

## Complete Lab Setup Guide

*From School Practicals to Research Labs*

Building a safe, efficient laboratory starts with the right tools. This guide organizes 50 common apparatus into starter kits, extended tools, and safety essentials—so you can move seamlessly from learning to procurement.

### 20 Essential Apparatus for Every Lab

These core tools cover measurement, mixing, heating, and safety—perfect for schools and colleges.

-  **Beaker** – Mixing, heating, and rough volume handling
-  **Conical flask (Erlenmeyer)** – Swirling solutions without spillage, titration setups
-  **Volumetric flask** – Preparing precise standard solutions
-  **Graduated cylinder** – Accurate liquid measurements
-  **Burette** – Controlled dispensing for titrations
-  **Pipette (volumetric/transfer)** – Precise aliquoting of liquids
-  **Test tubes with rack** – Reactions, heating small volumes, safe storage
-  **Dropper** – Dispensing small drops of reagents
-  **Watch glass** – Evaporation, covering beakers
-  **Funnel with filter paper** – Filtration and transfer
-  **Crucible with lid** – Strong heating of solids
-  **Evaporating dish** – Solvent evaporation and concentration
-  **Tongs / test tube holder** – Safe handling while heating
-  **Tripod stand with wire gauze** – Stable heating platform
-  **Bunsen burner or spirit lamp** – Flame heating
-  **Thermometer** – Temperature measurement
-  **pH paper / indicator** – Quick acidity or alkalinity checks
-  **Safety goggles and lab coat** – Personal protection

 [Shop Glacier India's Starter Kits → Glassware | Plasticware | Safety](#)

### Extended Tools for Advanced Practicals

As experiments advance, precision and safety become critical. These tools support higher-level chemistry, biology, and physics labs.

-  **Retort stand with clamp** – Secure apparatus setups

-  **Separatory funnel** – Liquid–liquid extraction
-  **Condenser (Liebig)** – Distillation cooling
-  **Round-bottom flask** – Heating under reflux
-  **Buchner funnel with vacuum pump** – Filtration under pressure
-  **Microscope with slides** – Basic microscopy
-  **Autoclave** – Sterilization of equipment
-  **Balances (digital)** – Accurate mass measurement
-  **pH meter** – Precision pH readings
-  **Fume hood access** – Hazardous vapors control

### Safety Checklist

Every lab must be equipped with:

-  PPE (goggles, coat, gloves)
-  Fire extinguisher
-  Eyewash station
-  First-aid kit
-  Sharps container
-  Clear labeling and reagent storage

 *Need a custom kit? Share your lab list—we'll curate a package aligned to your curriculum.*