

DOC CAMERA PRIMER

EVERYTHING YOU NEED TO KNOW TO TEACH WITH A DOCUMENT CAMERA

No. 1 THE BASICS

What Is It?

A doc cam is what every dusty, old overhead projector wishes it could be! It can project a page of a book or a three-dimensional object (baseball? frog?) onto the screen for the whole class to see. Doc cams are basically high-res web cameras, so you can also take photos and record video with them!

How About the Bells and Whistles?

A document camera is one of the simplest and most useful teacher tools available. You can find one for under \$100 or pay more than \$1,000 for a more elaborate setup. The trick is deciding which features you really need for the way you teach.

You want a remote.

Repeat: You want a remote. That way, you can move around the classroom and observe students at work. And you can pass the remote to students when they want to zero in on a map detail or the wing of a butterfly.

Split screen, baby.

Many doc cams have a split-screen feature that allows you to project two images side by side. So, for example, you can project both an exam question and a sample student answer. Maybe you'll finally understand the difference between an iceberg and a glacier.

Make the connection.

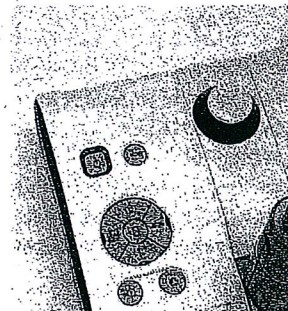
A document camera has to be connected to a projector or monitor. Ideally, though, it should be connected to a computer to allow you to do things like take and store photos and record audio and video.

It's a scanner, too.

Most document cameras allow you to snap a quick image and store it either on the camera itself or on a connected computer. You'll likely never need a scanner again. Look for all the basic photo features like freeze, focus, and zoom.

Read that fine print.

Any doc cam should have an optical zoom lens, allowing you to zero in on small print or illustrations. Microscope attachments are available for many models, so you can give a sprouting flower seed or a pollywog its big-screen debut.



No. 2 SCIENCE

When you get a doc cam, one of the first places you'll want to try it out is in science class. There is no easier way to demonstrate the scientific process than with using a doc cam. Here are just a few ways it will come in handy in the lab.

Demonstrate Science Experiments

Show the whole process step by step before students start working on their own.

Share the Close-Ups

Your students can document each stage of a biological process. For example, have them take a series of photos with the doc cam as their caterpillar transforms into a butterfly.

Model Data Recording

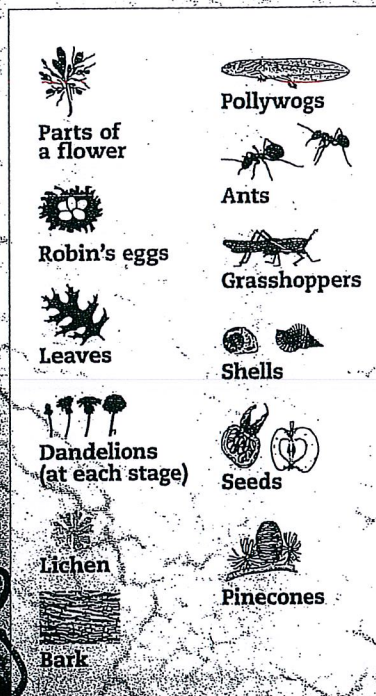
Recording data can be a tedious process. Project your data-recording form and then review the process together with sample data.

Label Diagrams

Project a scientific diagram of a paramecium or a human skeleton (or whatever subject you're currently studying) and have kids work together to identify and label its parts.

Zoom In on Nature

What's the best thing about a doc cam? Studying three-dimensional objects from every angle. As spring draws near, get ready to observe these natural objects up close.



"HELP! I DON'T HAVE ONE!"

Try these budget justifiers with the powers that be.



A doc cam is many tools in one.

A document camera with a projector can do the jobs of an overhead projector, a scanner, a digital camera, chart paper, and, often, even an interactive whiteboard. Viewed that way, it's a remarkable bargain.

It saves on printing.

Instead of making 25 copies of that science quiz or essay writing prompt, you can place the original under the doc cam and project it for the whole class to see. Over several years, a doc cam can save many trees and a big chunk of your photocopying budget.

It's easy to use.

Unlike other tech tools, the doc cam doesn't have a steep learning curve. You don't need a day of expensive professional development. Most teachers will find it a natural fit for the classroom and start using it right away.

No. 3 CLASSROOM MANAGEMENT

Many teachers with doc cams in their classrooms say they use them "all day long." What?! It turns out that the document camera is a surprisingly versatile classroom management tool. Teachers can use it on the fly for a variety of purposes, such as delivering clear, transparent expectations, modeling behavior and procedures, and making efficient use of time and resources. We asked teachers to share strategies.

Keep Kids on Track

Bell Work

"As our schedule varies, I do morning work by jotting a quick list each day and projecting it on the screen."

To-Do Lists

"I always project a list of tasks to be done. It helps students remember what they need to get accomplished in a short time."

The Daily Schedule

"We have a complex 10-day schedule so I always start by posting the morning schedule, and later on, the afternoon schedule."

Model Expectations

Step-by-Step Procedures

"When our class does art projects, I put all the supplies under the doc cam and model the process. I do the same for science experiments."

Math Strategies

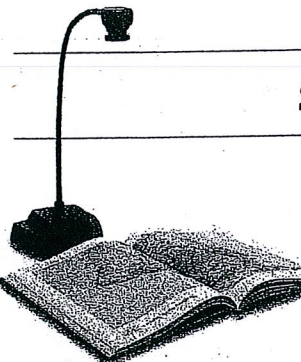
"I put math story problems under the doc cam and we work them together on the big screen, circling numbers and underlining important information."

"Big" Thinking

"During silent reading time, I post a comprehension strategy or two to help students keep them 'front of mind.'"

Teacher Tip

"I use my doc cam constantly to model work and project many different things so that all my students can easily see what we're working on. I also use it to take digital photos of student work—reducing the piles and files of papers!"
—Dorothy C.



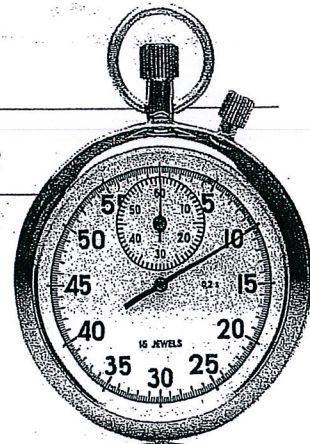
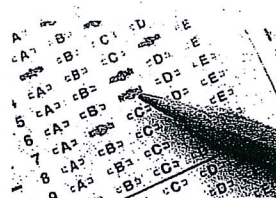
Big Book Read-Alouds

"I place storybooks under the doc cam as I read aloud. Not only can everyone see the illustrations, I save the time I would spend walking the book around the group."

Save Classroom Time

Check Your Answers

"Instead of making copies of the answer key or reading each quiz item aloud, I can put up an answer sheet. That gives me a minute or two to prep the next thing."



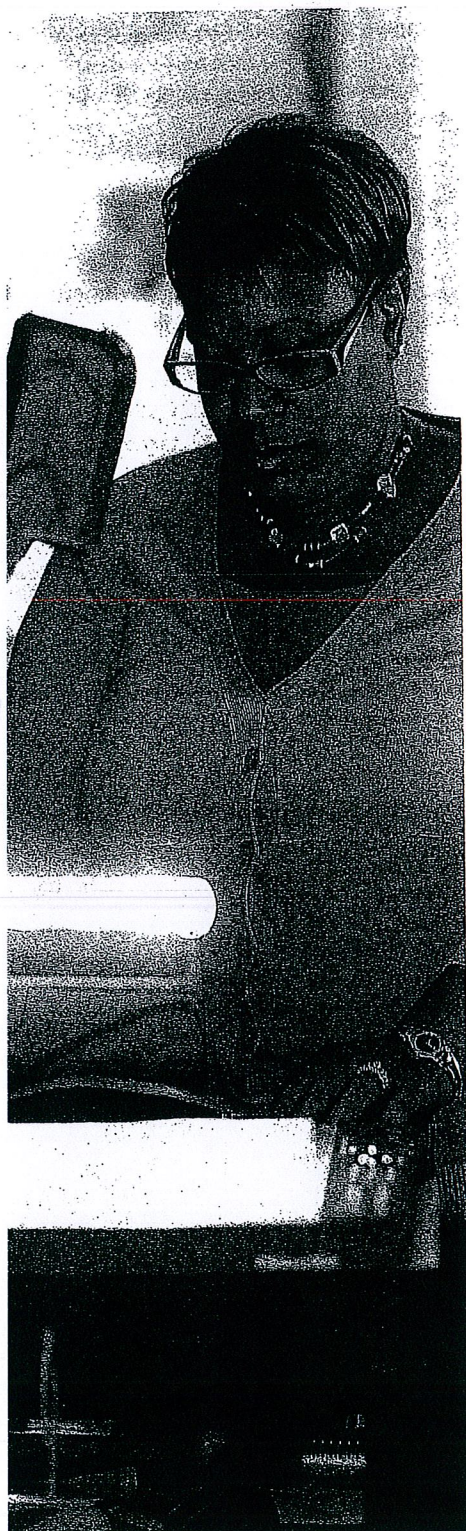
Timekeeping

"I always place my kitchen timer under the doc cam. Then kids know how many minutes they have left to work."

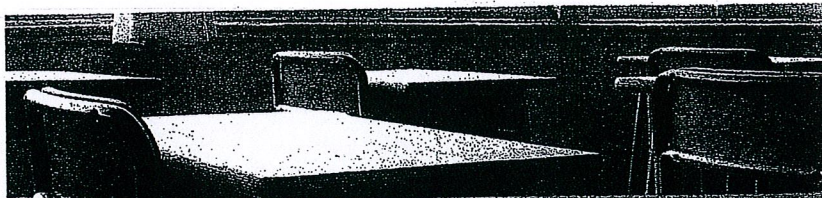
DOCUMENT CAMERAS

No. 4 LANGUAGE ARTS

Using a document camera for language arts can open up new opportunities to teach close reading analysis and the writing process. Here are just a few ideas from experienced teachers.

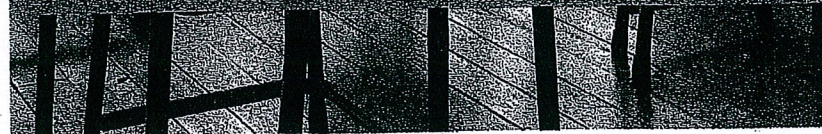


<i>Goal</i>	<i>What You Can Do</i>
<i>Enhance Writer's Notebook</i>	Use the doc cam to demonstrate the process of recording ideas and deciding what to write about.
<i>Build Note-Taking Skills</i>	Post the sequence for note taking as you lecture and then have students share their notes. Are they similar? Are they hitting the most important points?
<i>Closely Analyze Readings</i>	Project an important passage from a text the class is reading and then share your own sample annotations on that passage.
<i>Share the Writing Process</i>	Post a writing sample and work on the opening paragraph as a group. Review the process of turning a question into a thesis and writing an interesting hook or introduction.
<i>Compare Thoughts</i>	Have students take turns sharing their texts. What are their annotations? What questions do they have?



Teacher Tip

"When my students are working on a writing assignment, I project the rubric via my doc cam to help them keep it in mind." —Rachel H.



PHOTOS (LEFT TO RIGHT): JEFF FUSCO; OCEAN/CORBIS