

# Science can be fun?

## Enhancing Science Education With Digital Media

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# Partners at St. Georges



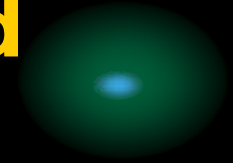
- Terry Blanch
  - 9<sup>th</sup> grade students
  - Physical Science



- 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

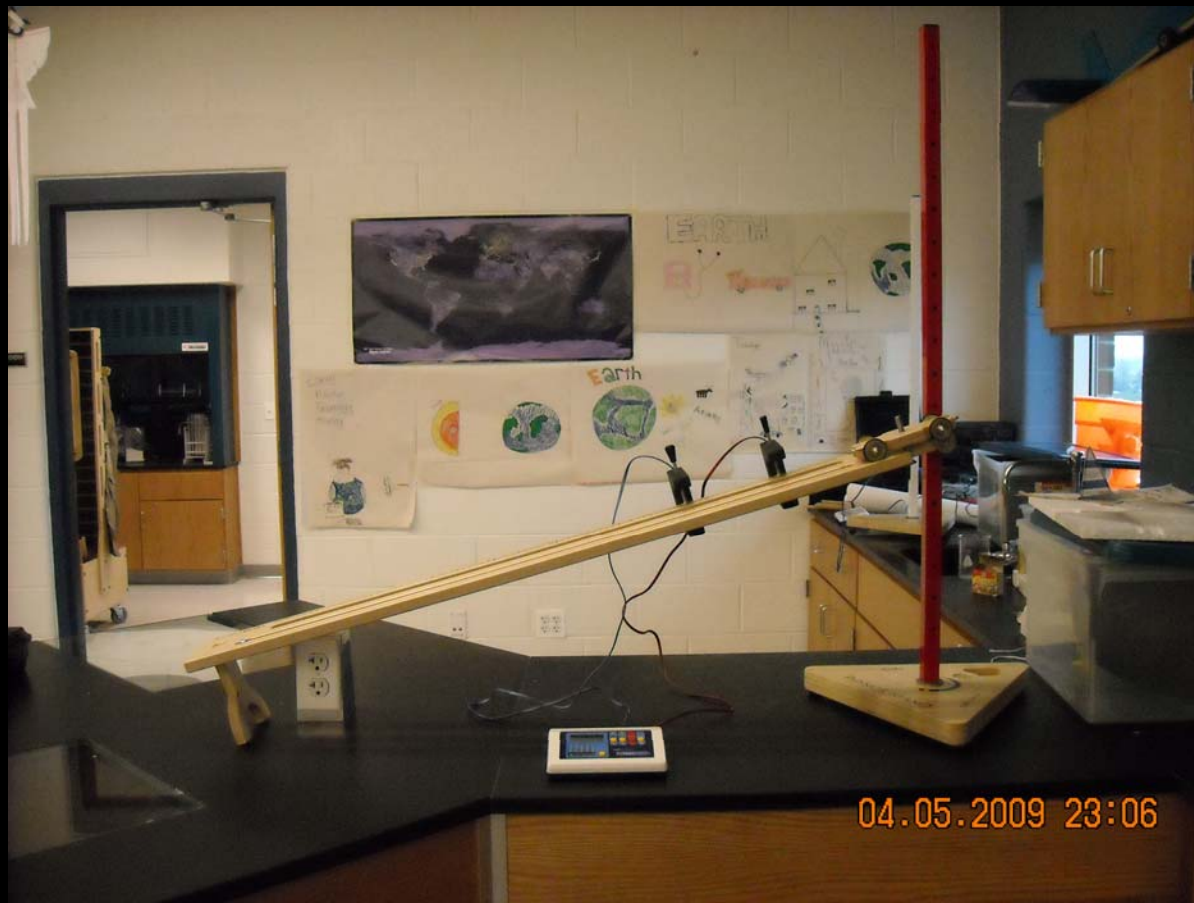


\*Funding provided by GK-12 grant DGE 0538555



# 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



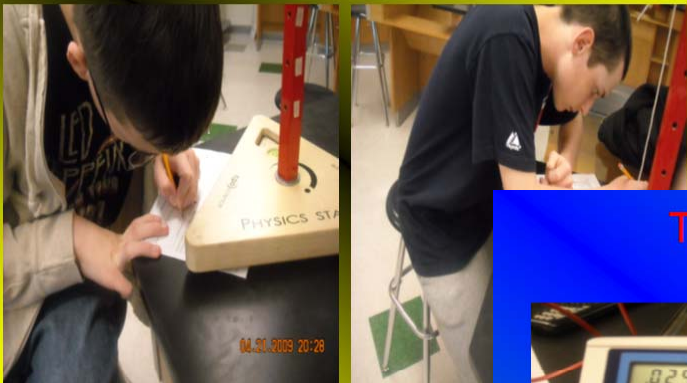
- Take photos of:
  - Equipment set-up
  - Any changes made from the original set-up during the lab
  - Any measurements made
- Create a PowerPoint of photos
- Describe such that another student can do the experiment without the lab manual

# Examples of Student Work



## Set-Up for Lab 3.1

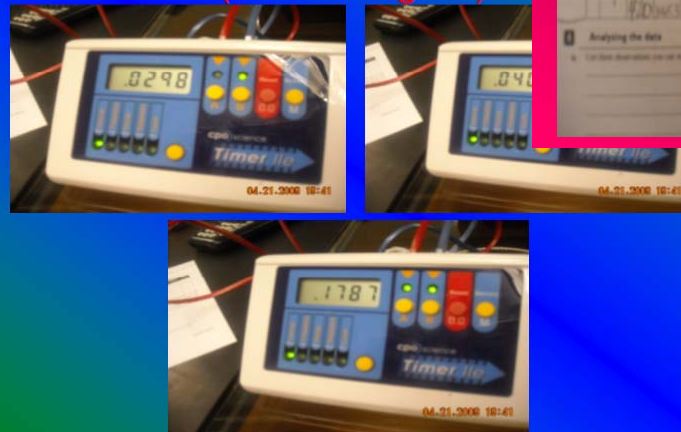
Us Working



Brett

By:  
Matthew Downey  
Brett Lamers

Times on Photo gate  
(Two Weights)



Finished and Unfinished Tables  
(One Weight)

Unfinished

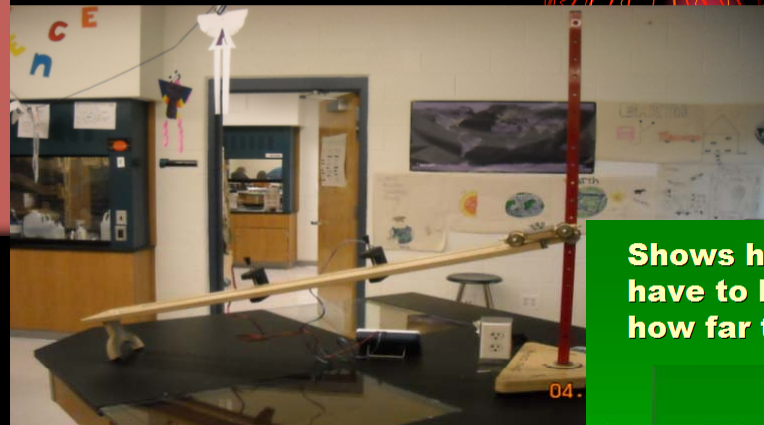
Finished

# 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.



Timer with both A and B times on it.



Timer with just A time



Timer with just B

Putting weights on the car to change the force.



Car with three weights on.



Car with two weights on.



Car with one weight on.

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



You read the Newton side to measure the force.



Do not read the gram

# 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

# Acknowledgements

- GK-12 leaders and fellows
- St. Georges teachers and students
- Dr. Thomas P. Beebe, Jr.
- National Science Foundation (NSF)  
DGE 0538555

