

# Featured e-PD resources within the Learning Center



# SciGuides

supported by



GE Foundation

S.D. Bechtel, Jr.  
Foundation

THE WILLIAM AND FLORA  
HEWLETT  
FOUNDATION



U.S. Department of Transportation  
National Highway Traffic Safety  
Administration

Agilent  
Technologies  
Foundation

# Featured e-PD resources within the Learning Center



Valuable classroom resources for science teachers interested in integrating the web into their teaching

Each SciGuide consists of:

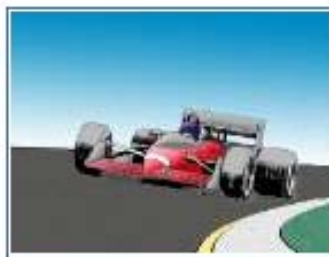
- Approximately 100 standards-aligned web-accessible resources
- customized lesson plans using selected web resources
- teacher media vignettes describing and showcasing the lessons
- samples of student work
- Interactives utilized in SciPack on same topic





## Position and Motion

Think about driving a car. We know when the car is still, when it is traveling at a constant speed and when the speed is increasing or decreasing. We know when we are getting closer to the car in front that we have to reduce our speed. When that car in front is getting close very fast, we have to reduce our speed by a great amount very quickly. Can we explain this more accurately?



We rarely think about the motion of objects beyond noticing that they are still or in motion. But we have an intuitive sense of a wide range of motion and changes in motion. This SciGuide will develop a deeper understanding of motion and changes in motion and introduce descriptive language and equations for changes in motion.

Motion involves a change in position. It is important to be able to describe position accurately in relation to a reference point. When the object changes position, it is important to describe how it changes position and in what direction. This SciGuide will provide support in understanding different ways to describe position and different units used in science. How an object changes its position can be described by using speed or velocity. When the speed or velocity changes, those changes can be describe by the object's acceleration. Definitions for position, speed, velocity and acceleration developed by physicists can be extremely helpful in understanding motion. Definitions, scientific units, equations, graphs of change in position and change in velocity, and simulations are all provided in these on-line resources to facilitate and understanding of

### Lesson Resources:

- **Rollercoasters!**
  - [Lesson Plan](#)
  - [Vignette \(Case Study\)](#)
  - [Audio Clip](#)
  - [Sample of Student Work](#)

### Additional Resources:

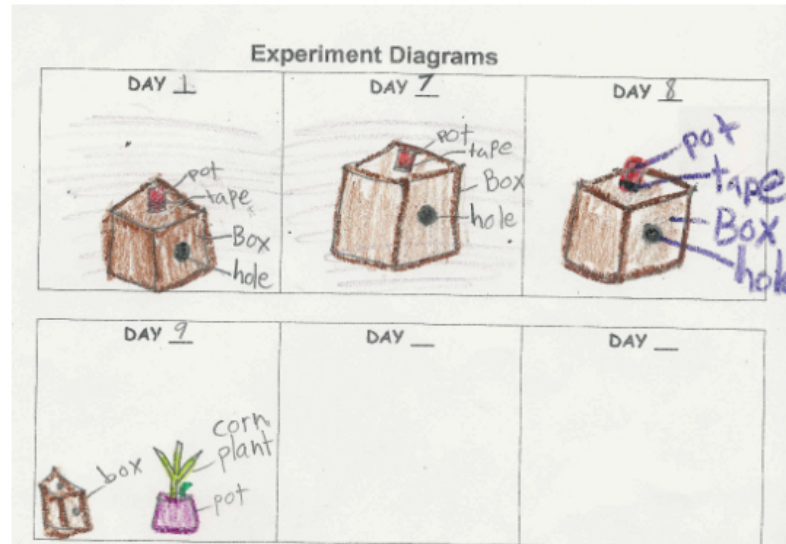
- **Media**
  - [Angels and Distance \(flash sim\)](#)
  - [Three Speeds \(flash sim\)](#)
  - [Moving Objects \(flash sim\)](#)
  - [Motion Related to Speed \(flash sim\)](#)
  - [Ball Rolling Across Different Surfaces \(flash sim\)](#)
  - [Velocity and Speed \(flash sim\)](#)
  - [Applying Force to a Moving Object \(flash sim\)](#)
  - [Ball on a Complex Track \(flash sim\)](#)

# Sample of Student Work from Organisms SciGuide



Address [http://webwatchers.nsta.org/files/Student\\_Work\\_Sample.doc](http://webwatchers.nsta.org/files/Student_Work_Sample.doc)

Go



### CONCLUSION:

(Explain what happened throughout your experiment)

My table planted a plant upside down. We used a box, pot, corn, plants, soil, and tape, and plastic rap. We wanted to know if the plants in a box would grow to the sunlight. The plants grew, but not to the sunlight. At first the plants were 4.8 mm and 17.5. Now they're a little taller. The colors changed to. It's starting to turn white instead of green. I think that they didn't grow very much taller because they were upside down. Now we did this was by getting a box. Then cutting 2 holes in it. Second we put the plant upside down in one of the holes, and taped it down. Now when we measured it this

# Featured e-PD resources within the Learning Center

---



## Third Party Evaluations

### Horizon's Research NSF Grant Evaluation (2004)

Significant Gains for participants using SciGuides in:

- Feelings of preparedness to search the Internet
- Ability to integrate the Internet into their teaching
- Preparedness to connect instructional uses of Internet with standards and curriculum
- Ability to evaluate web pages, including their potential to facilitate inquiry-based learning and interactivity

# Featured e-PD resources within the Learning Center



## Third Party Evaluations

### PD and Middle Level NSTA Committee Reviews (2005)

- 100% said SciGuides are a valuable supplemental online resource for educators
- 100% said SciGuides and their content are laid out in a logical fashion that is easy to navigate & consume from educator's' point of view.
- 100% said SciGuides are effective resources that:
  - save educators time when searching for vetted URLs
  - assist in implementing the web by the accompanying lesson plans, media vignettes, and samples of student work

# Featured e-PD resources within the Learning Center

---



## Third Party Evaluations

### Facet Innovations (2007)

- 90% of respondents were either very satisfied or satisfied with Guides
- 90% of respondents said the Guides were easy to use
- Written content very efficient in providing succinct introductions to topics and suggesting resources for a subject unit
- Tighten coherence and consistency of lesson plans both within and between SciGuides

# Unsolicited Awards



- National Association of Elementary School Principals: Curriculum Hot Link



- Best of the Web: Learn NC, University of North Carolina, Chapel Hill School of Education



- The School Library Journal Site of the Month



- KLRU TV's Special Pick for Internet resources for teachers