



# Using Your Digital Camera

Digital cameras are powerful and exciting classroom tools. They are immediate, personal, and very engaging. No matter what camera you get, you will be able to do very exciting things. Here are some general tips about digital cameras to help get you started.

## Power

Every digital camera has a power switch. Often it is a two-part process (push and slide) so that the camera won't accidentally get turned on and drain the batteries or get turned off while you are trying to take a picture.

If you don't use your camera for a specific length of time (60 seconds or so), many of them are designed to turn themselves off to conserve battery power. You simply need to turn it back on before you take your next picture. All the pictures that you have previously taken are stored on the camera, so you won't lose them when it turns off.

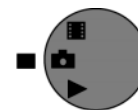
## Battery Life

Digital cameras usually run on AA batteries or a lithium battery. If your camera battery or batteries are not rechargeable, it is a good idea to buy rechargeable batteries for it. In most cases, you will have less than one hour of camera use for every set of batteries (4 AAs) you use. This would get very expensive if you couldn't recharge. The rechargeable lithium batteries are also pretty good. Some of them will hold a charge for almost 3 hours!

Eventually, any rechargeable battery can wear out, so you may have to replace them. In general, your battery will be good for several years of heavy use before it wears out.

## Record vs. Play

Most cameras have a switch that lets you move between recording or taking pictures and playing or viewing the ones you have already taken.



The words may be different on each camera, but the concept is the same. Some cameras don't have words, but will have icons that are self-explanatory.

When in doubt, check your user manual.





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## Viewfinder or LCD Display

If you switch or turn your camera to record, you will be able to take a picture. Some cameras don't have LCD displays and so, to view the picture you are about to take, you will have to use the viewfinder (like a regular camera). If the camera has an LCD display, you will be able to see what the lens is seeing on the LCD display. If you can't see anything, check to make sure you have removed the lens cap!

LCD displays are expensive and take a lot of battery power, so many cameras don't have them in order for the camera to be more affordable and energy efficient. If you are looking to save battery power, try turning off the LCD display instead of the camera. Many cameras have an LCD Display on and off or a backlight on and off to help you do this quickly.

Here is a nice trick for cleaning your LCD display. Instead of using a lens cloth, try using a couple of pieces of scotch tape. Place the tape over the LCD and lightly press it completely on the LCD. When you pull it off, the fingerprints will come off with the tape!

## Shutter Button and Focus

Obviously your camera needs a button to take a picture. Most shutters work like a regular auto-focus camera. If you press it half-way down, it will focus on the object in the center of the image. Then, to take a picture, you need to press all the way down, past this point of focus. Most cameras will either flash the word "recording" on the LCD display or the LCD display will "go black" or turn off for a second while the image is recording.

Many cameras will also let you choose exactly what focus or focal distance (the distance between the camera lens and the object in focus) for your picture. For example, you may be able to set the camera to a focal distance of 3.0m. Your camera will focus at 3.0m away, no matter what is in the center of the image.

## Macro



Some cameras also have a macro feature. This is often designated by a flower with the appearance of a tulip. A macro setting will allow the camera to focus on an object that is VERY close to the lens. This could be as close as 0.5 inches away from the lens.

This is useful for capturing detail on small objects such as insects, etc. If you are using the macro feature, be sure that your zoom is set all the way to wide angle.





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## Flash

Like a regular camera, digital cameras usually have a flash option as well.

Your flash button will often look like a lightning bolt. If you press the flash button, you will see this lightning bolt appear on your LCD display. This means that your flash is set to ALWAYS go off, no matter what the light. If you press the flash button again, you will see a “no” symbol around the flash. This means that the flash is set to NEVER go off.

If you don't see either symbol, but the flash light is on, the camera will decide when to use the flash. Some cameras also have a red eye reduction setting. In this case, the flash will go off a bit before the shutter captures the picture to reduce red eye.



*On some camera models, you must open the flash, before you can adjust any flash settings.*



**Flash On**



**Flash Off**



**Red Eye Reduction**

## When do you use a flash?

There doesn't seem to be a universal rule for using your flash. This is where the play mode and the ability to delete and reshoot a bad image will come in very handy.

I do find, however, that it is always a good idea to use a flash outside on a bright sunny day. Not exactly intuitive. But in this environment, a flash helps to even out the shadows and make your picture crisp and clear.

In low light be careful using the flash near any shiny surface as the light from the flash will reflect a bright white light. A flash can also wash out colors if you are close to an object. Again, this is not universal, so if you are unsure, take the picture with a flash and take another picture without a flash. This way you can decide at a later date, which one you would like to use.





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## Zoom

Most digital cameras have some sort of zoom capability. You will likely see a slider or button with the letter W (wide angle) and T (telephoto) at the other end. You can slide between these two to zoom in and out.

### Optical vs. Digital Zoom

Most cameras have both an optical and digital zoom. An optical zoom actually uses a combination of lenses to make the image appear closer (like binoculars). There is no loss in the quality of your image when you use an optical zoom.



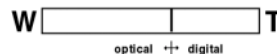
**Optical**



**Digital**

A digital zoom is different, however, because it magnifies the pixels that make up the image. If you have ever used a magnifying glass tool in an image editing program on the computer, you know that the closer you zoom in the more you see the pixels and the image becomes less clear. The same is true for a digital zoom. You will experience a fairly significant loss in quality when using a digital zoom.

Some cameras have a line on the LCD display to let you know when you are switching from optical to digital zoom.



If you are concerned about quality, you may want to invest in an additional lens for your camera. Most digital cameras have threading around the lens, which allows you to add additional lenses and filters.

