



SHOW and Tell: Video Lab Reports

Title	SHOW and Tell: Video Lab Reports
Subject/Unit/Lesson	Science, Any
Level/Grade	Elementary to High School
Time Frame	Nine class periods. [1 class period to discuss sample videos and select an experiment. 1 class period to complete the experiment and write a traditional lab report. 1 class period to discuss the “show” elements of their video and storyboard it. 1 class period to tape their experiment and create other needed documents. 2 class periods to edit their Video Lab Report. 1 class period to premiere their videos. 1 class period to reflect on the strengths and weaknesses of the two different lab report formats. 1 class period for whatever takes longer than we thought.]
Summary/Abstract	Students will use video as a means to better communicate their learning from science experiments (think Bill Nye the Science Guy). Instead of merely using the written word to write up a science lab, students will use video, still images, and special effects as necessary to visually represent their understanding of a scientific concept. They will need to follow the elements found in the traditional lab report: question; hypothesis; materials and procedure; results and analysis; and conclusion.
Tasks/Performance	<ol style="list-style-type: none">1. Watch sample videos that demonstrate a science or math concept (Apple’s <i>Bernoulli Principle</i> or <i>Triangles</i>, Bill Nye’s shows, or something from the Discovery Channel). Compare these with a video that basically “tells” you about a concept, but that doesn’t “show” much about it.2. As a class, discuss the parts of the videos where the video clearly “shows” something. Ask the students what camera or editing techniques were used (e.g. still images, animations, pictures of the materials, demonstrations of the process, footage of the “results,” slow motion, etc.)3. In groups of four, have students select a concept and experiment (consider using experiments from your textbook or other books like Janice VanCleave’s <i>Science for Every Kid</i> books.4. Have the students complete the experiment and write it up using a traditional lab report format.5. Have the students discuss how best to “show” their understanding, thinking back to the first discussion.6. Have the students storyboard their science experiment video.7. Have the students tape their video and create any other documents (still images, animations, etc.) needed for their video. (If you only have 1 camera, you may want to have 1 group at a time work during

	<p>lunch, before or after school, or while the class is doing something else in social studies).</p> <p>8. Have students import their video into the computer and edit the lab report according to their storyboards. (Students who finish early may want to add appropriate background music or sound effects.)</p> <p>9. Students present their finished Video Lab Reports to the class.</p>
Standards/Outcomes	<p>Science:</p> <p>Standard 1.1 – Constructing New Scientific Knowledge – All students will ask questions that help them learn about the world; design and conduct investigations using appropriate methodology and technology; learn from books and other sources of information; communicate their findings using appropriate technology; and reconstruct previously learned knowledge.</p> <p>English Language Arts:</p> <p>Standard 1 – All students will read and comprehend general and technical material.</p> <p>Standard 2 - All students will demonstrate the ability to write clear and grammatically correct sentences, paragraphs, and compositions.</p> <p>Standard 6. Voice All students will learn to communicate information accurately and effectively and demonstrate their expressive abilities by creating oral, written, and visual texts that enlighten and engage an audience.</p> <p>Standard 8. Genre and Craft of Language All students will explore and use the characteristics of different types of texts, aesthetic elements, and mechanics—including text structure, figurative and descriptive language, spelling, punctuation, and grammar—to construct and convey meaning.</p> <p>Standard 11. Inquiry and Research All students will define and investigate important issues and problems using a variety of resources, including technology, to explore and create texts.</p> <p>Technology:</p> <p>NETS 4 – Technology communication tools: Students use a variety of media and formats to communicate information and ideas effectively to multiple audiences.</p> <p>NETS 5 – Technology research tools: Students use technology to locate, evaluate, and collect information from a variety of sources.</p>
Tools/Resources	Textbooks, encyclopedia (CD-ROM, WWW, or book), web access, iMovie, DV camcorder, tape
Assessment	See rubric

Modifications:

-  Students could get hypothesis from other students.
-  Students could connect their experiment to other related concepts or examples in the real world.