

The Spoken Tutorial project

- Self explanatory: uses simple language
- Audio-video: uses multisensory approach
- Small duration: has better retention
- Learner-centered: learn at your own pace
- Learning by doing: learn and practice simultaneously
- Empowerment: learn a new FOSS

Target group

- School students
- Undergraduates/Postgraduates
- Research scholars
- Teachers

The Spoken Tutorial Project Team conducts workshops Vlabs and on several FOSS using spoken tutorials and gives certificates to those who pass an online test.

For more details, please write to contact@spoken-tutorial.org

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Contact Us

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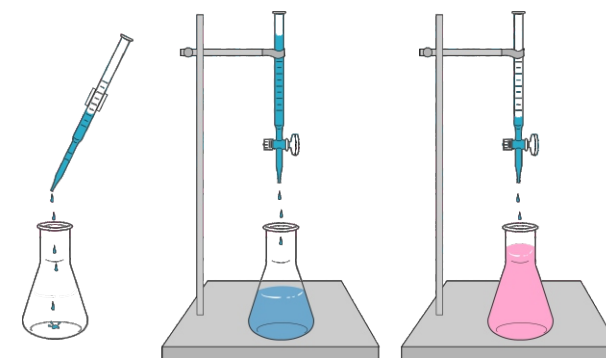


Spoken Tutorial

<http://spoken-tutorial.org>



ChemCollective Vlabs



National Mission on Education through Information and Communication Technology (NMEICT)

www.sakshat.ac.in

Funded by MHRD, Government of India

Introduction

The ChemCollective Virtual Lab is an online simulation of a chemistry lab.

It is designed to help students link chemical computations with authentic laboratory chemistry.

ChemCollective virtual labs are part of National Science Digital Library (NSDL).

<https://nsdl.oercommons.org>

Download and Installation

- The Virtual Lab will run on the following operating systems:

Ubuntu Linux, Mac OS 10.5 and higher, Windows XP, Vista, Windows7 and Windows 10.

- ChemCollective virtual labs are available in both online and offline mode.
- HTML5 based version of the virtual lab is available for online use.
- For offline mode please use the Download link given below.

Download link:

http://chemcollective.org/vlab_download



Features

- ChemCollective virtual labs software is available free of charge to all educators and students.
- Teachers and students can use it on the web without any licensing requirements.
- The lab allows students to select from hundreds of standard reagents (aqueous) and manipulate them in a manner resembling a real lab.
- Lab experiments in the following concepts are available as virtual labs.
 1. **Stoichiometry:** Mole, Molarity and Density, Reaction Stoichiometry and Limiting Reagents
 2. **Thermochemistry:** Energy and Enthalpy
 3. **Equilibrium:** LeChatlier's Principle, Equilibrium Calculations
 4. **Acid-Base chemistry:** Strong Acids and Bases, Weak Acids and Bases, Buffer Solutions, Acid/Base Titrations
 5. **Solubility:** Solubility Product
 6. **Oxidation/Reduction and Electrochemistry:** Standard Reduction Potentials
 7. **Analytical chemistry/Lab Techniques:** Acid/Base Titrations, Gravimetric Analysis

Uses

- Simulation-based exercises offer new ways to promote learning and motivation.
- Interactive exercises can allow students to explore and reinforce fundamental concepts.
- It will help students learn basic laboratory techniques without wastage of chemicals and breakage of apparatus.
- Teachers can use Vlabs as pre-lab exercise and as classroom activities for individuals or teams.
- Students can review and learn chemistry concepts using virtual labs.
- In case where experiments are to be done quickly, virtual labs allows careful observation and safe measurement of parameters.
- They are useful where experiments involve risks to the health and physical integrity of learners.
- They are available all around the year, as opposed to school laboratories, limited to a specific place and for a limited time.
- Virtual labs are cheaper, faster, less risky and more affordable than the real process.

