	Colligative Properties	2.	Factors Affecting Vapour Pressure of a Solvent	0:02:56		
HS	Add-On Categories	Colligative Properties	3.	Vapour Pressure of a Solvent	0:01:54		
HS	Add-On Categories	Colligative Properties	4.	The Degree of Disociation	0:02:51		
HS	Add-On Categories	Colligative Properties	5.	Depression in Freezing Point		√	



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PKG	Category	Sub Category	Topic #	Topic	Video Duration	Sim	Int
HS	Add-On Categories	Colligative Properties	6.	Raoult's Law		✓	
HS	Add-On Categories	Colligative Properties	7.	Lowering in Vapour Pressure		✓	
HS	Add-On Categories	Colligative Properties	8.	Elevation in Boiling Point		✓	
HS	Add-On Categories	Colligative Properties	9.	Abnormal Molar Masses	0:06:31		
HS	Add-On Categories	Equilibrium	1.	Equilibrium Processes (Physical Equilibrium)	0:05:14		
HS	Add-On Categories	Equilibrium	2.	Dynamic Nature of Equilibrium	0:04:08	✓	
HS	Add-On Categories	Equilibrium	3.	Law of Mass Action			✓
HS	Add-On Categories	Equilibrium	4.	Percentage Ionization of Weak Acids		✓	
HS	Add-On Categories	Equilibrium	5.	Le-Chatelier's Principle - Effect of Pressure		✓	
HS	Add-On Categories	Equilibrium	6.	Solubility Product	0:04:00		
HS	Add-On Categories	Equilibrium	7.	Reversible Decomposition of Calcium Carbonate	0:03:53		
HS	Add-On Categories	Surface Chemistry	1.	Adsorption and the Nature of Adsorbent	0:02:38		
HS	Add-On Categories	Surface Chemistry	2.	Adsorption	0:07:26		
HS	Add-On Categories	Applied Chemistry	1.	The Chemistry of Fire	0:05:23		
HS	Add-On Categories	Applied Chemistry	2.	Coriolis Effect and the Trade Winds	0:04:52		
HS	Add-On Categories	Applied Chemistry	3.	Fire Extinguisher		✓	
HS	Add-On Categories	Applied Chemistry	4.	EDTA Titration Method	0:03:17		
HS	Add-On Categories	Heat and Thermodynamics	1.	Internal Combustion Engine	0:06:07	✓	✓
HS	Add-On Categories	Heat and Thermodynamics	2.	Balance Wheel	0:02:20		
HS	Add-On Categories	Heat and Thermodynamics	3.	Thermodynamic Systems and Zeroth Law of Thermodynamics	0:06:15		
HS	Add-On Categories	Heat and Thermodynamics	4.	The First Law of Thermodynamics	0:06:19		
HS	Add-On Categories	Heat and Thermodynamics	5.	The Second Law of Thermodynamics	0:07:54		
HS	Add-On Categories	Heat and Thermodynamics	6.	Boyle's Law (Part-1)	0:02:48	✓	
HS	Add-On Categories	Heat and Thermodynamics	7.	Boyle's Law (Part-2)	0:02:41	✓	
HS	Add-On Categories	Heat and Thermodynamics	8.	Blackbody Radiation: Stefan-Boltzmann Law	0:04:54		
HS	Add-On Categories	Heat and Thermodynamics	9.	Volume Expansion of Solids		✓	
HS	Add-On Categories	Heat and Thermodynamics	10.	Charles' Law		✓	
HS	Add-On Categories	Heat and Thermodynamics	11.	Blackbody Radiation and Planck's Law		✓	
HS	Add-On Categories	Electromagnetism	1.	Capacitor	0:08:35		✓
HS	Add-On Categories	Electromagnetism	2.	Van de Graaff Generator	0:04:26	✓	✓
HS	Add-On Categories	Electromagnetism	3.	Gauss's Theorem (Part-1)	0:04:10		
HS	Add-On Categories	Electromagnetism	4.	Application of Gauss's Theorem (Part-1)	0:03:53		
HS	Add-On Categories	Electromagnetism	5.	Gauss's Theorem (Part-2)	0:03:59		
HS	Add-On Categories	Electromagnetism	6.	Dielectrics in a Capacitor	0:05:51		
HS	Add-On Categories	Electromagnetism	7.	Applications of Gauss's Theorem (Part-2)			
HS	Add-On Categories	Electromagnetism	8.	Dielectrics: Polar and Non-polar	0:05:28		
HS	Add-On Categories	Electromagnetism	9.	Capacitance of a Parallel Plate Capacitor		✓	
HS	Add-On Categories	Electromagnetism	10.	Magnetic Declination	0:01:20		
HS	Add-On Categories	Electromagnetism	11.	Types of Magnetism	0:02:53		



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PKG	Category	Sub Category	Topic #	Topic	Video Duration	Sim	Int
HS	Add-On Categories	Electromagnetism	12.	Domain Theory of Magnetism		√	
HS	Add-On Categories	Electricity and Magnetism	1.	Ohm's Law	0:07:26	√	
HS	Add-On Categories	Electricity and Magnetism	2.	Variable Resistors (Potentiometer & Rheostat)	0:06:30		√
HS	Add-On Categories	Electricity and Magnetism	3.	Series Connection of Resistors	0:01:38	√	
HS	Add-On Categories	Electricity and Magnetism	4.	Metre Bridge		√	
HS	Add-On Categories	Electricity and Magnetism	5.	Parallel Combination of Resistors		√	
HS	Add-On Categories	Electricity and Magnetism	6.	Dependence of Current on Potential Difference		√	
HS	Add-On Categories	Electronics and Communication	1.	Logic Gates	0:06:52		
HS	Add-On Categories	Electronics and Communication	2.	Amplitude Modulation		√	
HS	Add-On Categories	Electronics and Communication	3.	Boolean Expression and Truth Table		√	
HS	Add-On Categories	Electronics and Communication	4.	NAND Gate		√	
HS	Add-On Categories	Electronics and Communication	5.	NOR gate		√	
HS	Add-On Categories	Electronics and Communication	6.	Frequency Modulation		√	
HS	Add-On Categories	Sound and Light	1.	Infrasonics and Ultrasonics	0:05:13		
HS	Add-On Categories	Sound and Light	2.	Reflection of Sound		√	
HS	Add-On Categories	Sound and Light	3.	Focal Length of a Concave Mirror		√	
HS	Add-On Categories	Sound and Light	4.	Focal Length of Convex Lens		√	
HS	Add-On Categories	Light and Optics	1.	Focal Length of Convex Lens using Parallax Removal Method		√	
HS	Add-On Categories	Light and Optics	2.	Focal Length of a Concave Lens using a Convex Lens		√	
HS	Add-On Categories	Light and Optics	3.	Working of a Prism Spectrometer	0:07:06		√
HS	Add-On Categories	Light and Optics	4.	Prism Spectrometer	0:03:55		√
HS	Add-On Categories	Light and Optics	5.	Projector	0:06:37		
HS	Add-On Categories	Light and Optics	6.	Fresnel lens and Overhead Projector	0:02:47		
HS	Add-On Categories	Light and Optics	7.	Young's Double-Slit Experiment (Introduction)	0:05:01		
HS	Add-On Categories	Light and Optics	8.	Young's Double-Slit Experiment (Intensity of Fringes)	0:07:08		
HS	Add-On Categories	Light and Optics	9.	Wavefronts and Huygens' Principle	0:06:59		
HS	Add-On Categories	Light and Optics	10.	#VALUE!	0:07:29		
HS	Add-On Categories	Light and Optics	11.	Polarization of Light and Malus's Law			√
HS	Add-On Categories	Light and Optics	12.	Linear Polarization of Light			√
HS	Add-On Categories	Mechanics	1.	Elastic Behaviour of Solids	0:07:26		
HS	Add-On Categories	Mechanics	2.	Stress and strain	0:07:55		
HS	Add-On Categories	Mechanics	3.	Stress - Strain curve	0:07:58		
HS	Add-On Categories	Mechanics	4.	Hooke's Law			√
HS	Add-On Categories	Mechanics	5.	Elastic Modulus	0:07:29		
HS	Add-On Categories	Mechanics	6.	Applications of Bernoulli's Principle	0:04:38		
HS	Add-On Categories	Mechanics	7.	Bernoulli's Principle	0:06:24		
HS	Add-On Categories	Mechanics	8.	Fluids in Motion: Equation of Continuity	0:09:34		
HS	Add-On Categories	Mechanics	9.	Capillarity	0:08:49		
HS	Add-On Categories	Mechanics	10.	Equation of continuity (Applications)	0:03:16		



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PKG	Category	Sub Category	Topic #	Topic	Video Duration	Sim	Int
HS	Add-On Categories	Mechanics	11.	Rolling Friction and Sliding Friction	0:04:10		
HS	Add-On Categories	Mechanics	12.	Couple	0:07:21		
HS	Add-On Categories	Mechanics	13.	Moment of a Force and the Law of Moments	0:07:36		
HS	Add-On Categories	Mechanics	14.	Conservation of Linear Momentum	0:07:28		
HS	Add-On Categories	Mechanics	15.	Motion of a Block on an Inclined Plane		√	
HS	Add-On Categories	Mechanics	16.	Equations of Motion (Using Graph)	0:09:47		
HS	Add-On Categories	Mechanics	17.	Collisions: Elastic and Inelastic	0:06:29	√	
HS	Add-On Categories	Mechanics	18.	Impulse and Crumple Zone	0:06:28		
HS	Add-On Categories	Mechanics	19.	Elastic Collision		√	
HS	Add-On Categories	Mechanics	20.	Inelastic collision		√	
HS	Add-On Categories	Mechanics	21.	Centre of Mass of a System of Particles		√	
HS	Add-On Categories	Mechanics	22.	Newton's Cradle		√	
HS	Add-On Categories	Mechanics	23.	Conservation of Angular Momentum	0:05:39		
HS	Add-On Categories	Mechanics	24.	Moment of Inertia (Mathematical expressions)	0:05:14	√	
HS	Add-On Categories	Mechanics	25.	Conservation of Angular Momentum (Examples)	0:05:57		
HS	Add-On Categories	Mechanics	26.	Moment of Inertia	0:06:40		
HS	Add-On Categories	Mechanics	27.	Angular Momentum	0:07:25		
HS	Add-On Categories	Mechanics	28.	Angular Momentum of a System of Particles		√	
HS	Add-On Categories	Mechanics	29.	Introduction to Vectors		√	
HS	Add-On Categories	Mechanics	30.	Components of Vectors		√	
HS	Add-On Categories	Mechanics	31.	Determining Density of a Solid		√	
HS	Add-On Categories	Mechanics	32.	Work Done by a Constant Force	0:06:45		
HS	Add-On Categories	Mechanics	33.	Work-Energy Theorem	0:05:53		
HS	Add-On Categories	Oscillations and Waves	1.	Damped Oscillations	0:07:53		
HS	Add-On Categories	Oscillations and Waves	2.	Geometrical Representation of Simple Harmonic Motion		√	
HS	Add-On Categories	Oscillations and Waves	3.	Damped Oscillations of a Pendulum		√	
HS	Add-On Categories	Oscillations and Waves	4.	Force Constant of a Helical Spring		√	
HS	Add-On Categories	Oscillations and Waves	5.	Energy of a Simple Harmonic Oscillator		√	
HS	Add-On Categories	Oscillations and Waves	6.	Beats	0:06:43	√	