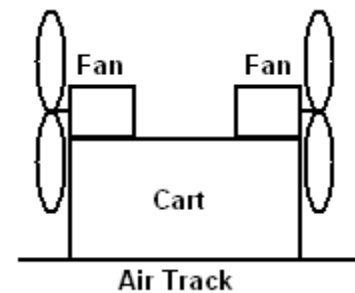


Interactive Lecture Demos

Monday, Jan 26, 2004 11:30 - 12:30 AM

Interactive lecture demos were created by David Sokoloff of the University of Oregon and Ronald Thornton of Tufts University, and consist of student handouts plus demonstrations for enhancing the traditional physics lecture. The entire set will be published by Wiley in February of 2004 as part of the Physics Suite. A subset suitable for high school physics instruction will be available on CD. An article describing the philosophy behind the development was published in the *Physics Teacher* (Sept 1997).

One example follows. A cart on an air track has fans mounted on it, one blowing forwards and one aft. Both fans are identical. The fans are started, and the cart is given an initial velocity down the track. Students must predict what the cart will do. Discussion among students is permitted. Possible answers are



- a) slow to a stop
- b) slow but not stop
- c) continue at the initial speed
- d) accelerate to twice the initial speed
- e) accelerate until it reaches the end of the track

The demonstration is then performed. Further discussion follows.

A web-based delivery is under development.

For more information see the article in TPT.

Random interesting fact that came up during the presentation: compass needle deflections can be used rather than brightness of lights in demonstrating series and parallel circuits. However, these deflections add as tangents.