EXPERT IN IB/IGCSE

PHYSICS

FOR

THE SHRI RAM SCHOOL,PATHWAYS INTERNATIONAL ,LANCERS INTERNATIONAL,G D GOENKA WORLD SCHOOL,DPS INTERNATIONAL ,STEP BY STEP,American Embassy School,The British School,Scottish School

KUMAR PHYSICS CLASSES

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I earned my master's in Electrical And Electronics Engineering.
My academic experiences have given me an understanding of the learning struggles students encounter in their own learning experiences, and I would love to help them overcome their struggles and succeed.
I'm an experienced tutor with over fifteen years of experience helping students in Physics subjects.
Working as a teaching assistant, I help students with the complexities of Motion,
Distance and displacement, Speed and velocity, Acceleration, Graphs describing motion, Equations of motion for uniform acceleration, Projectile motion, Fluid resistance and terminal speed, Forces, Objects as point particles, Free-body diagrams, Translational equilibrium, Newton's laws of motion, Solid friction, Work, energy and power, Kinetic energy
Gravitational potential energy, Elastic potential energy, Work done as energy transfer, Power as the rate of energy transfer, Principle of conservation of energy, Efficiency,

Momentum and impulse,
Newton's second law expressed in terms of rate of change of momentum,
Impulse and force–time graphs,
Conservation of linear momentum,
Elastic collisions, inelastic collisions and explosions,
Thermal concepts
Molecular theory of solids, liquids and gases
Temperature and absolute temperature
Internal energy
Specific heat capacity
Phase change

Specific latent heat
Modelling a gas

Pressure
Equation of state for an ideal gas
Kinetic model of an ideal gas
Mole, molar mass and the Avogadro constant
Differences between real and ideal gases

Oscillations
Simple harmonic oscillations
Time period, frequency, amplitude, displacement and phase difference
Conditions for simple harmonic motion
Travelling waves
Travelling waves
Wavelength, frequency, period and wave speed
Transverse and longitudinal waves
The nature of electromagnetic waves
The nature of sound waves
Wave characteristics
Wavefronts and rays
Amplitude and intensity
Superposition
Polarization
Wave behaviour
Reflection and refraction
Snell's law, critical angle and total internal reflection
Diffraction through a single-slit and around objects
Interference patterns
Double-slit interference
Path difference

Standing waves
The nature of standing waves
Boundary conditions
Nodes and antinodes

Electric fields
Charge
Electric field
Coulomb's law

Electric current
Direct current (dc)
Potential difference
Heating effect of electric currents
Circuit diagrams
Kirchhoff's circuit laws
Heating effect of current and its consequences
Resistance expressed as R = V/I
Ohm's law
Resistivity
Power dissipation
Electric cells
Cells
Internal resistance
Secondary cells
Terminal potential difference
Electromotive force (emf)

Magnetic effects of electric currents
Magnetic fields
Magnetic force.

Circular motion
Period, frequency, angular displacement and angular velocity
Centripetal force
Centripetal acceleration

Newton's law of gravitation
Newton's law of gravitation
Gravitational field strength
Discrete energy and radioactivity
Discrete energy and discrete energy levels
Transitions between energy levels

Radioactive decay
Fundamental forces and their properties
Alpha particles, beta particles and gamma rays
Half-life
Absorption characteristics of decay particles
Isotopes
Background radiation
Nuclear reactions
The unified atomic mass unit
Mass defect and nuclear binding energy
Nuclear fission and nuclear fusion
The structure of matter
Quarks, leptons and their antiparticles
Hadrons, baryons and mesons
The conservation laws of charge, baryon number, lepton number and strangeness
The nature and range of the strong nuclear force, weak atomic force and electromagnetic force
Exchange particles
Feynman diagrams

Confinement
The Higgs boson
Energy sources

Specific energy and energy density of fuel sources
Sankey diagrams
Primary energy sources
Electricity as a secondary and versatile form of energy
Renewable and non-renewable energy sources
Thermal energy transfer

Conduction, convection and thermal radiation
Black-body radiation
Albedo and emissivity
The solar constant
The greenhouse effect
Energy balance in the Earth surface-atmosphere system

I had worked as a private tutor while I was a graduate student and I have been working the past year privately. So far I had around twenty students of all levels of secondary education teaching Physics Science and at IB levels,

I am an enthusiastic and passionate tutor with high interpersonal skills who tries to explain the complex and challenging context in very friendly and enjoyable to understand way.
All my students were very successful at their exams and very pleased with my methodology and educational approaches.
As Science Ambassador I have visited top British schools in Delhi. All the students were very excited, and happy with my academic talks and experimental demonstrations.

If you are an IB Physics Student and pursuing IB PHYSICS HL/SL Course In Delhi,contact me for physics tutoring.
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