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

- Undergraduates/Postgraduates
- Research scholars
- Teachers

The Spoken Tutorial Project Team conducts workshops on PhET and 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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is funded by the
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Communication Technology, Ministry of
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Contact Us
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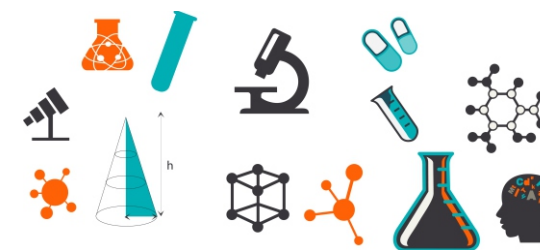Website: http://spoken-tutorial.org

IIT Bombay

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Spoken Tutorial
http://spoken-tutorial.org

PhET
INTERACTIVE SIMULATIONS
University of Colorado Boulder

National Mission on Education through
Information and Communication Technology
(NMEICT)
**http://www.sakshat.ac.in**

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Introduction

- PhETs are interactive simulations covering topics in physics, chemistry, mathematics, biology, environmental sciences etc. for elementary, middle, High School and university levels.
- PhET Simulations are open source and hence free for all students and teachers.
- Simulations are more effective for conceptual understanding.
- The focus of the simulation is on understanding the concept, cause and effect and explore the simulation.
- Simulations are a great way to capture students attention.

Download and Installation

- The simulations are written in Java, Flash or HTML5 format.
- They can be run online or downloaded to your computer.
- The full **PhET Offline Website** Installer package installs a copy of the PhET website in English onto your computer.
- For offline access, you can download the simulations at the following link.
  https://phet.colorado.edu/en/offline-access
- Once installed, you do not need to be connected to the Internet to view or run any of the simulations as long as you have Java, Flash, and a web browser such as Firefox, Chrome or Internet Explorer.
- Java is required to open the Java simulations.
  Here is the link to download Java http://java.com/.
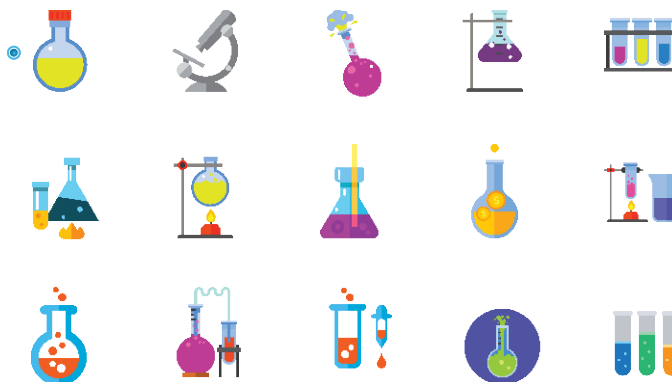
Features

- PhET provides over a 125 free simulations for teaching and learning science and mathematics.
- They are flexible easy to use and capture students attention.
- PhET simulations are fun way to learn difficult concepts .
- PhETs provide students with simulations which can be explored on their own.
- A wide variety of teaching activities have been contributed by the PhET team and its user community, they are available for teacher to adapt and use in classroom.
- Teachers can also create activity worksheets that encourage students to learn from simulations.
- PhET simulations are very effective in lecture, in class activities, lab and homework.
- They are designed with minimal text so that they can easily be integrated into every aspect of a course.
- Several tools in the simulations provide an interactive experience.

Uses

- There are many ways to use the simulation, one can use as classroom demonstration, homework, tutorials.
- It is an effective way to describe a dynamic system.
- Simulations are a great way to capture students attention.
- The simulation makes the students understand the concept and exploring the topic.
- They also help the students to co-relate the topics with real-life examples.
- Using PhETs teachers can prepare rich content for science activity.
- It can be individual or a group activity.
- They are optimized for student engagement, The activity can take up a whole class period.
- We can also create activity worksheets that encourage students to learn from simulations.