

BRAINSHINE **ACADEMY**

Online
HOME
TUITIONS



9080138609

www.brainshineacademy.com

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 students 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.



CHEMISTRY CURRICULUM

Topic	Sub Topic	No of cls
Some Basic Concepts of Chemistry	General Introduction: Importance and scope of Chemistry. Nature of matter, laws of chemical combination, Dalton's atomic theory: concept of elements, atoms and molecules. Atomic and molecular masses, mole concept and molar mass, percentage composition, empirical and molecular formula, chemical reactions, stoichiometry and calculations based on stoichiometry.	2-3
Structure of Atom	Discovery of Electron, Proton and Neutron, atomic number, isotopes and isobars. Thomson's model and its limitations. Rutherford's model and its limitations, Bohr's model and its limitations, concept of shells and subshells, dual nature of matter and light, de Broglie's relationship, Heisenberg uncertainty principle, concept of orbitals, quantum numbers, shapes of s, p and d orbitals, rules for filling electrons in orbitals – Aufbau principle, Pauli's exclusion principle and Hund's rule, electronic configuration of atoms, stability of half-filled and completely filled orbitals.	3-4
Classification of Elements and Periodicity in Properties	Significance of classification, brief history of the development of periodic table, modern periodic law and the present form of periodic table, periodic trends in properties of elements –atomic radii, ionic radii, inert gas radii, ionization enthalpy, electron gain enthalpy, electronegativity, valency. Nomenclature of elements with atomic number greater than 100.	2-3
Chemical Bonding and Molecular Structure	Valence electrons, ionic bond, covalent bond, bond parameters, Lewis structure, polar character of covalent bond, covalent character of ionic bond, valence bond theory, resonance, geometry of covalent molecules, VSEPR theory, concept of hybridization, involving s, p and d orbitals and shapes of some simple molecules, molecular orbital theory of homonuclear diatomic molecules(qualitative idea only), Hydrogen bond.	3-4
Chemical Thermodynamics	Concepts of System and types of systems, surroundings, work, heat, energy, extensive and intensive properties, state functions. First law of thermodynamics –internal energy and enthalpy, heat capacity and specific heat, measurement of U and H, Hess's law of constant heat summation, enthalpy of bond dissociation, combustion, formation, atomization, sublimation, phase transition, ionization, solution and dilution. Second law of Thermodynamics (brief introduction) Introduction of entropy as a state function, Gibb's energy change for spontaneous and nonspontaneous processes, criteria for equilibrium. Third law of thermodynamics (brief introduction).	3-4

Equilibrium	Equilibrium in physical and chemical processes, dynamic nature of equilibrium, law of mass action, equilibrium constant, factors affecting equilibrium – Le Chatelier's principle, ionic equilibrium– ionization of acids and bases, strong and weak electrolytes, degree of ionization, ionization of poly basic acids, acid strength, concept of pH, hydrolysis of salts (elementary idea), buffer solution, Henderson Equation, solubility product, common ion effect (with illustrative examples).	3–4
Redox Reactions	Concept of oxidation and reduction, redox reactions, oxidation number, balancing redox reactions, in terms of loss and gain of electrons and change in oxidation number, applications of redox reactions.	2–3
Organic Chemistry –Some Basic Principles and Techniques	General introduction, methods of purification, qualitative and quantitative analysis, classification and IUPAC nomenclature of organic compounds. Electronic displacements in a covalent bond: inductive effect, electromeric effect, resonance and hyper conjugation. Homolytic and heterolytic fission of a covalent bond: free radicals, carbocations, carbanions, electrophiles and nucleophiles, types of organic reactions.	3–4
Hydrocarbons	Classification of Hydrocarbons Aliphatic Hydrocarbons: Alkanes – Nomenclature, isomerism, conformation (ethane only), physical properties, chemical reactions including free radical mechanism of halogenation, combustion and pyrolysis. Alkenes – Nomenclature, structure of double bond (ethene), geometrical isomerism, physical properties, methods of preparation, chemical reactions: addition of hydrogen, halogen, water, hydrogen halides (Markovnikov's addition and peroxide effect), ozonolysis, oxidation, mechanism of electrophilic addition. Alkynes – Nomenclature, structure of triple bond (ethyne), physical properties, methods of preparation, chemical reactions: acidic character of alkynes, addition reaction of – hydrogen, halogens, hydrogen halides and water. Aromatic Hydrocarbons: Introduction, IUPAC nomenclature, benzene: resonance, aromaticity, chemical properties: mechanism of electrophilic substitution. Nitration, sulphonation, halogenation, Friedel Craft's alkylation and acylation, directive influence of functional group in monosubstituted benzene. Carcinogenicity and toxicity.	5–6
Cell Cycle and Cell Division	Cell cycle, mitosis, meiosis and their significance	2–3
Photosynthesis in Higher Plants	Photosynthesis as a means of autotrophic nutrition; site of photosynthesis, pigments involved in photosynthesis (elementary idea); photochemical and biosynthetic phases of photosynthesis; cyclic and non-cyclic photophosphorylation; chemiosmotic hypothesis; photorespiration; C3 and C4 pathways; factors affecting photosynthesis.	3–4
Neural Control and Coordination	Neuron and nerves; Nervous system in humans – central nervous system; peripheral nervous system and visceral nervous system; generation and conduction of nerve impulse	2–3
Chemical Coordination and Integration	Endocrine glands and hormones; human endocrine system – hypothalamus, pituitary, pineal, thyroid, parathyroid, adrenal, pancreas, gonads; mechanism of hormone action (elementary idea); role of hormones as messengers and regulators, hypo – and hyperactivity and related disorders; dwarfism, acromegaly, cretinism, goiter, exophthalmic goitre, diabetes, Addison's disease.	3–4

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. "

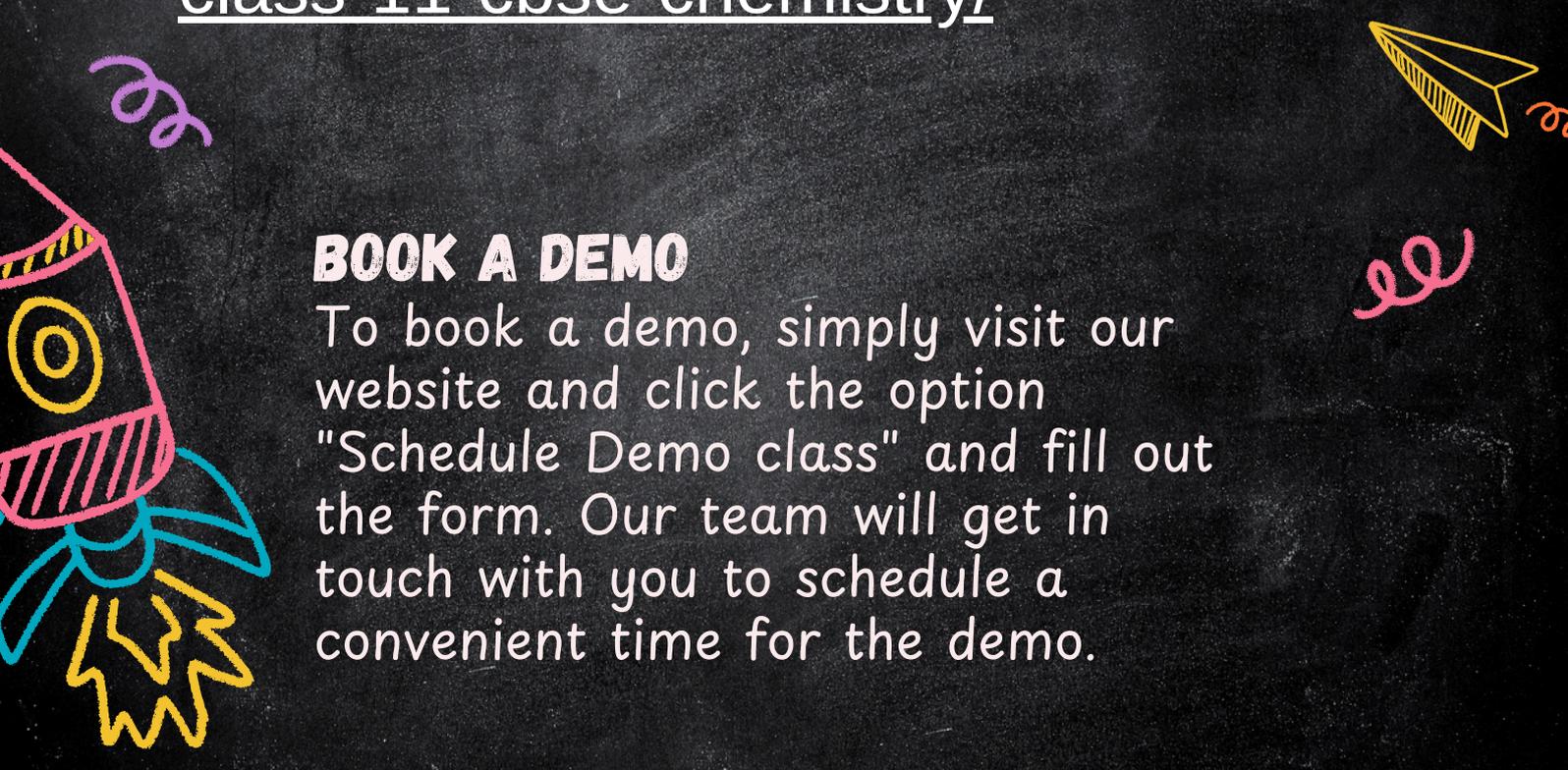


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"We motivate the students to build skills and develop confidence as they pursue educational success."