

KENDRIYA VIDYALAYA NO. 1, UDHAMPUR  
 REPORT ON MODERNISATION OF PHYSICS LABORATORY  
 2019-2020

Kendriya Vidyalaya Sangathan's vision is to instill learning as a life-long process by creating an environment where every student has the opportunity to develop their full potential, be empowered with confidence, and be prepared for future challenges in a society. Laboratory is one such platform in the school that allows innovation, ignites self-discovery through practical experience and promotes critical thinking for students to stand on their own. Kendriya Vidyalaya No. 1, Udhampur under the guidance of Respected Principal (Mr Sumit Mehra), an experienced teacher (Mr Vikramaditya, PGT Physics) and Ms Navjot Kaur (PGT-Physics) had made the possible efforts to make classroom teaching more effective in all possible ways. Physics laboratory is equipped with following items-

S. No.	ITEM	USE
1.	Van-De-Graff Generator Kit	For generation of high voltages. (used to understand concepts of Electrostatics of Class 12)
2.	Capacitance Demonstration Kit	For understanding the factors on which Capacitance depends and concept of combination of capacitors. (Class 12)
3.	Diode Laser Kit	To measure wavelength using a millimeter scale. ( used to understand concepts of Wave Optics of class 12)
4.	Demonstration Meter Kit	To study working of galvanometer and its conversion to Voltmeter and Ammeter. (Class 12)
5.	Transformer Kit	To study working of step down and step up transformer and understanding various energy losses. (Class 12)
6.	Physics Experiment Kit	To understand basic concepts of physics
7.	Digital Meter	To measure AC/DC voltages, DC current, resistance, capacitance, frequency, temperature.
8.	Westminster Kit	To understand magnetic properties, magnetic field due to different arrangements of magnet and electromagnetic induction (class 10 or Class 12)
9.	Newton's Second Law Apparatus	To understand Newton's second law of motion (class 9 and class 11)
10.	Hydraulic Press	To understand Pascal's Law.
11.	Projectile Launcher	To understand Projectile motion (Class 11)
12.	Magnetising/Demagnetising Coil	To understand the concept of magnetization and demagnetization
13.	Electrostatic Kit	To demonstrate range of experiments of Electrostatics (Class 12)
14.	Field Lines And Equipotential Lines	To understand the concept of electric field

		lines and equipotential lines. (Class 12)
15.	Dia-Para- And Ferromagnetism	To demonstrate dia-para-ferro magnetism in a homogeneous magnetic field. (Class 12)
16.	Force table	To illustrate the vector addition of forces. (Class 11)
17.	Ring Launcher	To verify Lenz's law, induce current in ring and effect of Aluminium slit and acrylic ring. ( concepts of chapter Electromagnetic Induction of class 12)
18.	Compact Wave Tank	To understand concepts of wave optics (Class 12)
19.	Ray Optics Kit	To understand concepts of Ray Optics (class 10 and 12)
20.	Laser Ray Kit	To understand working of Human Eye (Class 10)
21.	Bell Experiment	To demonstrate Sound requires medium to travel (Class 8 or 9)
22.	Law of Resistance Board	To understand combination of resistances (Class 10 and 12)
23.	Optics Kit	To understand concepts of Optics (Class 10 and 12)
24.	Melting Point Apparatus	To determine melting point of a substance.
25.	Kit for Magnetism Experiments	<ol style="list-style-type: none"> <li>1. To understand Magnetic field lines of various magnets (class 10)</li> <li>2. To determine the value of horizontal component of earth magnetic field. (class 12)</li> </ol>
26.	Mechanics Kit	To understand various concepts of Mechanics. (Class 11)
27.	Free Fall apparatus	For measuring the acceleration due to gravity has a 150 cm fall length.
28.	Linear Air Track with Timer	To study the linear motion under virtually frictionless condition.
29.	Electricity Kit & Basic Electricity Kit	To understand concepts of basic Electricity.
30.	Heat and Thermometer Kit	To understand the concepts of thermal expansion, determining specific heat capacities of solids. (Class 11)
31.	Law of Motion Kit	To study the linear motion of object, elastic collision, Newton's law of motion. (Class 11)
32.	Analytical Balance	To measure small mass.

With the use of modernized lab equipments in teaching-learning process had make the entire process of learning not only interesting but more impactful as well and makes the learning lifelong. It brought curiosity among the students and made their learning active. Overall, Students were involved in what they were learning as when students use all of their senses it helps the brain create pathways that made it easier and quicker to retain.

Thank You,

Submitted by-  
Ms Navjot Kaur  
(PGT Physics)