

## Using the Digital Cameras for Instruction

When we talk about integrating technology into the curriculum, technology does not refer only to the computers. All available technologies can be used for integration such as scanners, digital projectors, and digital cameras.

Digital cameras are used in schools every day; however, camera *use* is not the same as *integration*. Teachers take pictures of their classes at PTA programs, during special events in the classroom, and on field trips. The pictures are often put into slideshows that are shown at Open House and other events to which parents are invited. This is a great way to let the parents see all of the wonderful things that are going on and it should continue. But ask yourself, “What did the students learn from this?” As with the computers, it comes back to the students and what they learned by virtue of this technology. For the camera use to be truly integrated and focus on instruction, the students had to have learned something.

When digital cameras were first introduced on many of the campuses they were large, unwieldy, heavy pieces of equipment that cost a lot of money. The size and the cost made most teachers wary of using them themselves, let alone the students. But thanks to memory sticks and general advances in technology as a whole, the cameras have gotten smaller and lighter and less expensive.

Most campuses have at least one camera – many have several. Some schools have one per grade level that is held by the team leader; others have checkout procedures in place in the library or office. If you don’t already know, find out what the procedure is on your campus. So that you can be assured of having the camera when you need it, be sure you know who to get it from, how long you can keep it (most have to be turned back in to a secure location overnight), and what to do if the keeper-of-the-camera is out the day you need it.

Check out the camera long before you are actually going to use it to familiarize yourself with it. Does it use a floppy disk, a memory stick, or a memory stick with a disk adapter? Do you have one of those new-fangled memory stick mice? Take a few practice shots and make sure you can work the camera. Then work on downloading those pictures to your computer. Once on your computer, can you find the pictures? Can you open them and manipulate them using the photo software on your computer?

Once you are comfortable with the camera and working with the pictures on your computer, it is time to train your students – yes, your students. It is perfectly acceptable and desired, in fact, for the students to use the cameras. Yes, they are expensive – so are the desktop machines in the labs, so are the wireless laptops. That is why the students must be taught rules for using the cameras the same way we teach them rules for using the computers and laptops.

Once you and your students are comfortable with the cameras, you will find no shortage of ways to use them in your classroom.

# Digital Camera Activities

The activities listed below have come from a variety of online sources that are listed at the end of this document. In some cases I have expanded on the idea presented. I recommend visiting some of the sites yourself to find even more ways to use the digital cameras to enhance instruction.

I've divided this into two sections – Student Centered Activities and Teacher Directed Activities. Both focus on integration using the cameras and the teacher section also includes some helpful hints just for you.

(The numbers in parentheses refer to the site from which the activities originally came.)

## Student Centered Activities

### Lower Grades

- Create a personal or classroom alphabet with pictures. (1)
  - Students go around the room or the building and look for items that begin with either a specific letter of the alphabet. The pictures can then be printed and posted either with or without the name of the object.
- Use the camera to take pictures that demonstrate the concepts of over, under, left, right, etc. (1)
- Make a five senses book or bulletin board. (3)
  - Students take pictures of the body parts used for each sense. Others take pictures of everyday objects. Print the pictures or insert into a Word document or web (think Kidspiration) where students can match the objects to the senses that can be used to identify each one. For example, the eyes, nose, and hands can be used to identify a flower.
- Counting/Numbers (3)
  - Preschool or kindergarten students learning to count and order numbers could find sets of objects in nature or around the classroom or school building. For example, a bunch of bananas may represent 5; a box of crayons could represent 8. The images could be put together in a book to review counting. Flashcards could be made that could be sorted from least to greatest.

### Upper Grades

- Use pictures for reports and presentations such as “A day in the life of...” (1)
  - Students take pictures of the teacher, principal, custodian, secretary, etc. from the beginning of the school day to the end. Insert into a Power Point presentation or Word document and add text to describe what is happening in the pictures. These can then be shared with students in the lower grades (especially Pre-K and Kinder) to let them know what all of the important people in the school do. (Example on slide 4 or PowerPoint)
- Similes and metaphors. The teacher creates a list of words for the students to use. (1)
  - The students take pictures of things in the classroom, building or schoolyard that show how that object is or is not like the word. Example – school is like...picture of an anthill; life is like...picture of a highway

- Students go on a scavenger hunt to find objects in school that are examples of simple machines. (3)
- As a twist on having students draw or locate parts of a plant or flower, have them instead take pictures of the various parts on a live flower or plant. Students insert the pictures into presentation software where captions with names and descriptions can be added. (3)
- Multiples/Arrays (3)
  - Students look for arrays around the room or school. Print out the pictures; make a poster for each number. A poster for 12 might have a 2 x 6 carton of eggs or a 3 x 4 case of soft drinks.

#### All Levels

- Students take pictures of math concepts. (1)
  - Send them out to take pictures of acute, obtuse, and right angles, parallel and perpendicular lines. Print the pictures and highlight the angles/lines.
  - Take pictures of objects that represent both flat geometric shapes and geometric solids. Put into a Word document and type the name of the shape before printing, or create a Power Point of shapes.
  - Find collections of odd numbered things, even numbered things.
- Document growth and/or change. (2)
  - Students take pictures of:
    - A plant as it grows from seedling to plant
    - The same tree in the school yard as it changes over the seasons
    - A school construction project
    - Each other in front of the same object at specific points throughout the year to track growth in height

The pictures can be put into Power Point or Kid Pix slideshows to be displayed on the television or printed and posted to document the changes.

- Stages of development. (3)
  - Many elementary classrooms study life cycles and raise tadpoles, mealworms, or butterflies. Document the stages of the life cycle by having the students take pictures at each stage. The pictures can be used on a bulletin board display or poster. Mount the pictures on tag board and laminate to create a sequencing puzzle for the students.
- Illustrate the steps in a procedure. (2)
  - Students take pictures of the steps in a procedure that is being carried out (a science experiment, making a peanut butter sandwich, tying shoes, adding two numbers, going through the lunch line, etc.) The pictures can be put into a slideshow and students can orally tell the steps or they can be printed and students can write out the steps in the process.
- Create a virtual tour of your classroom. (2)
  - Have each student select an area to photograph and describe to create one page in a slideshow. Expand to create “tours” of your school.

## Teacher Directed Activities

- Take pictures of vocabulary items for speech, ESL, and bilingual students. You can individualize for specific students. (1)
- Create sequence stories that integrate language and science. (1)
  - You take five pictures that tell a story and then have the students use the pictures to write the story. For example, acorn, sprout, sapling, mature oak, decayed log
- Comparing Environments (1)
  - Use the camera to take pictures of different environments – classroom, science lab, computer lab, office, teachers’ lounge, playground, etc. Compare and discuss factors that make each place different from the others.
- Create a “School” or “Class Rules” book with pictures of acceptable behaviors. (2)
  - Take pictures of your students “caught” doing the appropriate behavior (example, placing trash in a trash can, raising a hand to be called on.)
- Assign a new “Class Photographer” each week. (2)
  - This student should have easy access to the digital camera. The assignment is to capture at least one photo of “learning in action” to be used in that week’s class newsletter. The student would also be responsible for writing 1-2 sentences describing what is happening in the photo.
- Take a series of student photos as they act out a story they’ve read, or just as they go about their daily events. (2)
  - Print the photos out, laminate, and use as a sequencing activity in a center.
  - Put the photos into a Power Point slide show (mixed up) and use the slide sorter view to have the students arrange the slides appropriately. They can also add a sentence describing each picture.
- Take lots of pictures when your class is on a field trip or involved in another major activity at school. (2)
  - Back in the classroom, each student chooses one picture to label with a short description of what was happening, why it was important, or what he or she learned. Print a class book for the event or use as a Power Point presentation.
- Take pictures of different times on an analog clock. Make into flash cards that students can use to practice telling time. (3)
  - For lower grades stick to hours and half hours; for middle to upper grades use quarter hours and 5-minute intervals.
  - Create a matching game by having the corresponding times on other cards.
- Elapsed time (3)
  - Take pictures of an analog clock at two different times. The students use the pictures to determine the elapsed time.

### Other Uses:

- Have to disconnect cables to move your computer? Take several pictures of where the cables go so it’s easier to reassemble. (2)
- Take pictures of bulletin boards or other room arrangements that you want to remember for the next year. (2)
- Take pictures of bulky projects to keep in a student’s folder or portfolio. (2)

- Take pictures of your students and insert them into a Word document (sized small enough to fit the whole class on one or two pages). Label each picture with the student's name and put in your substitute folder. (2)

### **Online Resources**

- 1) Classroom Applications for the Digital Camera from the Plano ISD Instructional Technology Resources  
<http://k-12.pisd.edu/techs/dhitt/digital/camideas.htm>
- 2) Click! Using a Digital Camera in the Elementary Classroom  
<http://www.edzone.net/~mwestern/pix.html>
- 3) 75 Ways to Use Your Digital Camera  
<http://www.semo.net/suburb/mgilmer/digcam/>
- 4) Going Digital in the Classroom  
<http://www.forsyth.k12.ga.us/sbeck/digital/goingdigital.htm>

### **Suggested Rules and Camera Management**

While it may seem like a bad idea to let students walk around with the cameras, it is something they need to learn to do. Proper modeling and demonstrating by the teacher, along with strictly enforced rules can go a long way toward keeping the cameras from being misused or damaged. No doubt, accidents will happen. However, deliberate misuse should not be tolerated.

Here are some suggested rules and guidelines for camera use with the students:

- Before sending students out to use the cameras on their own, demonstrate proper handling of the camera, memory sticks, and/or disks.
- Many students may not know how to take a picture – allow time for each of the students to take a few pictures in the room. They should practice zooming in and out, centering their subject, and focusing.
- Students' hands should be clean before handling the camera.
- When using the large cameras, students must have the neck strap on at ALL times. If using the smaller, newer cameras, students must have the wrist strap on at ALL times.
- Students will only take pictures of those things as directed by the teacher.
- Students will not use the restroom, sinks, or water fountains while in possession of the camera.
- When cameras are not being used while in the classroom, they should be on the teacher's desk or other secure location. They shouldn't be left on student desks where they could be knocked to the floor.
- When students are sent around the building and schoolyard to take photos, send them in groups of 2 or 3 – one with the camera, others to take notes and help with the observations.
- Obviously, remind students of proper hallway behavior since they will be out and about on their own.