



*Advancing science literacy and education worldwide through free interactive simulations*

**Description**

The PhET project provides over 100 interactive simulations, free of charge, to support more effective and engaging science education. PhET simulations offer an intuitive, game-like environment where students develop their conceptual understanding and build connections to the real world phenomena.

**Headquarters** Boulder, CO, USA  
USA

**Established** 2002

**Impact Areas** Worldwide

**Type** Non-Profit

**Sectors** Education

**Staff Size** 12

**Annual Budget** \$1.1 million

**Major Funders** Hewlett Foundation  
O'Donnell Foundation  
National Science Foundation

**Key Awards**

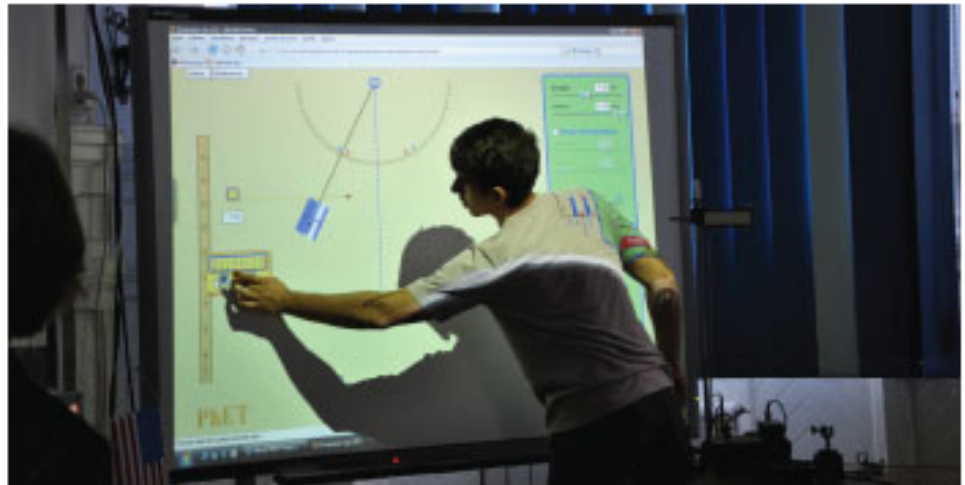
**2011** Tech Award Laureate

**2007** 1<sup>st</sup> place in NSF & Science Magazine's International Science & Engineering Visualization Challenge

**2006** MERLOT Editor's Choice Award & Physics Classics Award

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## PhET Interactive Simulations University of Colorado Boulder

### Target Market

Responding to the well-known crisis in science education (e.g. only 21% of US students graduate proficient in science), PhET targets all teachers and learners of science and math from around the world. We serve those who seek to increase interest in, access to, and learning of science and math - from elementary school through university, from traditional schools to home schools to virtual schools, and from over 200 countries and territories.

### Value Proposition

The PhET project provides over 100 interactive simulations that are based on extensive education research and support more effective and engaging science education. Each sim offers an intuitive, game-like environment where students learn through scientist-like exploration, where dynamic visual representations make the invisible visible, and where science ideas are connected to real-world phenomena. Unlike most educational software, PhET sims are free, easily translated into local languages, and available either online or offline. With their flexible design, PhET sims are used in many ways – as demos, homeworks, or inexpensive, accessible lab alternatives – and getting started is easy with our database of over 600 activities.



*"In 2011, our collection of 106 interactive simulations and 633 sim-based activities will be used more than 22 million times - advancing the teaching and learning of science and math in 64 languages around the world."*

**DR. KATHY PERKINS, DIRECTOR**



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### Milestones Achieved

- 2002** Founded by Carl Wieman with funding from his Nobel Prize (\$195K), Kavli Foundation, & NSF
- 2005** Published first study of PhET effectiveness in the classroom
- 2006** 50 sims; 1.4 million uses/ year
- 2008** Secured \$1.6M to enable easy translation of all sims and the website, and to expand sims in chemistry and other sciences
- 2010** Secured \$2.5M to develop and study sims for middle school
- 2011** Over 100 sims; 600 activities; 30 publications; 50 million uses

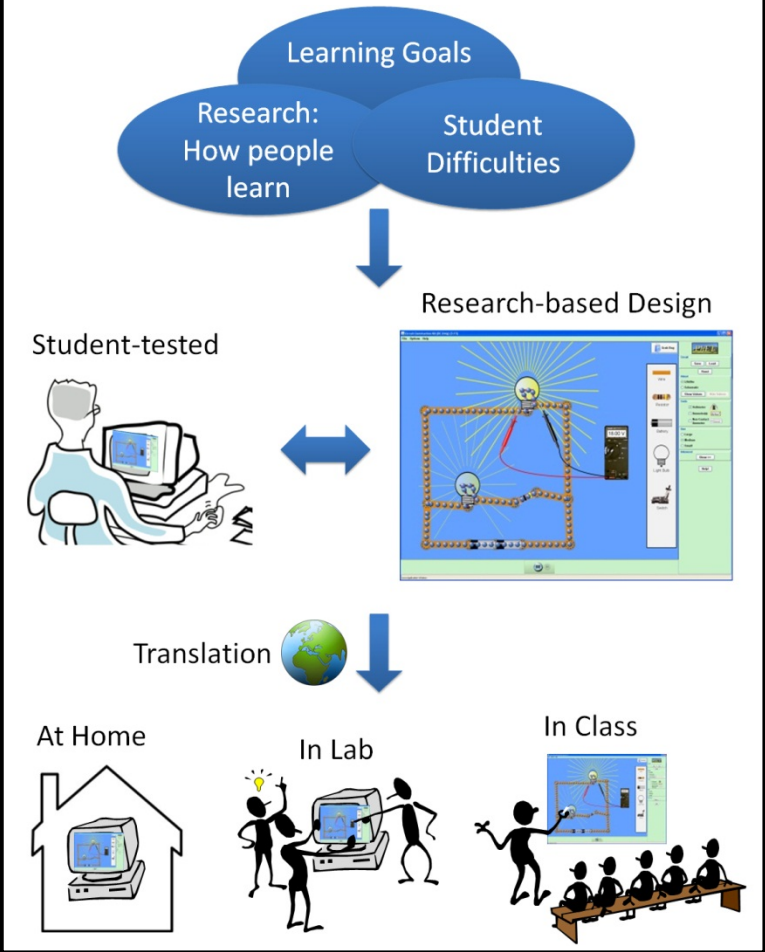
### Growth Plan

- 2012** Create new teacher professional development resources to support simulation use
- 2013** Reach 150 sims with a major new effort in middle school math
- 2014** Exceed 75 million uses/year

### Impact to Date

- 106 simulations with over 3000 translations across 64 languages
- Over 50 million sim uses worldwide
- Multiple classroom studies showing improved learning

### Technical Innovation



*"We LOVE your Circuit Construction Kit! My kids are 9 and 10 and are practically falling all over themselves to get a chance to build circuits on it. Teaching them circuits has NEVER been easier. And let me tell you, teaching littles about things they can't see and can only imagine can be very challenging. .... This is so important to them since we cannot afford to buy the electricity kits that districts in Texas with more money can afford."*

**AMY PALM  
ELEMENTARY TEACHER, DICKINSON, TX**

### Investment Required

We are seeking \$7M in grants and donations over the next 5 years to create a research-based teacher support system, to advance research on simulation use in learning, to almost double our simulations, and to grow PhET use to over 150 million uses/year.