PROPOSAL ON SCIENCE LAB PROJECT SLaB

GYAN NIKETAN SECONDARY ENGLISH SCHOOL

SHANKHAMOOL, KATHMANDU, NEPAL

School Compound

INTRODUCTION

Gyan Niketan Seconday English School and college +2 was established in 1989 (2046 B.S.) with a moto "**Education for all**". It is located in Shankhamool, New Baneshwor, Kathmandu. The school has around 1000 students and 100 teaching and non teaching Staff Members.

Since its establishment 33 years ago, the school administration has been working hard for the betterment of education in the best way possible. For this, unlike other subjects, schools must have the most up-to-date and high-quality scientific lab supplies. Science is unlike any other subject in that it is unique. To grasp its concepts, one must delve beyond textbooks and traditional classroom instruction. Seeing, holding and manipulating real items and materials are essential for effective science teaching and learning. Children's classroom knowledge will be ineffective unless they watch the process and comprehend the relationship between action and

reaction but unfortunately, students have not been able to obtain the necessary education. As a result, each grade's goal is only partially achieved.

An effective science lab can help children to develop an interest in scientific study. Moreover, several scientific theories and notions are difficult to describe straight from the books. Anatomy models, physics science kits, and chemistry science kits, for example, make otherwise complicated scientific theories understandable. Their reasoning skills are refined as they notice many objects and conduct various experiments, and they begin to think extensively about those theories and concepts. As a result, schools play an important role in educating the next generation of engineers and doctors.

To summarize, schools must have the most up-to-date scientific lab supplies and equipment in order to engage kids in science and encourage them to make substantial contributions in the fields of physics, biology, chemistry, and other branches of science later in life.

Current Science Lab in the School

OBJECTIVE

Ever since the laboratory instructions were introduced in education, it has become necessary part of education since it provided observation, training and precise information for grabbing students' undivided attention. These same reasons are still valid nearly a century later. The groups of objectives that may be achieved through the use of the laboratory in our context are:

- To develop the skills like manipulative, inquiry, investigative, organizational & communicative among school pupils.
- To help understand the concepts of science- for example, hypothesis, theoretical model, and taxonomic category.
- To develop cognitive abilities of children like critical thinking, problem solving, application, analysis, and synthesis.
- To understand the nature of science like scientific enterprise, scientists and how they work, existence of scientific methods, interrelationships between science and technology and among the various disciplines of science.

- To develop positive attitude towards scientific research like curiosity, interest, risk taking. Objectivity, precision, confidence, perseverance, satisfaction, responsibility, consensus collaboration, and liking science.

CURRENT STATUS

At the instance, science laboratory work has been conducted at minimal level which comprises basic tasks. Locally available materials are collected by science instructors. Hence, sufficient lab materials are required for the school.

Syllabus of Science from Grade 8 to Grade 12

I. Syllabus of Science of Grade 8

A. Physics

Units & Measurements, Simple machine, Pressure, Work, Energy & power, Heat, Sound, Light, Magnetism, Electricity and Velocity & Acceleration

B. Chemistry

Matter, Acid, Base & Salt, Mixture, Some useful chemicals and Metals & Non-metals

C. Biology

Cell & Tissue, Life Process and Living – Beings

D. Geology & Astronomy

Weather & Climate, Earth & Space and Structure of earth

E. Environment science

Environmental & its Balance, Environmental Degradation and its Conservation and Environmental & sustainable development

II. Syllabus of Science of Grade 9

A. Physics

Measurement, Force, Machine, Work, energy & power, Sound, Light and Electricity & Magnetism

B. Chemistry

Classification of elements, Chemical reaction, Solubility, Some Gases, Metals and Chemical fertilizer.

C. Biology

Classification of Living Things, Lifecycle of some Insects, Adaptation of some Organisms, The Cell , Tissue & Organ, Skeletal System, Sense Organ, Evolution, Ecosystem, Micro Organism and Human Nutrition.

D. Geology and Astronomy

Natural Disaster, The Earth and The Universe and Green House

III. Syllabus of Science of Grade 10

A. Physics

Force, Pressure, Energy, Heat, Light and Electricity & Magnetism

A. Chemistry

Classification of Elements, Chemical Reaction, Acid , Base & Salt, Metals, Carbon & its Compound and Material used in daily life.

B. Biology

Human nervous & Glandular System, Chromosome & Sex Determination, Reproduction, Blood circulation in human body, Heredity, Invertebrates and Environmental Pollution & its Management.

C. Geology & Astronomy

History of Earth, The Atmosphere and The Universe.

IV. Syllabus of Science of Grade 11

A. Physics

1. Mechanics

Physical Quantities, Vectors, Kinematics, Dynamics, Work, Energy & Power, Circular Motion, Gravitation and Elasticity.

2. Heat &Thermodynamics

Heat & Temperature, Thermal Expansion, Quantity of Heat, Rate of Heat Flow and Ideal gas.

3. Wave and Optics

Reflection of Plane & Curved Surface, Refraction through Prisms, Lenses and Dispersion.

4. **Electricity and Magnetism**

Electric Charges, Electrostatic Field, Potential, Potential difference and Potential Energy, Capacitor, and DC Circuits

5. **Modern Physics**

Nuclear Physics, Solids and Recent trend in Physics.

B. Chemistry

1. **General and Physical Chemistry**

Foundation and Fundamentals, Stoichiometry, Atomic Structure, Classification of Elements and Periodic Table, Classification bonding and Shapes of Molecules, Oxidation and Reduction, States of Matter and Chemical Equilibrium

2. **Organic Chemistry**

Basic concepts of Organic Chemistry, Fundamental Principle, Hydrocarbons and Aromatic hydrocarbons.

3. **Inorganic Chemistry**

Chemistry of Non-Metals, Chemistry of Metals and Bio Inorganic Chemistry.

4. **Applied Chemistry**

Fundamentals of Applied Chemistry and Modern Chemical Manufactures.

C. Biology

1. **Botany**
   Biomolecules and Cell Biology, Floral Diversity, Introductory Microbiology, Ecology and Vegetation.

2. **Zoology**

   Introduction to Biology, Evolutionary Biology, Faunal Diversity, Biota and Environmental and Conservation Biology.

V. Syllabus of Science of Grade 12

A. Physics

1. Mechanics

Rotational Dynamics, Periodic Motion and Fluid Statics

2. Heat and Thermodynamics

First law of Thermodynamics and Second Law of Thermodynamics

3. Wave and Optics

Wave Motions, Mechanical Waves, Waves in Pipes and String, Acoustic Phenomena, Nature and Propagation of Light, Interference, Diffraction and Polarization.

4. Electricity and Magnetism

Electrical Circuits, Thermodynamics, Magnetic Field, Magnetic properties of Material, Electromagnetic Induction and Alternating Currents.

5. Modern Physics

Electron, Photons, Semiconductor of Physics, Quantization of Energy, Radioactivity and Nuclear Reactions and Recent trends in Physics

B. Chemistry

1. General & Physical Chemistry

Volumetric Analysis, Ionic Equilibrium, Chemical Kinetics, Thermodynamics and Electrochemistry

2. Organic Chemistry

Haloalknes, Haloarenes, Alcohols, Phenols, Ethers, Aldehydes and Ketones, Carboxylic acid & its derivatives, Nitro Compounds, Amines and Organ metallic compounds

3. Applied Chemistry

Chemistry in Service of Mankind, Cement, Paper and Pulp, Nuclear Chemistry and Applications of Radioactivity

4. Inorganic Chemistry

Transition Metals and Study of heavy Metals

C. Biology

1. Botany

Plant Anatomy, Plant Physiology, Genetics, Embryology, Biotechnology

2. **Zoology**
   Animal Tissues, Development Biology, Human Biology, Human Population and Health Disorders and Applied Biology.

List of experiments

PHYSICS

SN	Experiments	Equipments	Available Quantity	Required Quantity
1	-To measure small distance between two points - To determine refractive index of glass	- Travelling microscope with vernier caliper - Stop watch	Stop watch -1	- Travelling microscope – 2 -Stop Watch - 2
2	To measure coeff. Of friction and to verify the laws of solid friction	-Inclined plane woodenbox -pulley system -Slotted weight with hanger -Spring BalanceI	-slotted weight with hanger-1 -Spring balance - 1	-Inclined Plane -2 -Pulley System -2 -slotted weight with hanger-1 -Spring balance - 1
3	To determine Young's Modules of elasticity.	-Young's Modules Apparatus	-	-Young's Modules Apparatus-1
4	To determine surface tension of liquid by capillary tube method.	-Surface tension apparatus (capillary tubes)	-	-Surface tension apparatus (capillary tubes) -1
5	To determine viscocity of liquid.	-Viscocity apparatus	-	-Viscocity apparatus-1
6	To determine Archimedes Principle.	-Hydrostatic balance with weight box	-	- Hydrostatic balance with

				weight box-1
7	To determine law of floatation	– Hydrostatic balance with weight box	–	– Hydrostatic balance with weight box–2
11	To explain Dopplers effect.	-Doppler's effect demo device	-	-Doppler's effect demo device-1
12	-To compare frequencies of different tuning fork/ sound in resonance condition. - To determine velocity of sound in air.	-Resonance tube	-Resonance tube-1	- Resonance tube- 1
13	To measure linear expansivity of solid.	-Pullinger's Apparatus	-	- Pullinger's Apparatus-1
14	To measure thermal conductivity of solid.	-Searle's Apparatus	-	-Searle's Apparatus-1
15	To measure specific heat capacity of solid.	-Regnault's Apparatus	-	- Regnault's Apparatus-1
16	To measure relative humidity.	-Hygrometer + max -Minimum Thermometer -Barometer	-	- Hygrometer + max - 1 -Minimum Thermometer -1 - Barometer - 1
17	To verify Joule's law of heating.	-Joule's law of heating apparatus.	-	-Joule's law of heating apparatus - 1
18	To determine image and object distance.	-Optical Bench -Lens (concave/convex)	-	-Optical Bench -1 - Lens

				(concave/convex) - 2
	To study refraction and reflection of light	– optical bench		optical bench-3
19	To determine lateral shift.	-Glass Slab	-Glass Slab - 10	-
20	To study diffraction pattern.	-Plane diffraction grating -Monochromatic source of light) sodium light	-	-Plane diffraction grating -1 -Monochromatic source of light) -1
21	To verify Ohms law.	-Ohm's law set -Multimeter	-Ohm's law set -1 -Multimeter - 1	-
22	To determine A.C. frequency.	-Sonometer	-Sonometer-1	-Sonometer - 1
	To study electric bell	– electric bell	–	electric bell-2
23	To study Step – up and down transformer.	-Step up transofrmers -Step down transofrmers	-	-Step up transformers - 1 -Step down transformers - 1
24	To study motor effect.	-DC motor and A.C. motor with DC/AC supply	motor with DC/AC supply- 1	-
25	To study about dynamo and internal resistance of cell.	-Dynamo -Potentiometer -PO Box Rheostat	Potentiometer - 1 -PO Box -2 Rheostat -1	-Dynamo - 1
26	To verify Faraday's Law.	-U shaped magnet - horse shoe magnet – bar magnet -Compass Needle	-U shaped magnet -2 - horse shoe magnet -2 Bar Magnet - 5 -Compass Needle -10	-

27	To find magnetic moment of bar magnet.	-Deflection magnetometer	-Deflection magnetometer -1	-Deflection magnetometer -1
28	To find time period and magnetic moment of bar magnet.	-Oscillation Magnetometer	-	-Oscillation Magnetometer -1
29	To study star and planets.	-Telescope	-Telescope -1	-
30	To study AC oscillation nature.	-Oscilloscope	-Oscilloscope -1	-
31	To study working of solar heater	– Solar heater model	–	– Solar heater model -2

BIOLOGY

SN	**Experiments**	**Equipment's**	**Available Quantity**	**Required Quantity**
1	Study of permanents slides and specimens.	-Several slides of protozoans and museum specimens (Protozoa to Mammalia)	-1 – 1 Slide each	-2 – 2 Slide each
	To study permanent slide cell division	permanent slides of plant and animal cell	–	3–3 specimens each
2	Preparation of temporary slides.	Museum Specimens of Animals	-1 – 1 Specimen each	-2 – 2 Specimens each
3	Preparation of temporary slides of Onion cell.	-Microscope -Slide -Safranin -Iodine -Solution & its bottles	-Safranin -1 -Iodine -1 -Solution & its bottles - 4	-Safranin -4 -Iodine -4 -Solution & its bottles -4
4	Preparation of temporary slides of Tradescantia plant.			
5	Preparation of temporary slides of Geranium plant.			
6	Study of Adaptional features of animals.	-Flying fishes -Frog -Wall Lizard -Pigeon & set (specimens)	1 each	1 each
7	Histological slides of frog (T.S.	-Different slides of	10 Pieces	15 pieces

	of oesophagus, intestine, lungs, pancreas, kidney, ovary, testis.	frog		
8	Disection of Earthworm.	-Disecting box & Tray	1 each	1 each
9	Disection of Frog.	-Disecting box & Tray	1 each	1 each
10	Disection of Rat.	-Disecting box & Tray	1 each	1 each
11	Observation of different animal tissues using permanent slides.	-Different animalslides (squamous, kidney, lungs, testis, ovary and VS of skin)	-	1 each
12	Study of Skeleton of Human Beings.	-Human Skeleton	-Human Skeleton -3	-Human Skeleton -2
13	Study of Skeleton of Rabbit.	-Rabbit Skeleton	-	-Rabbit Skeleton -1
14	Determination of blood Groups.	-Beaker of different size -Testubes -Holders -Droppers	-Beaker of different size -3 -Testubes -3 -Holders-3 -Droppers-3	-
15	Determination of sugar level through urine test.			
16	Evolution of oxygen during photosynthesis.	-Ganong's photometer	-Ganong's photometer -2	-
17	Necessity of chlorophyll for photosynthesis.	-Wide mouth bottle	-Wide mouth bottle - 3	-
18	Necessity of CO2during aerobic respiration.			
19	To observe DNA model of Human Being.	-DNA Model	-DNA Model -2	-
20	Fermentation of different plant beans.	-Fermentor	-Fermentor -2	-
21	Observation of common bacterial growth.	-Bacterial growth incubator	-Bacterial growth incubator -2	-
22	Blood Pressure Measurement.	-Spygmomanometer -Sthethescope	-Spygmomanometer -1 -Sthethescope -1	-
23	Oxygen Pulse Measurement.	-Oxymeter	-Oxymeter -1	-
24	Heart Beat Measurement.	-Oxymeter		

CHEMISTRY

SN	Experiments	Equipments	Available Quantity	Required Quantity
1	Separate soluble & insoluble solids.	-Porcelian Basin, Tipod Stand & Wire Gauze, Funnel & Filter papers, Beaker, Test tubes, Asbestos Sheet, Burner, Conical Flask, Water Trough, Glass Retort	5Each	10 Each
2	Separate volatile & non-volatile solids (sublimation).			
3	Separate two insoluble solids.			
4	Separate pure water from impure water.	-Round bottom flask, Condensor	2 Each	5 Each
5	Obtain pure crystal by crystallization.			
6	Neutralization reaction between acid and base to obtain crystal of salt.	-Beaker, Funnel, Filter Paper, Glass rod, Porcelian Basin, Tripod Stand, Wire Gauze, Test Tubes	2 Each	3 Each
7	Precipitation reaction between BaCl2 &Di.l H2SO4.			
8	Oxidise Ferrous to Ferric ion (Redox reaction).			
9	Preparation of Hydrogen Gas.	-Woulfe's Bottle, Thistle Funnel, Gas Jar, Water Trough, Beehive Self, Corks, Kipp's Apparatus	2 Each	3 Each
10	Preparation of Carbon Doixide Gas.			
11	Preparation of Hydrogen Sulphide Gas.			
12	Determination of weight of given piece of metal.	-Analytical Balance, Eudiometer Tube, Clamp, Short Stem Funnel, Tall Jar, Thermometer	3 Each	2 Each
13	Determination of equivalent weight of given metal.			
14	Determine solubility of given soluble salt.			
15	Identify Acid radicalsby both dry & wet ways (4 tests).	-Test Tubes, Measuring Cylinder,		

		Test tube stands & holders, Delivery tube, Forks	2 Each	2 Each
16	Detect CI-, SO4-- & CO3—in tap & distilled water.			
17	Identify Basic radicals by both dry & wet ways. (4 tests).			
18	Detection of Oxygen.	-Sodium Fusion Tube, Porcelain Basin, Filter Paper, Funnel Burner, Tripod Stand, Test Tube & Holders	1 Each	2 Each
19	Detection of Nitrogen.			
20	Detection of Halogens.			
21	Detection of Phosphorous.			
22	Standardize decinormal solution of HCL with sodium carbonate solution.	-Beaker, Conical Flask, Volumetric Flask, Pipette, Chemical Balance, Burette	1 Each	2 Each
23	Standardize the bench Sulphyric acid against NaOH.			
24	Standardize KMnO4 solution against oxalix acid.			
25	Identify the Alcohol.	-Test Tubes & its holders, Porcelain Basins, Beakers, Glass Rods	2 Each	2 Each
26	Identify Carboxylic Acid.			
27	Identify Ether.			
28	Identify Aldehyde.			

Action Plan

S.N	Activities	Date	Day count	Involvement	What To Do?	How
1.	Arranged meeting with committee members for the discussion of proposal	5 Feb 2023	10 days	Committee members	Arranging a meeting	Discussion

2.	Writing proposals for science lab	15 - 20 Feb 2023	5 days	Coordination mentor with the help of school	Writing proposals	Writing Or typing
3.	Forwarding proposals	5 March 2023	15 days	CM and school committee	Forwarding either by mail or visiting office	Email/ visiting
4.	Visit store for the research of equipment	20 March 2023	15 days	CM and school committee	Visit Store	Research about equipment
5.	Ordering the equipment from store	30 March 2023	10 days	CM and school committee	Ordering the equipment	Visit store
6.	Installing equipment in the science lab	5 – 8 April 2023	4 days	Committeee members and school management	Installing the science equipments in science lab	Arranging materials in lab
7.	Running Practical classes	April 15 Onwards	……..	Teachers and students	Experiments and Demonstration	Lab task or activities

Budgeting

Physics

S.N.	Description	Pack	Qty.	Unit Price
1	Ammeter /Voltmeter/ Galvanometer	Pc	1	945.00
2	Aneroid Barometer	Pc	1	1,518.00
3	Bar Magnet 2"	Pc	1	200.00
4	Bar Magnet 3"	Pc	1	250.00
5	Bar Magnet 4"	Pc	1	380.00
6	Battery Box for 2 Cells	Pc	1	260.00
7	Bicycle Dynamo	Pc	1	3,113.00
8	Bulb Holder	Pc	1	11.00
9	Color Fitter- Primary Set of 3	Pc	1	230.00
10	Color Fitter- Secondary Set of 3	Pc	1	230.00
11	Common Balance (Top Pan Balance)	Set	1	1,160.00
12	Compass Magnetic 42mm dia.	Pc	1	250.00
13	Connecting Wire DCCgm	Coil	1	2,475.00
14	Convex/ Concave Lens 2" F.L. Different Size	Pcs	1	106.00
15	Convex/ Concave Mirror 2" F.L. 15cm	Pcs	1	85.00
16	Copper Wire	Roll	1	750.00
17	Cork Rubber No. 3,4,6,9	Pcs	1	24.00
18	Cork Rubber No. 7,9,11	Pcs	1	40.00
19	Crocodile Clip Red/ Black	Pc	1	29.00
20	Cylindrical Magnet	Pc	1	193.00

21	Dip Needle	Pc	1	286.00
22	Drawing Board 12"X18" Cork Sheet	Pcs	1	1,290.00
23	Dry Cell 1.5V	Pcs	1	53.00
24	Dynamo Model	Pc	1	1,056.00
25	Electric Bell Demonstration	Pc	1	1,600.00
26	Electric Motor	Pc	1	1,386.00
27	Electrolysis Set	Set	1	289.00
28	Electromagnets	Pc	1	1,037.00
29	Electroplating Set	Set	1	1,103.00
30	Flashlight Bulb	Pc	1	20.00
31	Foot Ball Pump	Pc	1	798.00
32	Force Pump (Model Glass)	Pc	1	715.00
33	Fortin's Barometer without Mercury	Pc	1	8,650.00
34	Geometry Box for Black Board	Set	1	2,250.00
35	Glass Slab 75X50X18 mm	Pcs	1	177.00
36	Helicle Spring	Pc	1	380.00
37	Horse Shoe Magnet 2"	Pc	1	396.00
38	Horse Shoe Magnet 4"	Pc	1	273.00
39	Hydraulic Press	Pc	1	2,365.00
40	Hydrometer	Pcs	1	350.00
41	Kinetic Trally Complete	Pc	1	7,150.00
42	Lactometer	Pc	1	280.00
43	Laser light	Pc	1	510.00

44	Lift Pump Model	Pc	1	798.00
45	Manometer	Pc	1	2,450.00
46	Mass Analytical (Weight Box)	Set	1	1,525.00
47	Measuring Tape	Pc	1	40.00
48	Metal Bob 18mm Brass	Pc	1	180.00
49	Meter Scale Wooden 1 Mtr.	Pc	1	160.00
50	Meter Scale Wooden 1/2 Mtr.	Pc	1	127.00
51	Micrometer 25cm	Pc	1	604.00
52	Multimeter, Digital	Pc	1	850.00
53	Newton Color Disc on Stand	Pc	1	1,350.00
54	Newton's Ring & Ball Apparatus	Pc	1	1,045.00
55	Overflow Can (Eureka Metal Can)	Pc	1	270.00
56	Physical Balance	Set	1	6,000.00
57	Pin Hole Camera	Pc	1	1,050.00
58	Pith Ball on Stand	Pc	1	467.00
59	Plano Convex Lens 2" f.l. 15,25cm	Pc	1	115.00
60	Prism 38 X 38 mm	Pcs	1	145.00
61	Prism 50X50mm	Pc	1	150.00
62	Prism Right Angle	Pc	1	130.00
63	Pulleys (Double) With Metal Frame	Pc	1	594.00
64	Pulleys (Single) With Metal Frame	Pc	1	330.00
65	Pulleys (Triple) With Metal Frame	Pc	1	858.00
66	Ray Box	Pc	1	1,208.00

67	Ring Magnet	Pc	1	110.00
68	Rod Magnet 3"	Pc	1	226.00
69	Simple Cell (Lechlanche)	Pc	1	650.00
70	Solar Energy Kit	Pc	1	3,843.00
71	Solar Pannel (Model)	Pc	1	5,610.00
72	Sonometer	Pc	1	3,632.00
73	Spherometer	Pc	1	604.00
74	Spring Balance 1Kg.	Pcs	1	163.00
75	Stop Clock	Pc	1	1,260.00
76	Stopwatch, Digital	Pc	1	980.00
77	Switch Small	Pc	1	48.00
78	Thermocouple	Pc	1	633.00
79	Triple Beam Balance 311gm	Set	1	4,796.00
80	Tunning Fork (480/384/320)Hz	Pc	1	280.00
81	U Shaped Magnet 2"	Pc	1	110.00
82	Vernier Calliper 12.5cm	Pc	1	604.00
83	Wall Thermometer	Pc	1	523.00
84	Water Pump (Model Glass)	Pc	1	715.00
85	Wheel & Axle	Pc	1	1,452.00

91,348.00

Chemistry

S.N.	Description	Pack	Qty.	Unit Price
1	Asbestos Sheet 6"X6"	Pcs	1	60.00

2	Beehive Shelf 3"	Pcs	1	84.00
3	Bunsen Burner with Stopcork	Pcs	1	781.00
4	Clinical Thermometer	Pc	1	55.00
5	Copper Plate With Terminal	Pc	1	142.00
6	Cork Borer Set of 6	Pcs	1	330.00
7	Crucible Tong 8"	Pcs	1	80.00
8	Digital Thermometer	Pc	1	450.00
9	Dissecting Needle	Pcs	1	33.00
10	Filter Paper 11cm Dia.	Pkts.	1	111.00
11	Funnel Clamps	Pcs	1	209.00
12	Gas Jar With Cover	Pcs	1	215.00
13	Gas Tap 2Way	Pcs	1	869.00
14	Indicator pH Paper	Pc	1	645.00
15	Iron Stand + Clamps & Bosshead	Pcs	1	1,465.00
16	Laboratory Thermometer Alcohol	Pc	1	160.00
17	Laboratory Thermometer Mercury	Pc	1	160.00
18	Litmus Paper Red/ Blue	Pcs	1	138.00
19	Magnetic Compass 18mm	Pcs	1	45.00
20	Maximum Minnimum Thermometer	Pc	1	830.00
21	Mortar & Pestle 3"	Pc	1	260.00
22	pH Meter Pen Type	Pc	1	2,915.00
23	pH Paper	Pc	1	707.00
24	Pipette Bulb, Rubber	Pc	1	35.00

25	Porcelain Basin 3"	Pcs	1	70.00
26	Retort Ring 2.5"	Pc	1	120.00
27	Ring & Ball Apparatus 18mm "Brass"	Pcs	1	396.00
28	Rubber Tubing 5/6/7mm	Coil	1	850.00
29	Sand Bath	Pcs	1	110.00
30	Scissor 5"	Pcs	1	138.00
31	Spatula 6"	Pc	1	74.00
32	Spirit Lamp 120ml	Pcs	1	286.00
33	Syringe 5ml	Pcs	1	8.00
34	Test Tube Holder	Pcs	1	83.00
35	Thistle Funnel (Large)	Pcs	1	127.00
36	Triangular File "	Pcs	1	149.00
37	Tripod Stand 7" X 5"	Pc	1	230.00
38	U- Shaped Magnet 4"	Pcs	1	869.00
39	Watch Glass 75mm	Pcs	1	20.00
40	Weighing Machine	Pc	1	2,600.00
41	Wire Guage 6"X6"	Pcs	1	40.00
42	Zinc Plate With Terminal	Pc	1	116.00

17,065.00

Chemicals

S.N.	Description	Pack	Qty.	Unit Price
1	Alcohol	450ml	1	330.00
2	Ammonium Chloride	500gm	1	960.00

3	Ammonium Sulphate	500ml	1	649.00
4	Calcium Carbonate	500gm	1	743.00
5	Calcium Chloride	500gm	1	693.00
6	Calcium Hydroxide	500gm	1	704.00
7	Calcium Sulphate	500gm	1	633.00
8	Copper Metal Turning	500gm	1	2,541.00
9	Copper Metal Turning	100gm	1	650.00
10	Copper Sulphate	500gm	1	1,584.00
11	Ethanol	500ml	1	825.00
12	Glycerine	500ml	1	1,200.00
13	Hydrochloric Acid	500ml	1	836.00
14	Hydrogen Peroxide 6%	Lit.	1	790.00
15	Iodine Solution	125ml	1	358.00
16	Iron Dust	500gm	1	352.00
17	Lime Water	500ml	1	350.00
18	Liqure Ammonia	500ml	1	446.00
19	Magnessium Carbonate	500gm	1	1,059.00
20	Magnessium Chloride	500gm	1	567.00
21	Magnessium Ribbon 25gm	Coil	1	809.00
22	Magnessium Sulphate	500gm	1	803.00
23	Manganese Dioxide	500gm	1	828.00
24	Marble Chips	500gm	1	350.00
25	Methyl Orange Solution	125ml	1	410.00

26	Nitric Acid	500ml	1	980.00
27	Phenolphthalain Solution	125ml	1	420.00
28	Potassium Chloride	500gm	1	729.00
29	Potassium Hydroxide Flakes	500gm	1	1,243.00
30	Potassium Nitrate	500gm	1	1,191.00
31	Potassium Sulphate	500gm	1	770.00
32	Safranine	125ml	1	702.00
33	Sodium Chloride	500gm	1	446.00
34	Sodium Hydroxide Flakes	500gm	1	809.00
35	Sodium Nitrate	500gm	1	867.00
36	Sodium Nitrite	500gm	1	1,037.00
37	Sulphuric Acid	500ml	1	910.00
38	Universal Indicator Solution	125ml	1	374.00
39	Zinc Metal Granular	250gm	1	2,453.00
40	Zinc Metal Granulated "P"	500gm	1	3,515.00
41	Zinc Sulphate	500gm	1	981.00

36,897.00

Biology + Geology

S.N.	Description	Pack	Qty.	Unit Price
1	Astronomical Telescope	Set	1	6,500.00
2	BVP Chart 100X120cm	Pc	1	2,156.00
3	BVP Chart 60X90cm	Pc	1	1,460.00
4	Charts of Different Plants & Animals (Polyart)	Pcs	1	890.00

5	Coverslip 18X18mm	Pkts.	1	135.00
6	Day & Night Apparatus Mannual	Set	1	2,475.00
7	Day & Night Motorized	Set	1	3,200.00
8	Disecting Box	Set	1	1,440.00
9	Disecting Tray 12" X 14"	Pc	1	1,466.00
10	Disposable Syringe 5ml	Pc	1	8.00
11	Dissecting Microscope	Set	1	2,915.00
12	Forceps 5"	Pc	1	165.00
13	Four Season Apparatus Motorized	Set	1	4,000.00
14	Glass Slide Plain	Pkts.	1	198.00
15	Hand Lens 2"	Pcs	1	143.00
16	Hand Lens 3"	Pc	1	357.00
17	Human Skeleton Full Size	Pc	1	5,348.00
18	Microscope Slide Plain	Pc	1	213.00
19	Model of Human Heart/ Ear/ Lungs/ Skull/Brain/ Eye	Pc	1	1,162.00
20	Model of Human on Board Lungs/Kidney/Digestive/Circulatory/ Heart/Eye/Brain/ Skull/ Respiratory System	Pcs	1	1,675.00
21	Model of Human Torso	Pc	1	10,615.00
22	Model of Rocks & Minerals	Set	1	1,815.00
23	Modern Periodic Table	Pcs	1	1,420.00
24	Museum Specimen In Gas Jar Common	Pc	1	690.00
25	Permanent Slides	Pcs	1	88.00
26	Petridish 4"	Pcs	1	254.00

27	Phases of Moon Motorized	Set	1	4,048.00
28	Season Apparatus Mannual	Set	1	3,135.00
29	Slide of Amoeba	Pcs	1	132.00
30	Solar & Lunar Eclipse Manual	Set	1	2,706.00
31	Solar System Mannual	Set	1	3,135.00
32	Solar System Motorized	Set	1	3,400.00
33	Student Microscope (Compound) (VN-5)	Set	1	9,800.00

77,144.00

Glass Wares

S.N.	Description	Pack	Qty.	Unit Price
1	Beaker 1 Litr.	Pcs	1	700.00
2	Beaker 100ml	Pcs	1	190.00
3	Beaker 250ml	Pcs	1	200.00
4	Beaker 500ml	Pcs	1	315.00
5	Beaker 50ml	Pc	1	175.00
6	Bell Jar 8"X4"	Pc	1	989.00
7	Condenser Lie Big 300mm	Pc	1	874.00
8	Conical Flask 250ml	Pc	1	320.00
9	Delivery Tube	Pc	1	23.00
10	Funnel 2.5"	Pc	1	250.00
11	Gas Jar With Cover 5X15cm	Pc	1	167.00
12	Glass Beads	Pkt.	1	431.00
13	Glass Funnel 2.5"	Pcs	1	330.00

14	Glass Retort 250ml	Pc	1	776.00
15	Glass Rods	Pcs	1	28.00
16	Glass Tube	Kg	1	396.00
17	Glass Tube 1Mtr.	Pc	1	23.00
18	Hard Glass Test Tube 25X150 mm	Pcs	1	72.00
19	Measuring Cylinder 100ml	Pcs	1	990.00
20	Measuring Cylinder 500ml	Pcs	1	2,393.00
21	Measuring Cylinder 50ml	Pcs	1	867.00
22	Reagent Bottle 250ml	Pc	1	305.00
23	Round Bottom Flask 250ml	Pc	1	316.00
24	Test Tube 18X150mm	Pcs	1	48.00
25	Test Tubes 12X100mm	Pc	1	16.00
26	Test Tubes 15X125mm	Pc	1	23.00
27	Test Tubes 25X150mm	Pc	1	53.00
28	Thistle Funnel	Pc	1	71.00
29	Volumetric Flask 250ml, Glass	Pc	1	851.00
30	Woulf's Bottle 250ml	Pc	1	776.00

12,968.00

Plastic Wares:

S.N.	Description	Pack	Qty.	Unit Price
1	Atomic Model Junior	Pc	1	1,900.00
2	Beaker 1000ml	Pc	1	185.00
3	Beaker 250ml	Pc	1	

				80.00
4	Beaker 500ml	Pc	1	110.00
5	Funnel 3"	Pc	1	50.00
6	Gas Jar With Cover	Pc	1	134.00
7	Measuring Cylinder 100ml	Pc	1	110.00
8	Measuring Cylinder 250ml	Pc	1	240.00
9	Measuring Cylinder 500ml	Pc	1	365.00
10	Measuring Jug 1000ml	Pc	1	220.00
11	Measuring Jug 500ml	Pc	1	150.00
12	Petridish 100mm	Pc	1	55.00
13	Sample Container	Pc	1	27.00
14	Spatula	Pc	1	30.00
15	Test Tube Stand for 6 holes and 6 pegs, Poly	Pc	1	130.00
16	Wash Bottle 250ml	Pc	1	190.00
17	Water Trough 200X100mm, Poly	Pc	1	385.00

4,361.00

Amount Summary

S.N.	Particulars	Amount
1	Physics	91,348.00
2	Chemistry	17,065.00
3	Chemicals	36,897.00
4	Biology+Geology	77,144.00
5	Glass Wares	12,968.00
6	Plastic Wares	4,361.00
7	13% VAT	31,171.79
9	Project Management	58,391.21
	Total	**329,346.00**

1. Monitoring/Evaluation

The teachers will keep a close eye on all of our activities and resources. Every teacher is required to report on their experiments and activities to their coordinators, and all of this information is then forwarded to the principal.

2. Committee Members:

a. Deepika Pandit (CM) - Leader
b. Mr. Bijay Jit Kunwar (Managing Director) - Leader
c. Mr. Dipendra Basaula (School Coordinator) - Leader
d. Mr. Keshav Acharya (Science Teacher) – Member
e. Mr. Hikmat Jit Kunwar (Teacher, Biology) – Member
f. Ms. Binu Thapa (Primary Science Teacher) – Member
g. Ms. Sudipa Shakya (Math Teacher) – Member
h. Ms. Usha Niraula (Secondary Science Teacher) – Member
i. Kristina Raut (LSF/E4E Girl) – Member
j. Sunidhi Shrestha (LSF/E4E Girl) – Member