

Water Rocket Designing Workshop

Objective:

A water rocket is a type of model rocket using water as its reaction mass. Water rockets at schools help students understand the principles of aeronautics. Designing, building, flying & landing a water rocket provides students with a real-world application of the scientific method.

Session 1: Introduction to Rockets

- Fundamental of Rockets
- Newton's Laws of Motion
- Relationship between Work and Energy
- Aerodynamic Forces

Session 2: Introduction to water Rocket

- Introduction to water Rockets
- Understanding different parts of Rockets
- Understanding launching & firing mechanism of Rocket
- Comparison of the mechanism involved in Parachute landing

Session 3: Rocket Design & Engineering

- Choosing a bottle
- Making the rocket First Stage propulsor
- Making a nose cone
- Making Rocket Fins
- Making a simple parachute

Session 4: Construction of Water Rocket

- Construction of water Rocket
- Construction of Parachute for Water Rocket

Session 5: Rocket Launche

- Making a tube launcher
- Simple plug launcher
- Different types of launching systems.
- Multi-Stage Rockets
- **Attaching parachute to water Rocket**

Session 6: Firing the Water Rocket

Session 7: Competition

- Query
- Competition
- Certificate Distribution