



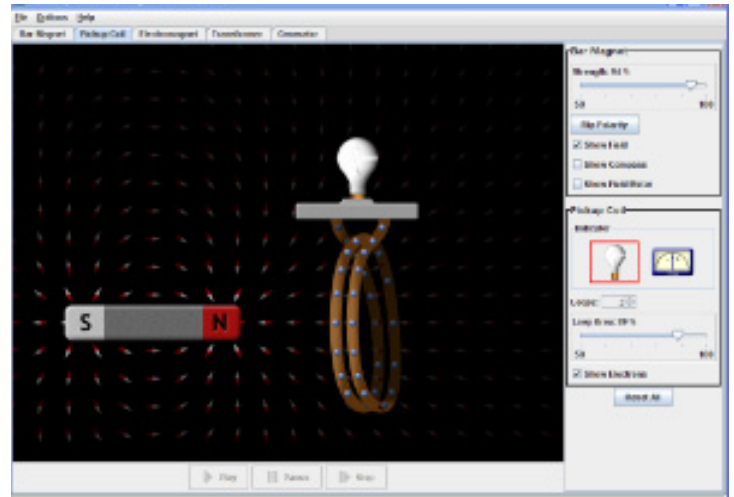
PhET Interactive Simulations



PhET Interactive Simulations are a suite of free, research-based tools that improve the way the way that physics, chemistry, biology, earth science and math are taught and learned. These interactive tools enable students to make connections between real life phenomena and the underlying science which explains such phenomena. Our team of scientists, software engineers and science educators use a research-based approach to create simulations that support student engagement with and understanding of scientific concepts. All simulations are free and easily down-loadable or can be run live from the web.

Interactive & Engaging: PhET simulations animate what is invisible to the eye through the use of graphics and intuitive controls such as click-and-drag manipulation, sliders and radio buttons. In order to further encourage quantitative exploration, the simulations also offer measurement instruments including rulers, stop-watches, voltmeters and thermometers. As the user manipulates these interactive tools, responses are immediately animated thus effectively illustrating cause-and-effects relationships as well as multiple linked representations (motion of the objects, graphs, number readouts, etc...).

Research Based: To ensure educational effectiveness and usability, all of the simulations are extensively tested and evaluated. These tests include student interviews in addition to actual utilization of the simulations in a variety of settings, including lectures, group work, homework and lab work. Our rating system indicates what level of testing has been completed on each simulation.



PhET Sims: Reaching the World

- **84 total sims** available
- **Over 400 activities for teachers** using sims
- Available in **44 languages** and counting
- **8.4 million:** Number of sims run online in 2009

How do I get PhET Sims?

All simulations are completely free and can be accessed from the PhET website in three ways:

- Download individual sims
- Download the entire website
- Run them live from the web

For more information or to use PhET Sims, visit:
www.phet.colorado.edu

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