InquirySpace Teacher Guides:
Screencast Lab Reports

Summary

The Inquiry Space project included research on an alternative method of lab reporting called screencasting. With this method, students make short recordings of their voice and their computer screen to be used as a report of their work at different stages in an experiment. We found that these short (often under two-minute) videos can be used as an engaging reflection for students and a revealing assessment for teachers.

Students employ free software installed on their computers to record the story of what they did and what they found while being able to point (with the computer mouse) to their data and graphs on the Experiment Tab to argue their points. Successful screencasts require effort from all members of each student group to both plan and carry out, and they bring an element of situated performance assessment to the activity. Students can save and email their screencasts to teachers who can quickly review them and provide formative feedback.

More information about the use of screencasts in Inquiry Space activities can be found in an article by Edmund Hazzard:

> Hazzard, E. (2014). A New Take on Student Lab Reports. The Science Teacher. March. (Posted with permission of The Science Teacher.)

A screencast can be made at the beginning of an experiment to explain the plan and proposed process. At the end of an experiment, a screencast can be used to explain the data and results in lieu of a traditional lab report.

Using Screencasts with Students

Several options exist for free screencasting software to be run on Macs and PCs. We recommend *Jing* from TechSmith as a simple screencasting package. It is available for free at: http://www.techsmith.com/jing.html

Once installed, this software allows for quick production of both screenshots and screencasts by activating the software with a single click on the Jing "sun" icon on the edge of the screen.

General Instructions for Screencasts

Step 1: Plan a screencast

Students should prepare an outline of their screencast in advance. They must decide who will speak and control the mouse at each point in the recording. Students should include the following information in their screencasts, which will vary depending on whether they are in the planning or results phase of their experiment:

- Team name.
- Statement of the question being investigated.
- A description of the experimental set-up and the process used to collect the data.
- A description of the variables used and how effects were measured.
- Graphs and data tables to explain patterns found in the data.
    - Ensure relevant graphs and table are within the recorded area of the screen.
    - Use the mouse to point to the parts of the graphs and data table being discussed
- A description of observations and identify areas for further exploration.

Teachers may want to add their own spin to screencasts and try different variations on the theme to suit the needs of their particular classroom.

Step 2: Make a screencast

Open Jing, or similar tool, and select the entire InquirySpace area to record. Following the outline they created in Step 1, students should make a short, two-minute screencast. They should record their voices and the computer screen but not their faces (no camera). Remind students that they should prepare their script before they begin and set up their screen to include all necessary tables and graphs. However, if they make a mistake, it is not a problem, they can try again!

Screencasts should involve all team members sharing speaking parts. Many students enjoy this novel approach to lab reporting and report a higher level of engagement in the experimental process.

Step 3: Save a screencast

Most screencast software provides multiple ways of saving and sharing screencasts. In Jing, a small tool bar gives options to share and save screenshots and screencasts.

Students should name and save their Jing screencast on the desktop or in a location given by the teacher. File names should identify the team, the date, and the experiment. For example, “Period1-BlueTeam-Jan-22-parachute-model” is a descriptive filename.

Depending on their specific preferences, teachers should give students instructions on how to deliver their screencasts (email, zip drive, etc.).