

## The Video Encyclopedia of Physics Demonstrations™

In addition to two sets of *The Video Encyclopedia of Physics Demonstrations™* (one on DVD and one on LaserDisc), the UCSB Physics Lecture Demonstration unit has the bilingual middle school edition (for students age 10-14) on DVDs, which could be useful for the Community Science Center, the Physics Circus or other outreach projects. This set also has an index that links the demonstrations to the appropriate sections in various middle-school-level textbooks.

Below is the list of demonstrations this set contains, and the list of textbooks for which it has an index. Should you see a demonstration that is not currently available, and which you would like to have built, please [e-mail](mailto:) me (Louis Grace) or phone me at x4293.

### The Video Encyclopedia of Physics Demonstrations™, Bilingual Middle School Edition (English/Spanish, 2003, DVD)

#### DISC ONE

##### **Chapter 1      Measurement**

Demo 01-01      Basic Units

##### **Chapter 2      Force, Work, Energy**

Demo 01-02      Air Track Friction  
Demo 01-03      Static vs. Sliding Friction  
Demo 01-04      Weight Dependence of Friction  
Demo 01-05      Surface Dependence of Friction  
Demo 01-06      Energy Well Track  
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Demo 01-08      Bowling Ball Pendulum  
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Demo 01-10      Clown on Rope  
Demo 01-11      Simple Machines  
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Demo 01-13      Levers  
Demo 01-14      Hinge Board  
Demo 01-15      Arm Model

##### **Chapter 3      Fluids**

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Demo 01-17      Barrel Crush  
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Demo 01-22      Buoyancy in Various Liquids  
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Demo 01-25      Cartesian Diver  
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Demo 01-27      Mercury Barometer in Vacuum  
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#### DISC TWO

##### **Chapter 4      Thermal Phenomena**

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| Demo 02-02 | Two Can Radiation              |
| Demo 02-03 | Pin Breaker                    |
| Demo 02-04 | Drill and Dowel                |
| Demo 02-05 | Hot Dog Frying                 |
| Demo 02-06 | Convection Currents            |
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**Chapter 5      Motion**

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| Demo 02-11 | Rolling Ball Incline            |
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**DISC THREE**

**Chapter 6      Wave Phenomena**

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**Chapter 7      Light**

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|                  |                                 |
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## DISC FOUR

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|                   |                                     |
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***The Video Encyclopedia of Physics Demonstrations™, Bilingual Middle School Edition (English/Spanish, 2003, DVD)***

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Editor, Rosemary Wellner.

**Textbooks for which the series has an index:**

Robert H. Marshall, *et. al*, *American Guidance Services: General Science*

Robert H. Marshall, *et. al*, *American Guidance Services: Physical Science*

Thompson, McLaughlin and Smith, *Merrill Physical Science*

Glencoe/McGraw-Hill, *Science Voyages (Blue)*

Glencoe/McGraw-Hill, *Science Voyages (Green)*

Glencoe/McGraw-Hill, *Science Voyages (Red)*

Holt, Rinehart and Winston, *Holt Science and Technology: Earth Science*

Holt, Rinehart and Winston, *Holt Science and Technology: Life Science*

Holt, Rinehart and Winston, *Holt Science and Technology: Physical Science*

Joan S. Gottlieb, *Wonders of Science Series: The Earth Beyond*