Science can be fun?

Enhancing Science Education With Digital Media

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Delaware K-12
Partners at St. Georges

- **Terry Blanch**
  - 9th grade students
  - Physical Science

- **Roles in the classroom:**
  - Science/chemistry expert
  - Instructor
  - Guest speaker
  - “Demo lady”
Goals of Using Digital Media in the Classroom

- Facilitate student centered learning
- Shift focus from teacher to science
- Emphasize science principles
- Encourage awareness of procedural details in labs
Digital Media Equipment*

- Classroom set of Nikon digital cameras with video capability
- Handheld VADO video camera with interface to laptop computers for convenient projection displays

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Using Digital Media in the Classroom

- Displaying lab equipment set-up
Using Digital Media in the Classroom

- Following student thought progression
Uses in the Classroom

• Hands-on demos versus only giving verbal instructions for activities
Uses in the Classroom

• Allow students to document an experiment
Documentation Rules

• **Take photos of:**
  • Equipment set-up
  • Any changes made from the original set-up during the lab
  • Any measurements made

• **Create a PowerPoint of photos**

• **Describe such that another student can do the experiment without the lab manual**
Examples of Student Work

Set-Up for Lab 3.1

Us Working

By:
Matthew Downey
Brett Lamers

Times on Photo gate
(Two Weights)

Finished and Unfinished Tables
(One Weight)

Unfinished
Finished

Brett
Examples of Student Work

Force and Speed lab

By
Logan Derickson

Step 1; Setting up starting point.

Shows how far apart the Photo gates have to be and that is 30cm apart. Also how far the first gate is from the start.
Examples of Student Work

Timers should start at zero. Then you find both A and B. Then just A and, then just B times.

Putting weights on the car to change the force.

What side to read. You read the Newton's side not the grams.

Do not read the gram.

You read the Newton side to measure the force.
Reviewing Student Work

- Obtained an idea of students’ perception of “documentation”
  - Collage of photos versus step by step process

- More specific directions needed for future lab documentation
  - Provide an actual checklist of necessary steps to photograph

- Individual student focus in lab increased

- Student to student instruction increased
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