Shutter Speed and Aperture

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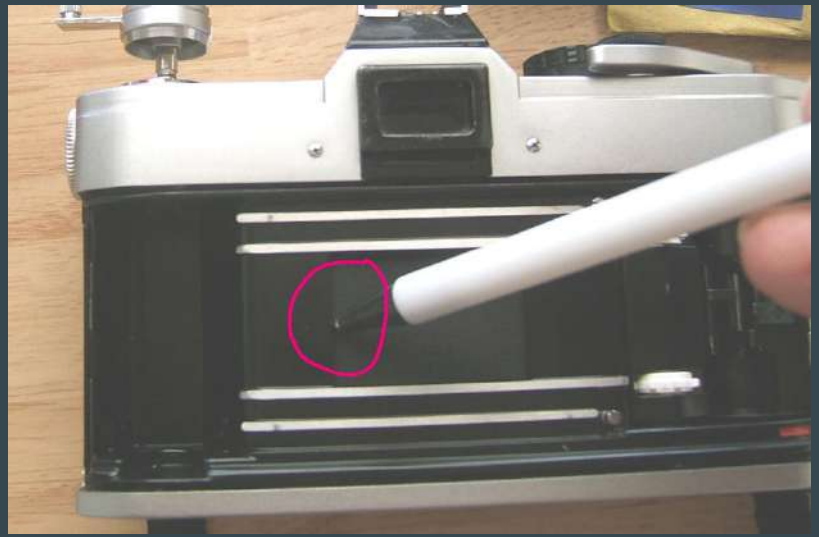
How to control the light that goes into your camera or your phone

(Photo 1 Edition - with phone instructions)

2 ways to control light coming into your camera

The shutter curtain opens and closes on the inside of the camera body for different amounts of time

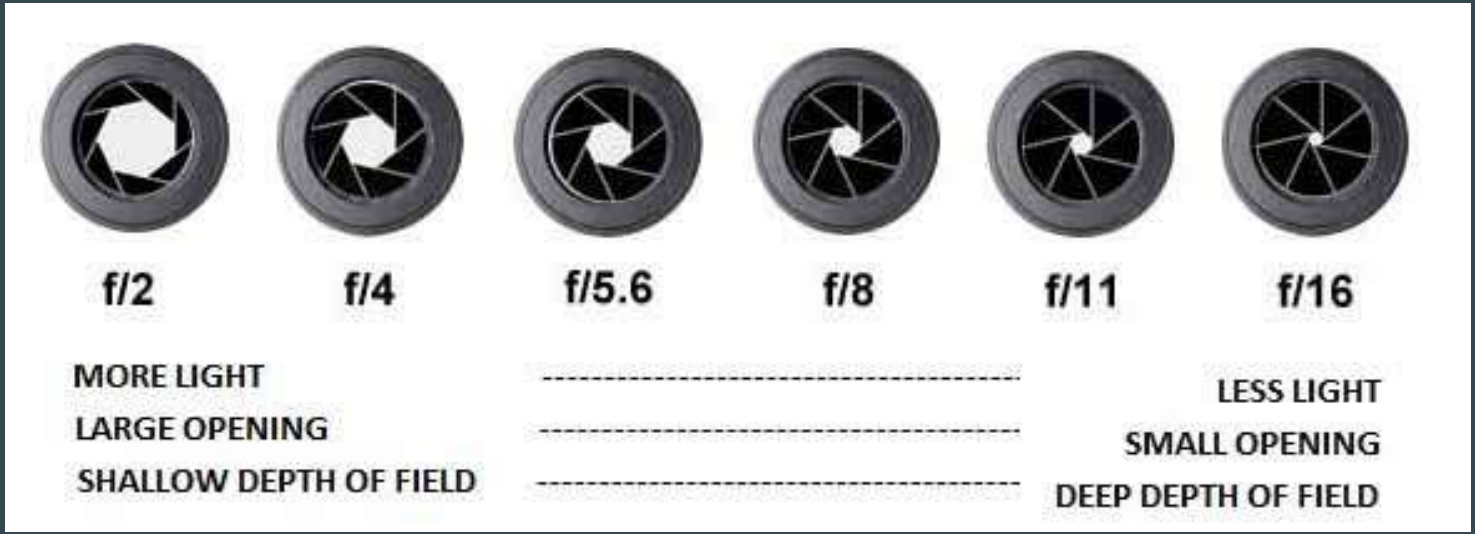


The lens has an opening called an aperture that lets in light. It can be made bigger or smaller.

But why have different settings?

Because the different options produce different looking images.

APERTURE


f/2
f/4
f/5.6
f/8
f/11
f/16
MORE LIGHT
LARGE OPENING
SHALLOW DEPTH OF FIELD
LESS LIGHT
SMALL OPENING
DEEP DEPTH OF FIELD

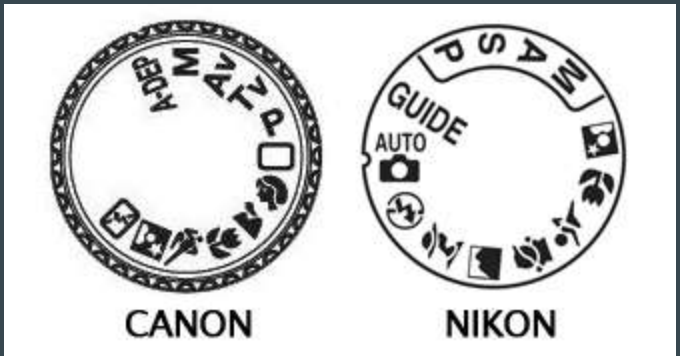
Visual Effect of a Large Aperture

Shallow Depth of Field - only part of the picture is in focus

More Shallow Depth of Field

Settings for Shallow Depth of field

Real Settings - put camera on A/Av and choose lower number f stop (f4, f3.5, f2, f1.4, etc)



EXTRA TIPS - you must have objects different distances away from the camera. Also, you should focus on something within 3-5 feet of the camera to help force Shallow DOF

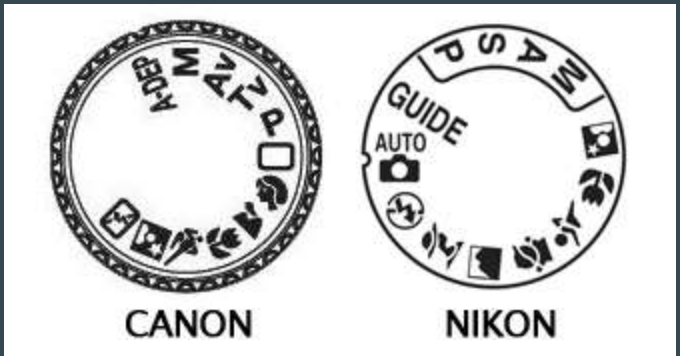
Visual Effect of a Small Aperture

Greater Depth of Field - all of the picture is in focus

More Greater Depth of Field

Settings for Greater Depth of field

Real Settings - put camera on A/Av and choose higher number f stop (f11, f16, f22, etc)



EXTRA TIPS - you must have objects different distances away from the camera. Also, you should focus on something far away from the camera to help force Greater DOF

SHUTTER SPEED

Shutter speed is measured in fractions of a second.

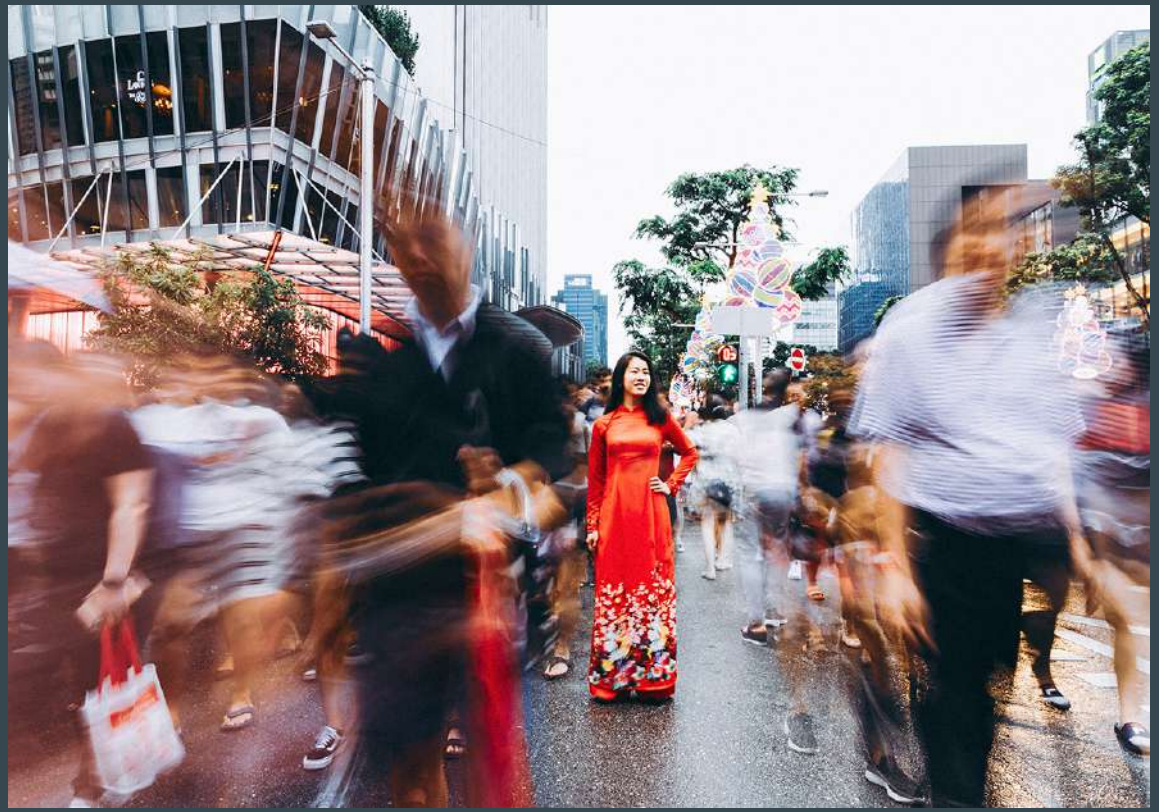
The longer a shutter is open, the more motion it captures and the more light it lets in.

Visual Effect of a Slow Shutter

Blurred Motion - anything that is moving in front of the camera is blurred. Anything that is still is not blurred.

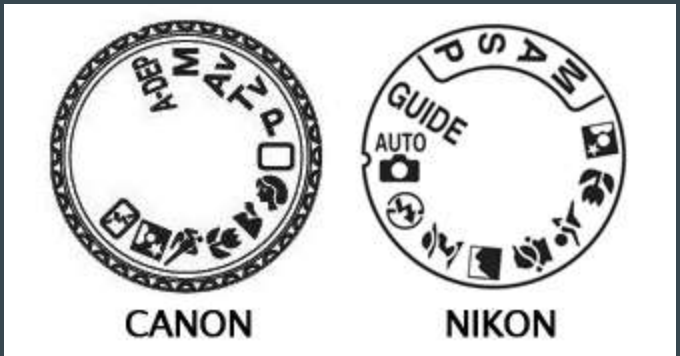
More Blurred Motion

More Blurred Motion



Settings for Blurred Motion

Real Settings - put camera on S/Tv and choose lower denominator (1/30, 1/15, ⅛, ¼, ½)



EXTRA TIPS - you must have something that is moving in the frame.
Also, you MUST hold the camera still! Otherwise even non-moving things will be blurred.

Ways to hold the camera still

1. Hold camera close to body, with feet wide apart
2. Lean against wall, while holding camera close to the body
3. Place camera on a table or chair or other sturdy non-moving object
4. Use a tripod

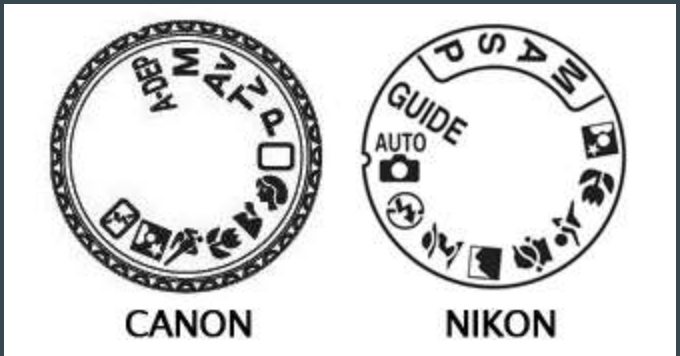
Visual Effect of a Fast Shutter

Frozen Motion - anything that is moving in front of the camera is frozen in time.

More Frozen Motion

Settings for Frozen Motion

Real Settings - put camera on S/Tv and choose higher denominator (1/125, 1/250, 1/500)



EXTRA TIPS - you must have something that is moving in the frame.
It needs to be something interesting! A frozen moving car just looks like a parked car.

Using a Flash

Make sure you turn your flash OFF!!!

Having the flash on makes certain cameras override settings that you want to use to capture the visual effect that you are trying to create

ACTIVE CHOICES

Just because you are now thinking about shutter and aperture, do NOT forget about:

Shadows/Light, the principles and elements of design (visual organization), distance, focal length, orientation, fore/mid/background, angles, rule of thirds, timing, eyespace, etc.

All of these things are in your tool box, and you want to think about them as you build your composition.

Controlling Shutter & Aperture & Focus on your phone

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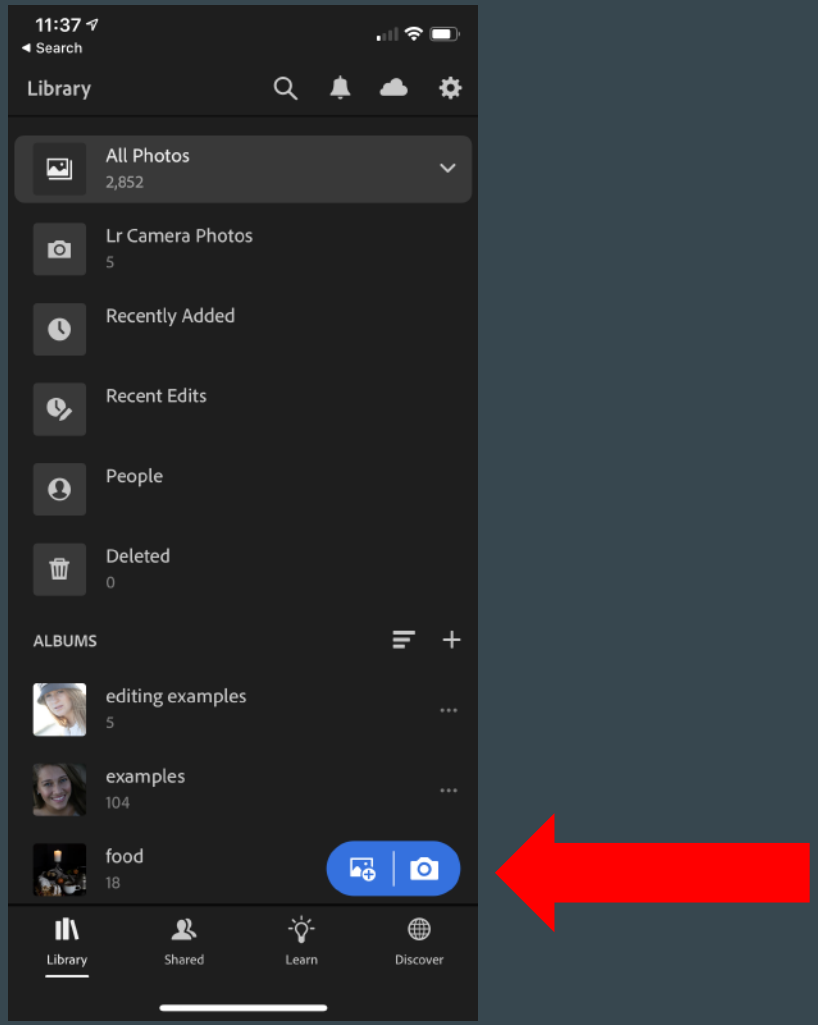
Using the Adobe Lightroom Mobile App

To get to the camera in Lightroom

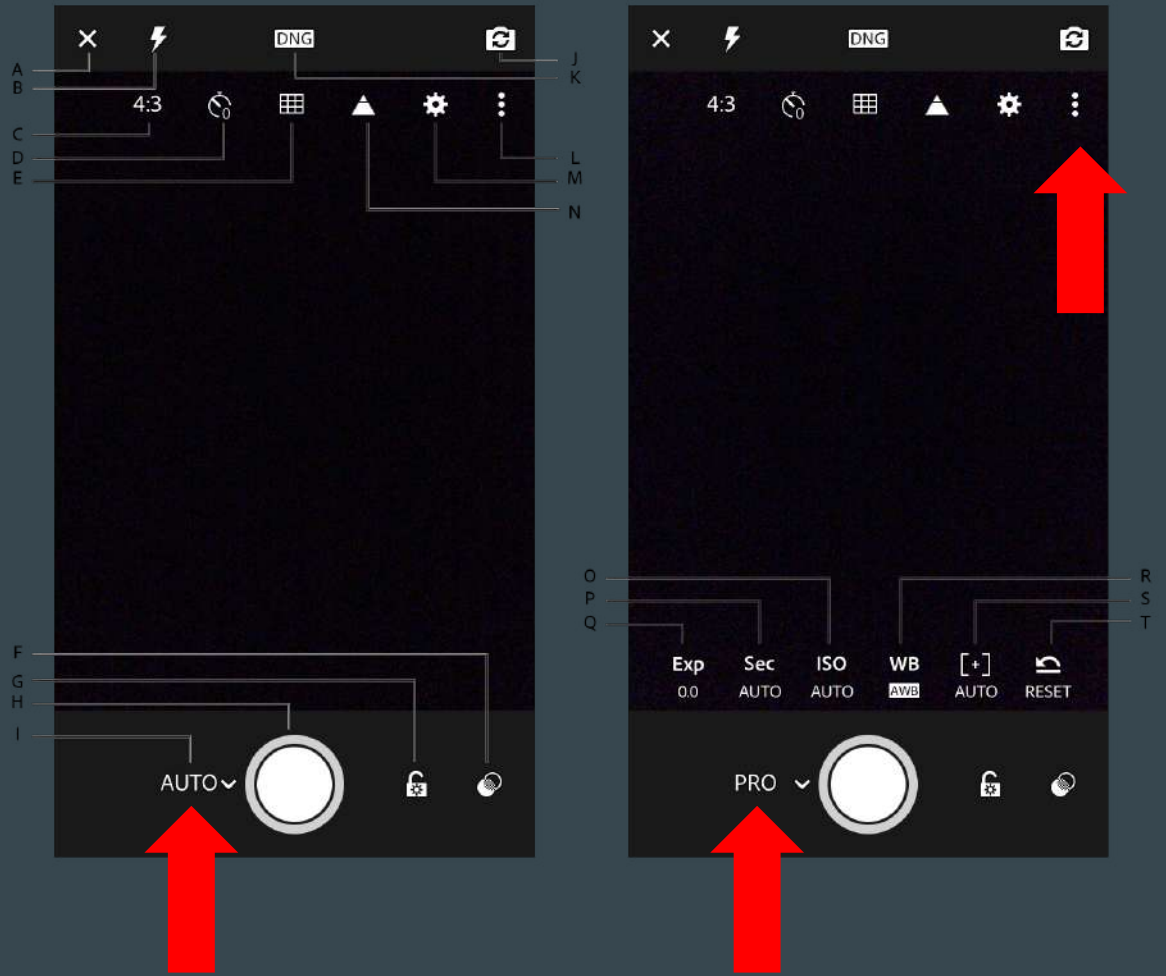
On the bottom right you will see a blue oval.

Choose the icon of the camera.



When you are in the camera...

1) Switch from AUTO to PRO
2) You can click on the three dots on the top for more settings like a timer or different grids
3) Set your Aspect Ratio to 3:2



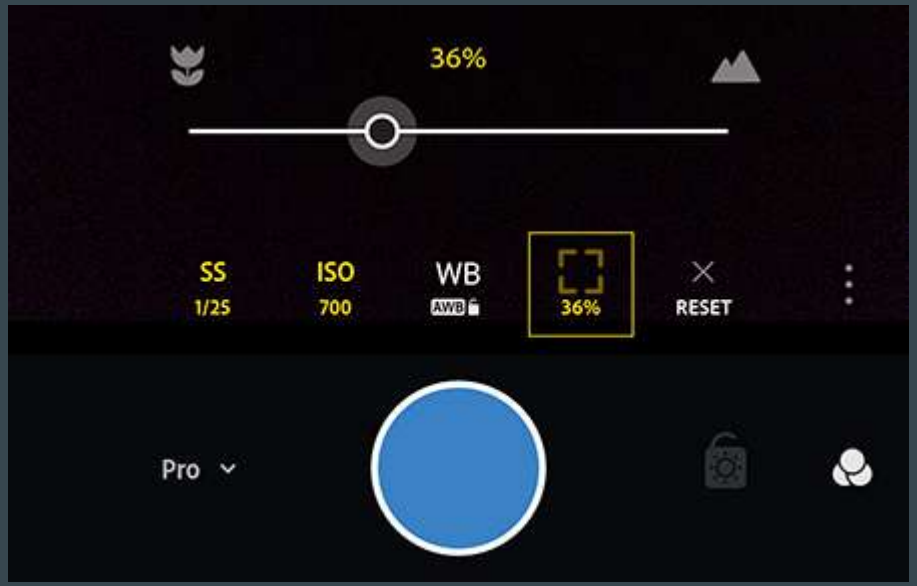
To change the Shutter Speed

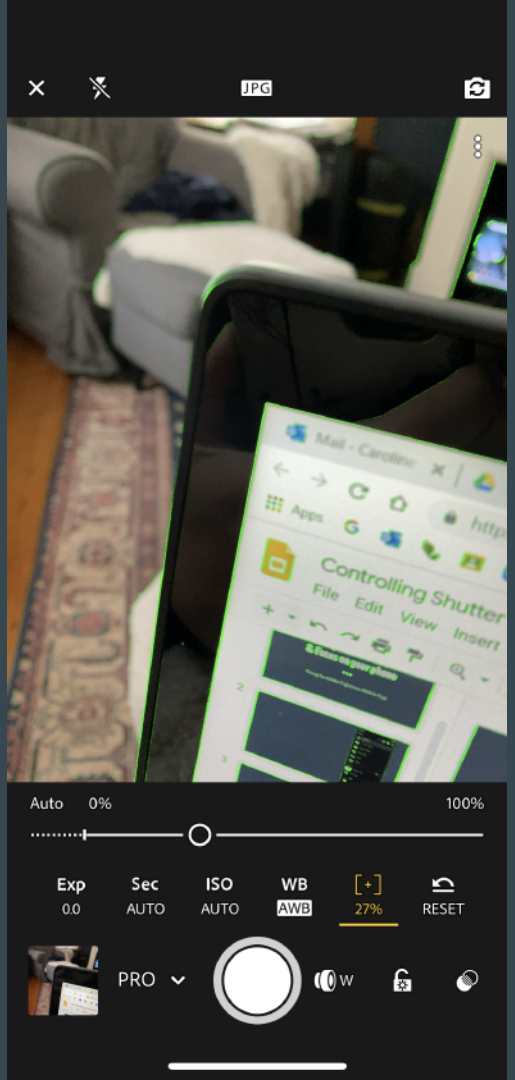
Click on the area that says “Sec” and slide back and forth for the shutter you want.

Higher denominator is faster shutter, lower denominator is slower shutter speed.

Manual Focus

Towards the right of the controls on the bottom of lightroom is the Manual Focus setting. You can select it and then slide back and forth to change the focus on your camera. You may have it set to where green outlines appear on the areas that are in focus.

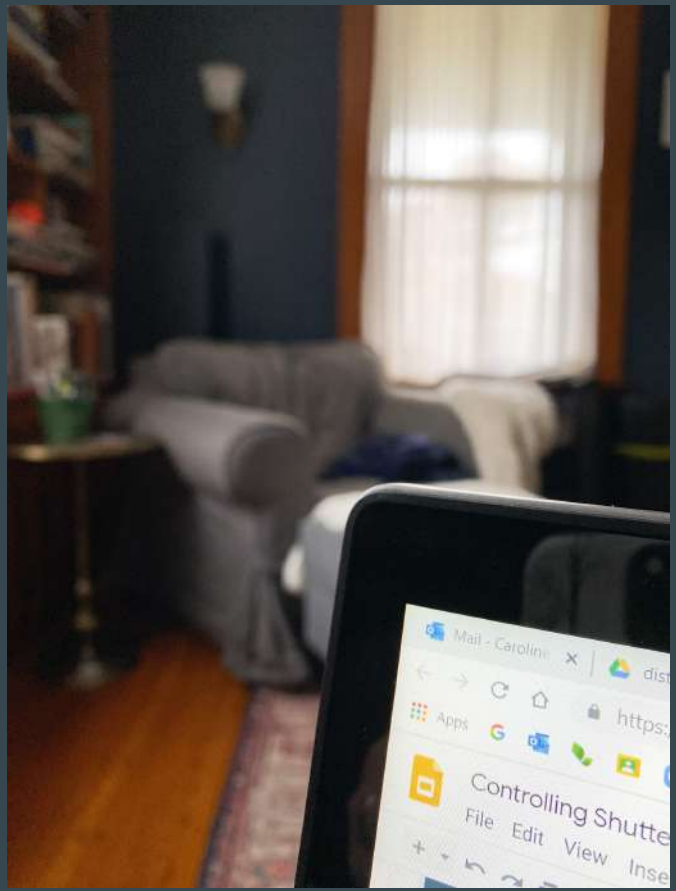




Forcing Shallow Depth of Field

First, have things different distances away. It's best if you have things much farther away than whatever is in front.

Second, get very close to something and click and hold on it to lock your focus (you will get the square over it), or use the manual focus settings.



You can also use Portrait Mode

But it is super fake!!!!!

It is a digital effect not a

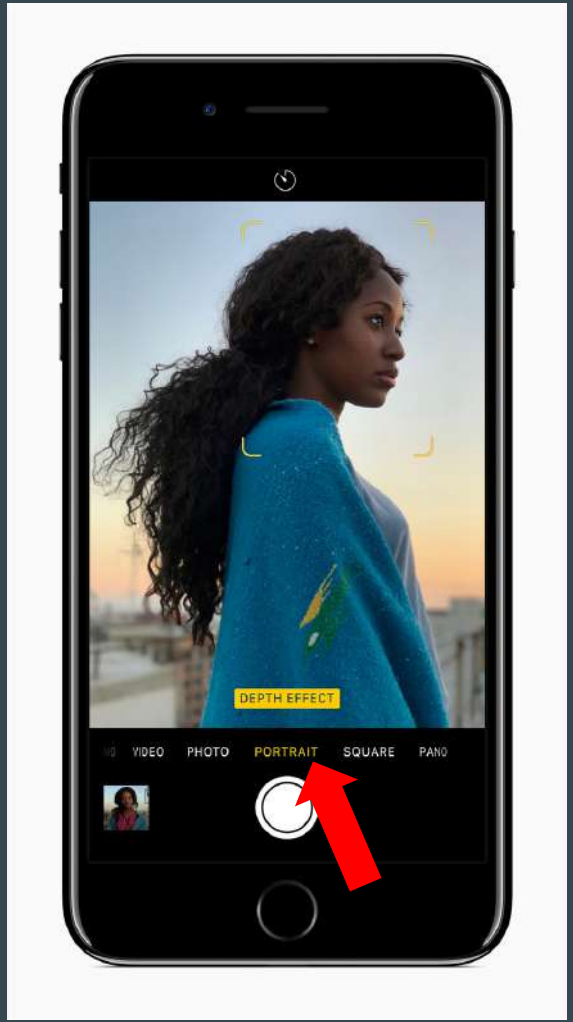
But if you still want to do it

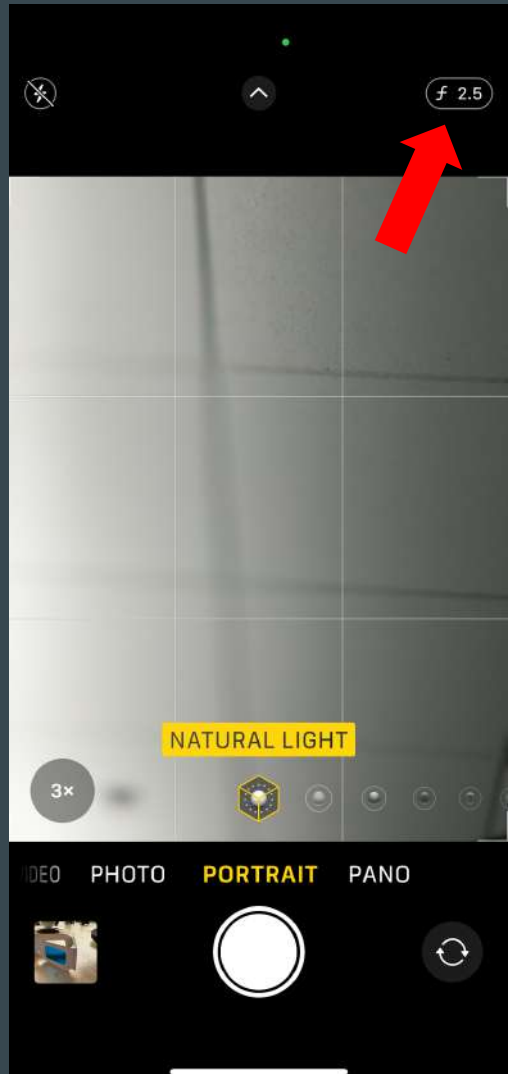
You actually have to pull farther away from an object than the method shown a few slides back.

But it works better for larger objects.

And you can choose your f stop. All the way shallow looks fake so maybe try something like f 2.2.

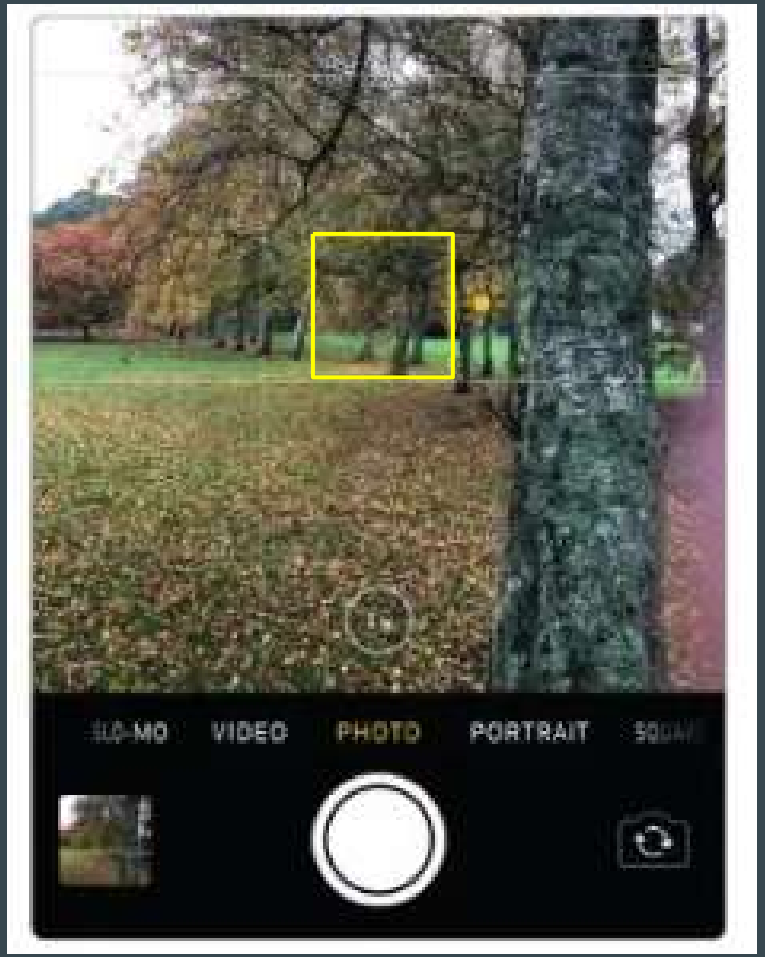
You can also change the f stop after





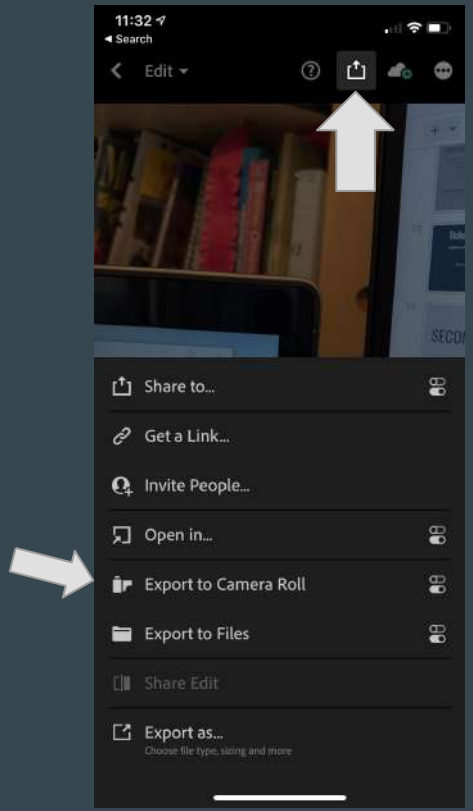
Greater Depth of Field

This is what your phone/iPad camera wants to do anyway. Just make sure you press on an object farther away to get that yellow box as it helps with greater depth of field



One final note :

When you take a photo in the Lightroom app, it does not save automatically to your camera roll. You need to open it in the Lightroom editing part and then export it to your camera roll.



Video

https://youtu.be/gQ-_UneWQcU

Advanced Shutter Speed and Aperture

In the next level course we will learn:

1. How to use the fully Manual setting on the camera
2. How shutter speed and aperture interact with
each other
3. The exposure triangle including ISO
4. How to use the different light meter settings when choosing shutter and aperture