RAW vs. JPEG

What's the difference? Which should you use?

What does RAW mean?

The RAW format is simply recording the information in front of the camera, using the settings you've provided.

This means it is not making decisions about the image for you.

What is a JPG?

JPEG stands for Joint Photographic Experts Group. The JPEG file type is one of the world's most widely used image file formats. Able to compress impressive detail into a shareable file size, JPEGs are most helpful in storing and sharing digital images. They're ideal for social, email, and blog content.

Which to Use?

Generally, a RAW file will be between two and six times larger than a JPEG file. RAW files are bigger because they contain a much greater amount of image data. This is the reason we have only used JPG until now - JPG is convenient when storage is an issue like it can be in class.

A JPEG image is essentially all that data compressed down into a smaller file size that's easier to share. The camera is already processing your image for you when you shoot in JPG. It does this for a few reasons: JPG files are smaller, therefore you can hold more of them on your SD card and computer. In doing this, however, there is data that is lost in your images that working in RAW would preserve.

My photos look terrible! Why would I want to use RAW if they come out like this?

Think of the RAW file like a negative – it's literally the "raw" data that is recorded by your camera. The raw digital file is a "positive" not a negative image, but still needs to be "developed".

Just like the raw ingredients in a recipe, they need to be "cooked" or processed before they're ready.

RAW images MUST be processed(aka "edited").

Unprocessed RAW vs. Edited Image

Note how the RAW file looks “flat” compared to the edit:

All the information is there, waiting to be brought out in post-processing!

Brands and File Extensions

We only have Canon and Nikon in the classroom.

Their RAW file extensions are different from one another:

Canon - end in .CR2 (some models are .CR3)

Nikon - end in .NEF

Other brands also have their own file formats.

(Sony is ARW)

THESE FILES CANNOT BE READ AS IMAGES BY ANY SOFTWARE NOT DESIGNED FOR EDITING. Google, Instagram, etc. do not recognize this format as an image **UNTIL YOU PROCESS IT.** That means they will not be viewable by anyone who doesn't have appropriate software, and you cannot put them into a Google Slide, or share them on social media, or really anything else.

This sounds like a lot more work – why not just use JPG?

1. **SIZE:** RAW files are larger and record more data – this translates to better quality images. This is important particularly for print, and especially if you're planning to print large sizes.

2. **QUALITY:** Hand in hand with the above, the larger file, because it records more information, is less likely to "lose" parts of your image via clipped highlights or shadows.

3. **CONTROL:** RAW format gives YOU the control over what your image looks like. When you're photographing in JPG, the camera is actually processing FOR you, whether you're aware of it or not. Sometimes, it works out, but sometimes, your pictures do not turn out the way you'd like and this is likely the reason why!

Where to go to change the camera to record in RAW