

Digital Cameras in the Classroom

ACTEM Maine Ed 2008

October 17, 2008

Agenda

Introduction / Wikispace

<http://sutterworkshops.wikispaces.com/DigitalCameraInClassroom>

Overview of digital cameras in the classroom

Ideas & Examples – shown via Keynote

Overview of some key camera functions / controls

Shown via Keynote

Q&A and Discussion as Time Allows

Additional Resources

See wikispace (above) for links to photo editing software, online photo editing sites, photosharing sites, links for digital storytelling, and resources for copyright free and creative commons licensed images for students to use.

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Camera Functions

ISO = Sensitivity to light : the higher the #, the less light you need to take a picture. Use the higher numbers to take shots of action or in low light without using the flash.

Review/Shoot Mode – may need to put camera on review mode in order to download the images to the computer.

Function Button : Used to access advanced settings for shooting

Menu Button : For setup menus and card formatting, etc

MIC : holes on the front of the camera – don't put your finger over it!

Lights (red, yellow, green) near viewfinder let you know if the shot is focused, and if the shutter speed is too slow for hand holding.

Checklist : Ask yourself . . .

Still or Video? – If video, pick the “movie camera” setting and skip to “white balance” setting

Which Still Setting?

Automatic or P is fine for most situations

Manual or P for extended or very short shutter speeds

FLASH

Flash OFF if : Shooting artwork? Reflective surface? Behind glass? Through microscope? Extended shutter speed? More than 10' away? Performance situation?

Flash ON if: Stop nearby action? Low-light / blurry picture?

White Balance:

AWB (Auto White Balance) : fine most of the time

Daylight : if using light through window or outside

Cloudy : will “warm” up pictures (great for fall foliage!) so not so blue

Incandescent : GE Soft White – eliminates orange cast (also Christmas lights)

Fluorescent : (Sometimes two settings) eliminates the green cast

Custom : Take a reading from a white sheet of paper in lighting conditions

EXPOSURE

Normal Exposure: if you are using a flash (most times) or in average, even lighting

Over Expose IF : Background is lighter than subject, subject is backlit, shot is mainly white (ie: pencil drawing on white paper), light source is in the frame (ie: you can see the lightbulb)

Under Expose IF : you need information in highlights that are being blown out (too white!)

Tip: You can correct for some aspects of exposure in editing. It is easier to lighten shadow areas in editing than it is to make a bright area darker and have it look realistic. *Advanced Tip:* Keep your histogram without spikes at the black point or white point – but mainly look out for a spike at the white point.

STABILITY

If you are doing longer exposures, use a tripod, beanbag pod, or stabilize on a table or other surface to avoid camera shake.

If you are doing super long exposures, use the self timer as a "cable release" so you don't move the camera when the shutter opens.

If you are shooting video, a tripod always helps. Keep the camera as still and level as possible.

Tip: VIDEO: Don't turn the camera to "vertical" if you are shooting Video! The screen doesn't work that way when it plays back. Landscape / horizontal view only, unless you have Quicktime Pro, which allows you to rotate the movie 90°

ALIGNMENT

When shooting flat projects, make sure your lens-plane and the plane of the paper are parallel so you don't have distortion of the rectangle to a trapezoid. Crop to edges so you don't have to go back and crop again later.

LENS DISTORTION

Faces in particular can be distorted when you use a wide-angle lens to shoot a portrait. Instead, for more accurate and flattering portraits, stand back and zoom in. (see examples)

GENERAL TIPS for better Photographs

Simple background : Use contrast – dark background for light objects, light background for dark objects.

Eliminate the unessential from the frame.

Choose an interesting vantage point : Level and straight on when aligning edges for copy work or shooting flat artwork, otherwise aim for some angles.

Get down down low or up high to alter scale relationships.

Use angles to create dynamic compositions; lead lines to draw the eye into the shot.

Place objects and lines such as the horizon on a third line or power point instead of centering the main subject bulls-eye.

Remember to turn the camera for **VERTICAL** still shots where appropriate.

Portraits look better if the person is not fully front faced; use the "school photo" technique of having the subject turn partially to the side and then turn their head back toward the camera. Shoot from slightly above the subject. Don't use the wide angle setting – back up and zoom in to avoid distortion of the face.

LIGHTING is key to a successful photograph. Transparent and translucent subjects may be made more interesting with side or backlighting. Soft even light (or even shadow) is best for portraiture.