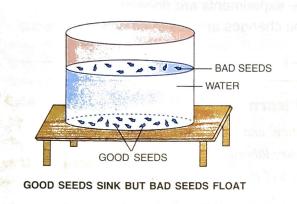


A farmer puts some seeds into a beaker full of water. He observes that most of the seeds sink and a few seeds stay afloat. It is believed that the seeds that remain afloat are bad ones and those which sink to the bottom are the good seeds. This method helps farmers to separate the good seeds from the bad ones. Such separation is possible only because of proper and careful observation.



## Experiment:

Chemistry is the branch of science which is mostly based on experiments. An experiment erformed under controlled conditions is an ectivity where we observe a natural or an entificially created phenomenon.



Take three glasses, A, B and C. Glass A contains hot water, glass B has lukewarm water and glass C contains cold water. Put one of your fingers in glass A and a finger of the other hand in glass C for sometime. Now, put both fingers in glass B.

## What do you feel?

You will feel different sensations in your two fingers. The water in glass B feels warmer to the finger kept in cold water in glass C whereas it feels cooler to the finger kept in hot water in glass A. This is an experiment carried out to understand a particular phenomenon. This simple activity helps us to draw the scientific conclusion that the hotness or coldness of a substance is a relative term.



## LABORATORY

A chemical laboratory (or a chemistry laboratory) is a place to perform experiments, observe chemical processes and to analyse results.

The following facilities should be provided to perform experiments.

1. Working Table: A chemical laboratory has special kinds of tables. Each table is fitted with a gas tap, a sink, a reagent shelf and a waste-paper basket. There is also a side shelf for keeping glassware apparatus and a fume closet.

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- 2. Reagent Shelf: All reagents and chemicals should be properly kept on the shelf with labels on every bottle so that there should not be any confusion while using the reagents.
- 3. Exhaust Fan: These fans are fitted near the roof of the walls to expel poisonous gases and fumes so that one can comfortably work for a longer time in the laboratory.
- 4. Balance Room: Every laboratory parate room where a number physical and chemical balances are for weighing chemicals. This room kept dust-free and smoke-free accurate measurements.

A good chemical laboratory must the apparatus and equipments as shown the previous page.

Table 2.1: Showing names, descriptions and uses of apparatus

S.No.	Name of apparatus	Description	Use
1.	Test tube	Made of hard or pyrex glass.	Used to conduct tests with sm quantities of chemicals, for heating and boiling purposes.
2.	Test tube stand	A rack made of wood or plastic.	To keep test tube in an organised manner.
3.	Test tube holder	Metallic rod with a clamp at one end and a handle at another end.	To hold test tubes while they are heated up.
4.	Beaker	Made of glass and available in different sizes.	For preparation and keeping of solutions.
5.	Flask	Made of glass. Three types of flask are the most common: round-bottom, flat bottom and conical.	Used during experiments to hold sufficient quantities of substance.