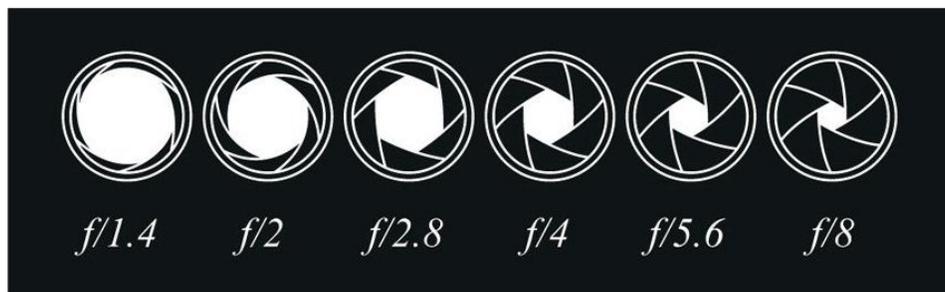


# DSLR Guide

## Camera Basics:

- **Aperture:** the variable opening by which light enters a camera (aka the pupil of the camera); measured in F-Stop.
  - **Depth of Field (DOF):** refers to the amount of the image that is in focus.
    - Lower F-Stop: shallower DOF. One part of the image is very sharp while the background/foreground will be blurred.
      - Lower F-Stop also opens the aperture more, allowing more light into the camera, which makes for a brighter image.
      - Low F-Stop is great for portraiture, still subjects (requires rack focus for any movement), and low light environments.
    - Higher F-Stop: greater DOF. More of the image is in focus and the eye is not directed to any particular area.
      - Higher F-Stop closes the aperture, allowing less light to enter the camera, which makes for a darker image.
      - High F-Stop is great for landscapes, moving subjects, and sunny, outdoor shoots.



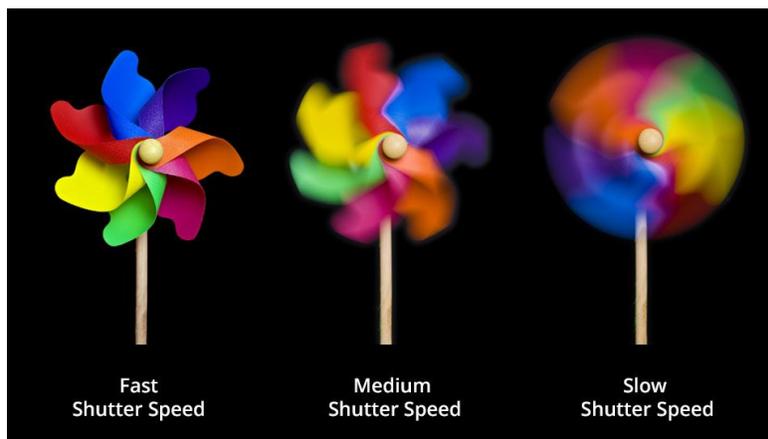
Wide ←————→ Narrow

- **ISO:** the light sensitivity of either the film or imaging sensor. When you change the ISO on a digital camera, you're rendering it more or less sensitive to light.
  - Higher ISO: adds more artificial light to the image, which can create a noisy or "grainy" image.
  - Lower ISO: adds less artificial light to the image, which produces better color and dynamic range (the ability of the camera to capture detail in both highlights and shadows).

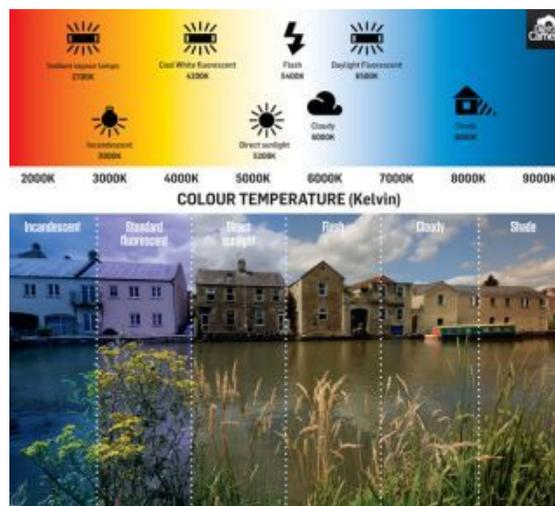
- It is best to keep the ISO as low as possible and only adjust it upwards when completely necessary in order to avoid a grainy image.



- **Shutter Speed:** the time for which the camera shutter is open at a given setting. Affects the exposure of an image.
  - Lower Shutter Speed: Adds more light to the image.
    - Lower shutter speed will also create motion blur, so keep that in mind when choosing a shutter speed
  - Higher Shutter Speed: Detracts light from the image.
    - Higher shutter speed will also freeze the subject with no blur.
  - Rule of Thumb: Try to keep shutter speed at two times higher than your desire frame rate (it's best not to adjust the shutter speed unless completely necessary).



- **White Balance:** controls the accurateness of the colors in the images. White balance is measured in Kelvins.
  - Preset Options:
    - Auto White Balance
      - Used for quick white balance changes. Camera adjusts the colors for you
    - Custom White Balance
      - With any white object, you can adjust the color tones of the image with this setting.
      - Take a picture of a white piece of paper filling up the entire frame. Under custom white balance, select this picture.
    - Presets
      - There are many white balance presets that correspond to a certain Kelvin temperature.
        - Cloudy, Shade, and Daylight are good for sunny outdoor shoots.
        - Tungsten and White Fluorescent can work for indoor shoots.
    - Manual
      - Lower Kelvin number = bluer image (typical for indoor shoots).
      - Higher Kelvin number = redder image (typical for outdoor shoots).
  - The white parts of the image should be the same tone when you view the image through the camera and when you view it through your eyes.
  - Images with a yellow tint are examples of poor white balance.



# Cinematography

- **Grids:** It is very helpful to use the 3x3 grid when framing your image (turn it on in the menu settings).
  - Rule of Thirds
    - Refers to a compositional technique in which you frame the important areas of the image on these vertical or horizontal grid lines.
  - Symmetry vs. Asymmetry
    - Symmetrical Framing: Image is even on both sides of the frame. Good for establishing shots, two subjects sitting across from each other, or a frame within the frame.
    - Asymmetrical Framing: Single subject will be closer to or directly on either the right or left vertical grid. The top or bottom lines of a landscape will be lined up with the upper or lower horizontal grid. Open space should take up the other third or two thirds of the image.



- **Cinematography Tips:**
  - Watch movies or TV shows that you think are shot well and try to imagine the choices the cinematographer made while composing the images.
  - Always make active choices when composing each image, every image has the potential to become interesting/cinematic through your choices in framing.
  - Don't point the camera in the direction of the sun or your image will be under or over exposed.

- If you are shooting during the day and can see the sky, make sure that you can see the color blue. If the sky is completely white, you have lost information and need to lower the exposure.
- Think about which focal distance will compliment the action you are shooting. Larger focal distances are suitable for close-ups and smaller focal distances are suitable for landscapes/establishing shots.
- Look out for continuity. Bad continuity is hard to notice during production, but very easy to notice once the film is complete and projected on a larger screen.