

BRAINSHINE ACADEMY

Online
**HOME
TUITIONS**



9080138609

www.brainshineacademy.com

BRAINSHINE ACADEMY



How Our Online Tuition Works

Book a Free Consultation:

Start by filling out our online form or contacting us. We'll understand your needs and match you with the right tutor.

Customized Learning Plan:

After assessing your requirements, we create a personalized lesson plan that works best for you.

Live Sessions:

Engage in interactive live sessions with your tutor via video conferencing tools. You'll be able to ask questions, get instant feedback, and track progress in real-time.

Study Materials & Homework Help:

Receive study materials, practice worksheets, and homework support to reinforce your learning.

Progress Tracking:

Regular feedback and progress reports will help you stay on track and achieve your learning goals.

CLASSES WE OFFER

ONE-TO-ONE:

We allocate one teacher to only one student so that the student interact with teacher and learn the concepts thoroughly.

GROUP CLASS FOR 5 STUDENTS:

We allocate one teacher for group of 5 students. This promotes friendly competition and interactive classes while simultaneously maintaining an individual learning experience for each student.

GROUP CLASS FOR 10 STUDENTS:

We allocate one teacher for group of 10 students. All the features are the same as above group class and it is cost effective.

GOAL:

Make the students master the concepts deeply.

PRACTICE STYLE:

Let the students understand the concepts through explaining with real time examples.

TEACHING APPROACH:

Teacher cues the student to discover the answer.

The teachers here are highly experienced and well-qualified, having graduated from prestigious institutions such as IIT, NIT, IIIT, CLRI, Anna University, and others. Their expertise and strong academic background contribute significantly to the high-quality education provided.



What We Do?

At Brainshine Academy, we offer comprehensive range of online tutoring services designed to support students at every stage of their academic journey.

Why choose us?

Personalized learning: We provide tutoring sessions to each student's unique needs, learning style, and pace. Our tutors adapt their methods to ensure every lesson is both engaging and effective.

Test Preparation & Exam Strategies: Our test preparation services focus on strategy, practice, and review to help you succeed in your exams.

Progress Monitoring & Feedback: We track your progress and provide regular updates on your improvement. Our tutors give constructive feedback, recommend areas for further growth, and ensure you stay on track to meet your academic goals.

Homework Assistance: We offer tutoring sessions to support you with school projects, essays, and homework.



PHYSICS CURRICULUM

Topic	Sub Topic	No of cls
Units and Measurements	Need for measurement: Units of measurement; systems of units; SI units, fundamental and derived units. significant figures. Dimensions of physical quantities, dimensional analysis and its applications.	2-3
Motion in a Straight Line	Frame of reference, Motion in a straight line, Elementary concepts of differentiation and integration for describing motion, uniform and nonuniform motion, and instantaneous velocity, uniformly accelerated motion, velocity – time and position–time graphs. Relations for uniformly accelerated motion (graphical treatment).	3-4
Motion in a Plane	Scalar and vector quantities; position and displacement vectors, general vectors and their notations; equality of vectors, multiplication of vectors by a real number; addition and subtraction of vectors, Unit vector; resolution of a vector in a plane, rectangular components, Scalar and Vector product of vectors. Motion in a plane, cases of uniform velocity and uniform acceleration projectile motion, uniform circular motion.	3-4
Laws of Motion	Intuitive concept of force, Inertia, Newton's first law of motion; momentum and Newton's second law of motion; impulse; Newton's third law of motion. Law of conservation of linear momentum and its applications. Equilibrium of concurrent forces, Static and kinetic friction, laws of friction, rolling friction, lubrication. Dynamics of uniform circular motion: Centripetal force, examples of circular motion (vehicle on a level circular road, vehicle on a banked road).	2-3
Work, Energy and Power	Work done by a constant force and a variable force; kinetic energy, workenergy theorem, power. Notion of potential energy, potential energy of a spring, conservative forces: non-conservative forces, motion in a vertical circle; elastic and inelastic collisions in one and two dimensions.	2-3
System of Particles and Rotational Motion	Centre of mass of a two-particle system, momentum conservation and Centre of mass motion. Centre of mass of a rigid body; centre of mass of a uniform rod. Moment of a force, torque, angular momentum, law of conservation of angular momentum and its applications. Equilibrium of rigid bodies, rigid body rotation and equations of rotational motion, comparison of linear and rotational motions. Moment of inertia, radius of gyration, values of moments of inertia for simple geometrical objects (no derivation).	4-5

Gravitation	Kepler's laws of planetary motion, universal law of gravitation. Acceleration due to gravity and its variation with altitude and depth. Gravitational potential energy and gravitational potential, escape speed, orbital velocity of a satellite.	2-3
Mechanical Properties of Solids	Elasticity, Stress-strain relationship, Hooke's law, Young's modulus, bulk modulus, shear modulus of rigidity (qualitative idea only), Poisson's ratio; elastic energy.	2-3
Mechanical Properties of Fluids	Pressure due to a fluid column; Pascal's law and its applications (hydraulic lift and hydraulic brakes), effect of gravity on fluid pressure. Viscosity, Stokes' law, terminal velocity, streamline and turbulent flow, critical velocity, Bernoulli's theorem and its simple applications. Surface energy and surface tension, angle of contact, excess of pressure across a curved surface, application of surface tension ideas to drops, bubbles and capillary rise.	2-3
Thermal Properties of Matter	Heat, temperature, thermal expansion; thermal expansion of solids, liquids and gases, anomalous expansion of water; specific heat capacity; C_p , C_v - calorimetry; change of state - latent heat capacity. Heat transfer-conduction, convection and radiation, thermal conductivity, qualitative ideas of Blackbody radiation, Wein's displacement Law, Stefan's law .	3-4
Thermodynamics	Thermal equilibrium and definition of temperature, zeroth law of thermodynamics, heat, work and internal energy. First law of thermodynamics, Second law of thermodynamics: gaseous state of matter, change of condition of gaseous state -isothermal, adiabatic, reversible, irreversible, and cyclic processes.	3-4
Kinetic Theory	Equation of state of a perfect gas, work done in compressing a gas. Kinetic theory of gases - assumptions, concept of pressure. Kinetic interpretation of temperature; rms speed of gas molecules; degrees of freedom, law of equi-partition of energy (statement only) and application to specific heat capacities of gases; concept of mean free path, Avogadro's number.	2-3
Oscillations	Periodic motion - time period, frequency, displacement as a function of time, periodic functions and their applications. Simple harmonic motion (S.H.M) and its equations of motion; phase; oscillations of a loaded spring- restoring force and force constant; energy in S.H.M. Kinetic and potential energies; simple pendulum derivation of expression for its time period.	3-4
Waves	Wave motion: Transverse and longitudinal waves, speed of travelling wave, displacement relation for a progressive wave, principle of superposition of waves, reflection of waves, standing waves in strings	2-3

WHAT STUDENTS SAY

Y

★★★★★

- by Yuvaraj
attended BTech Tuition
posted on 04 Jul, 2018

"Vastly experienced, Elusive teaching, clears doubt on par to the student capacity, motivating person."

R

★★★★★

- by RAJAVIKNESH
attended Class 11 Tuition
posted on 04 Jul, 2018

"Excellent in teaching. Level of teaching is totally well and good. I recommend. Tutor is having good knowledge on teaching the subjects. Especially I get support whenever I needed."

R

★★★★★

- by Rajesh
attended Class 10 Tuition
posted on 04 Jul, 2018

"Way of explaining the concepts is very good. Theoretical as well as technically good."

G

★★★★★

- by GEETHA BIMALRAJ
attended Class 9 Tuition
posted on 05 Jul, 2018

"Excellent tutor. Very dedicated and thorough in teaching. Has been teaching for the last three years and have not had any issues. definitely recommended."

T

★★★★☆

- by Thamim Fathima Nisha.A
attended BTech Tuition
posted on 12 Jul, 2018

"Very good. He is more interactive with us. He teaches us more concepts clearly. He clears our doubts without any hesitation."



★★★★★

- by Pavi

attended **Class 12 Tuition**

posted on 24 Sep, 2019

"Best one for all subject well experience in all subjects daily tests and clearing doubts with an example soon. "



★★★★★

- by Saravanan

attended **Class 10 Tuition**

posted on 24 Sep, 2019

"Good mentor. Really helped in my exam preparation. Thank you sir for being my tuition teacher. "



★★★★★

- by Bharathi

attended **Class 10 Tuition**

posted on 24 Sep, 2019

"Rajavel sir is very kind and humble. He won't scold if done a mistake. We can easily understand when he teaches. He will teach us a line by line. He is the best teacher I have ever seen in my life. "



★★★★★

- by Sathidevi S Raj

attended **Class 10 Tuition**

posted on 25 Sep, 2019

"Very polite and humble. Makes the student understand the concepts in easiest way and spends quality time with student. Student is very comfortable. "



thank
you

www.brainshineacademy.com

9080138609

[https://brainshineacademy.com/course/
class-11-cbse-physics/](https://brainshineacademy.com/course/class-11-cbse-physics/)

BOOK A DEMO

To book a demo, simply visit our website and click the option "Schedule Demo class" and fill out the form. Our team will get in touch with you to schedule a convenient time for the demo.

"We motivate the students to build skills and develop confidence as they pursue educational success."