

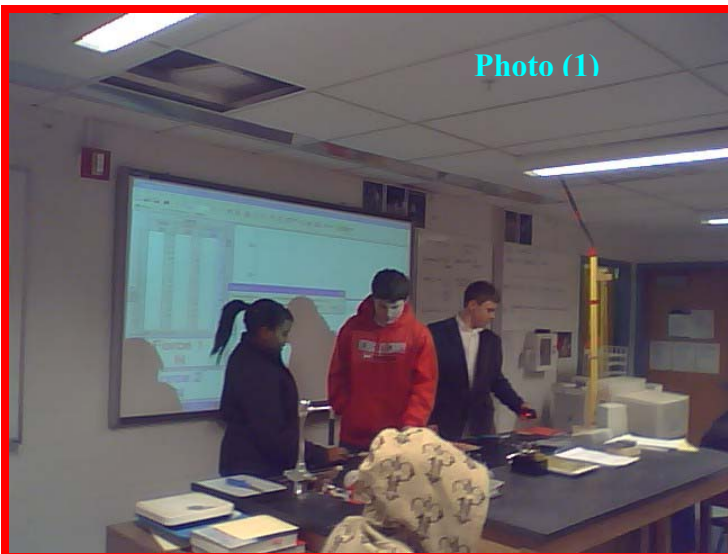
February 17, 2009

Dear Harvard Trust:

A hardy, albeit belated, thank you and update on the Vernier based physics lab equipment that you so generously purchased for the Bromfield Science Department last fall.

Though we are still developing an appreciation for the full capabilities of the equipment – it has proved very useful – not only towards the meeting of AP audit milestones – but also (*& more importantly*) as a teaching/learning tool for students at all levels so as to help them better understand the many concepts and conundrums of the world of physics. For physics is not always intuitive – nor does it follow rules of so-called “common-sense”.

Take for example the case of the Levi-Strauss trademark – which shows two teams of horses attempting to pull apart a pair of denims. Would it have made any difference if a single team and a stout wall was used? From an advertising standpoint undoubtedly! – as the two teams are far more dramatic than a single team. Certainly two teams double the force & thereby better demonstrate the extreme toughness

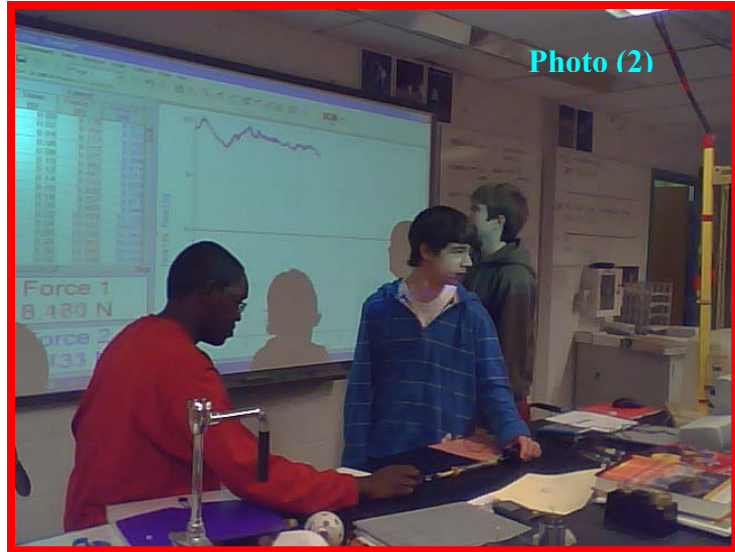


of the patented Levi material – don't they?

Well, with the advanced Vernier Labquest equipment - students Myjorie Philippe, Jack Michaels & Brett Carrier in Photo (1) and Deji Oyekunle, Mike Shaw & Peter Yahia in Photo (2) – prove otherwise in real time with Vernier

software and force probes in conjunction with Room 279's SmartBoard®.

Indeed the tension in the jeans was dependent only on the actions of a single (*simulated*) team thus proving Newton's third law - that for every action (*force*) there's an equal and opposite reaction (*force*). Look real close at Photo (2) and one can see that the forces in the two probes track one another exactly - regardless of the action of the operators

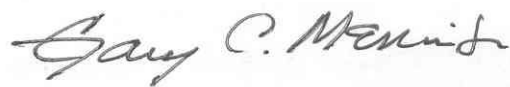


(*i.e. the simulated horse teams*). Indeed Strauss could have saved the efforts of one team – not to mention the hay !!

We expect to making greater use of the equipment through the spring semester as we get into the areas of electricity and magnetism & waves and optics though we'll never leave Newtonian mechanics far behind.

If anyone from the Trust (*or community for that matter*) would like to visit our class where you can see first hand how the equipment is being used please do not hesitate to drop me a line at gmenin@psharvard.org.

Thanks again – your grant is proving invaluable.



Gary C. Menin, Sr