SHUTTER SPEED

Introduction to Photography

Camera Functions:

- A/Av, P, M, & S/Tv: What do these letters mean?
- How does each letter control the camera?
- Which letter is best used for which function?

A is for Aperture:

- A/AV is aperture priority.
  - This means you control the aperture setting, the camera sets the shutter speed and ISO for you.
- Aperture controls **how much** light enters the camera.
- The aperture is located inside the camera lens and is adjusted by a ring on the outside of the lens.
- The larger the opening, the less sharp the final image will be.
- The aperture also controls the depth of field.
- When to use: ideal for portraits.

APERTURE

smallest

largest

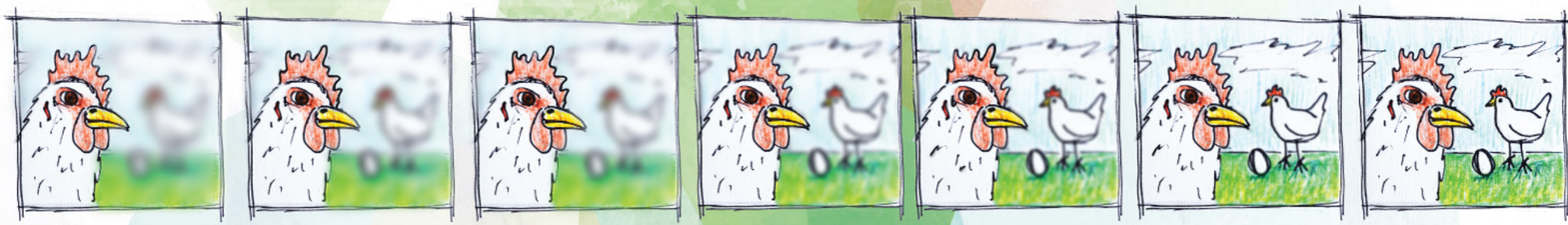
f22 f16 f11 f8 f5.6 f4 f2.8

deepest depth of field

shallowest depth of field

DEPTH OF FIELD

shallowest → *deepest*



larger aperture opening ← *smaller aperture opening*

S/Tv is for Shutter Speed:

- S/Tv is the shutter speed priority.
  - This means you set the shutter speed, the camera automatically adjusts the aperture and ISO.
- The shutter speed controls how **long** light enters the camera.
- This is timed by the shutter speed dial, generally at the top of the camera.
- When to use: sports/action photography when you want to freeze motion.

SHUTTER SPEED

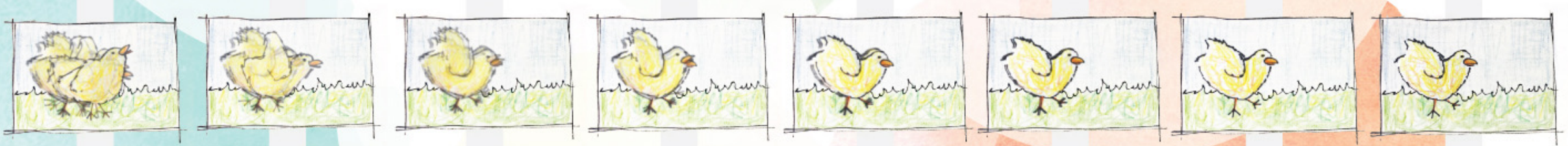
slower

faster

more light

less light

1/2	1/4	1/8	1/15	1/30	1/60	1/125	1/250



more blurry

less blurry

P is for Programmed Auto:

- P is for Program Mode (sometimes called Program Auto or Program Exposure)
- This allows you to experiment more with ISO and aperture/shutter speed combinations.
- This is in between fully automatic and manual.
- When to use: To show motion blur in lower light, freeze action in lower light, or lower the ISO to lower digital noise, to experiment while still relying on the camera to help automate portions.

ISO

- ISO can change how light or dark a photograph is.
- This can give you the power to adjust the look of a photograph taken in the bright sun, on a cloudy day, or at night.
- However, the risk with adjusting the ISO is it can add “noise” to your photograph.
- Noise gives a grainy, pixelated look to an image.
- The higher the ISO, the more noise an image will have.

ISO

set your ISO lower in bright light

set your ISO higher in low light

darker

lighter

less grainy

more grainy

M is for Manual:

- You have ultimate control over your camera and the exposure.
- You can set the aperture, shutter speed, and ISO without the camera trying to automate anything.
- In manual mode you can experiment to get the exact picture you are looking for.
- When to use: When you are trying to capture a specific style of photography, blurred motion, greater contrast, little noise, motion blur, or freeze action.

EXPOSURE

underexposed

overexposed

-2 -1 0 +1 +2

darker

lighter

try to keep the meter at 0

Let’s practice using the shutter speed!

01

Turn your camera to Tv (S) on the mode dial.

02

In Tv mode, you change the Shutter speed and the camera will change the aperture.

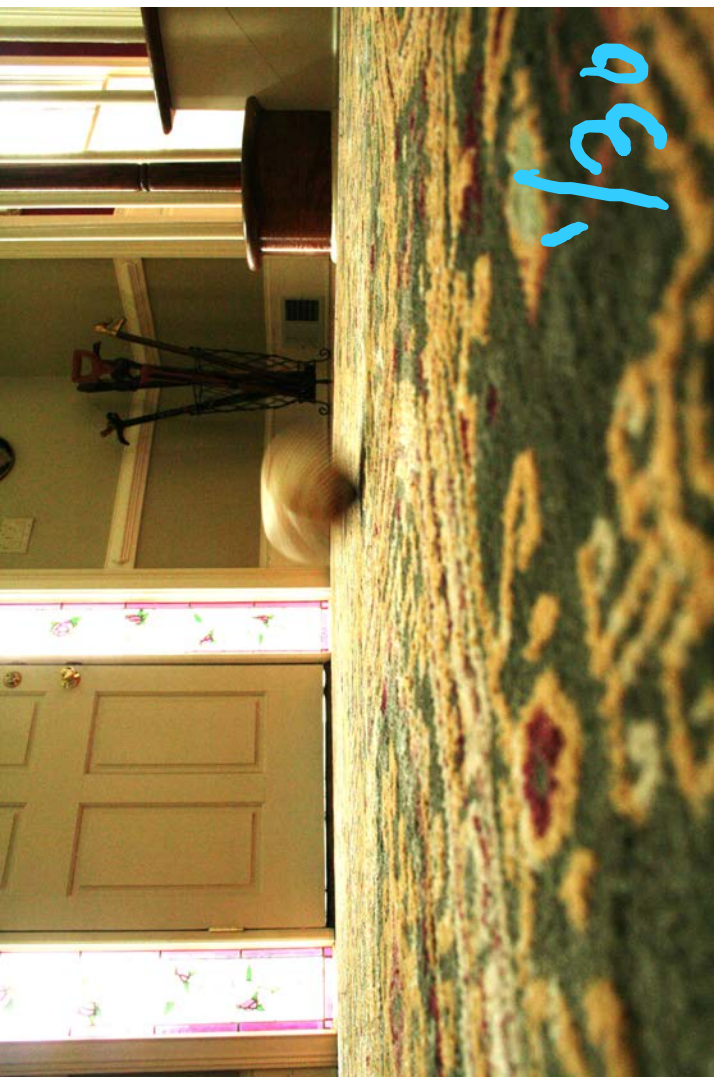
03

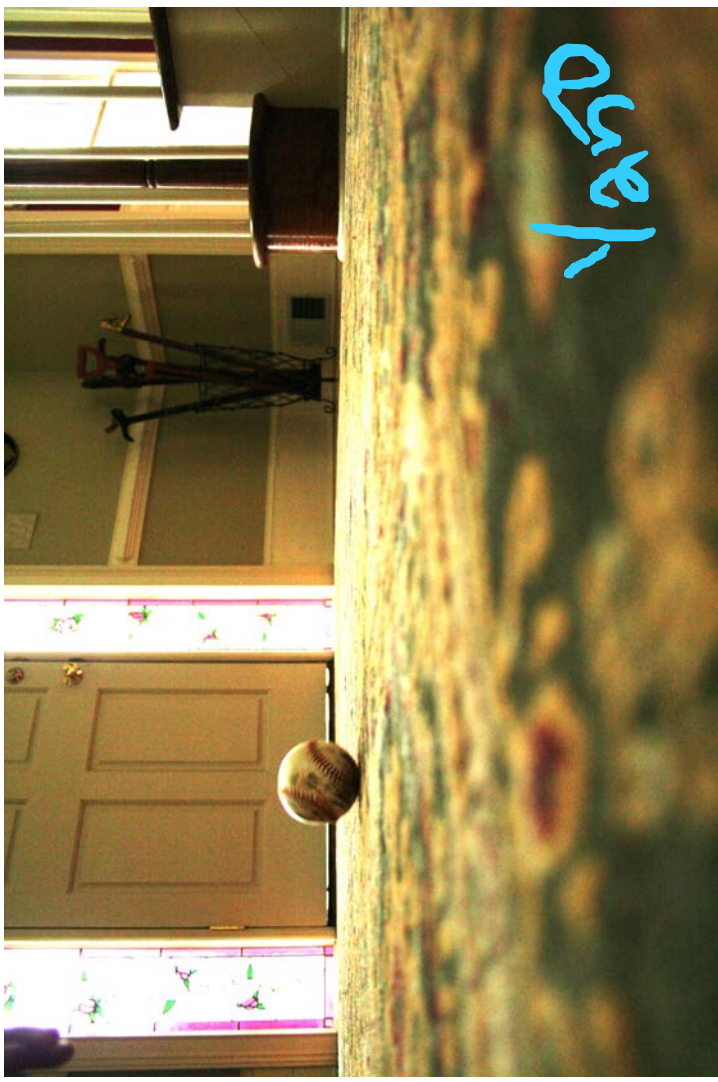
Use the dial to change the shutter speed.

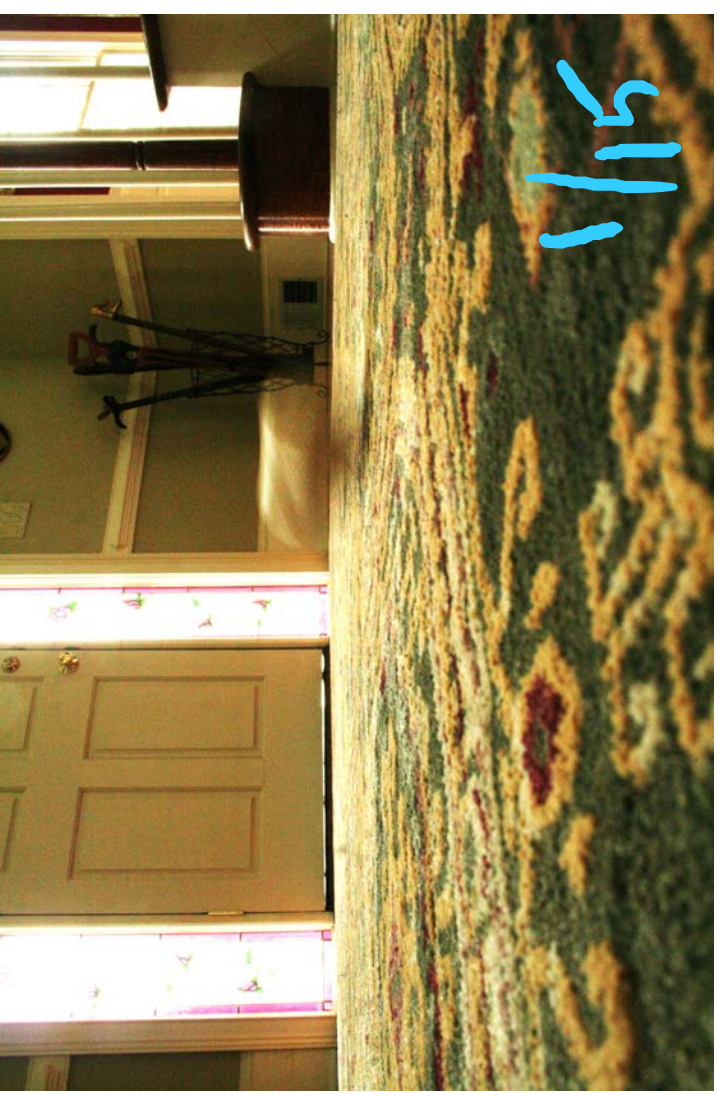
Your assignment:

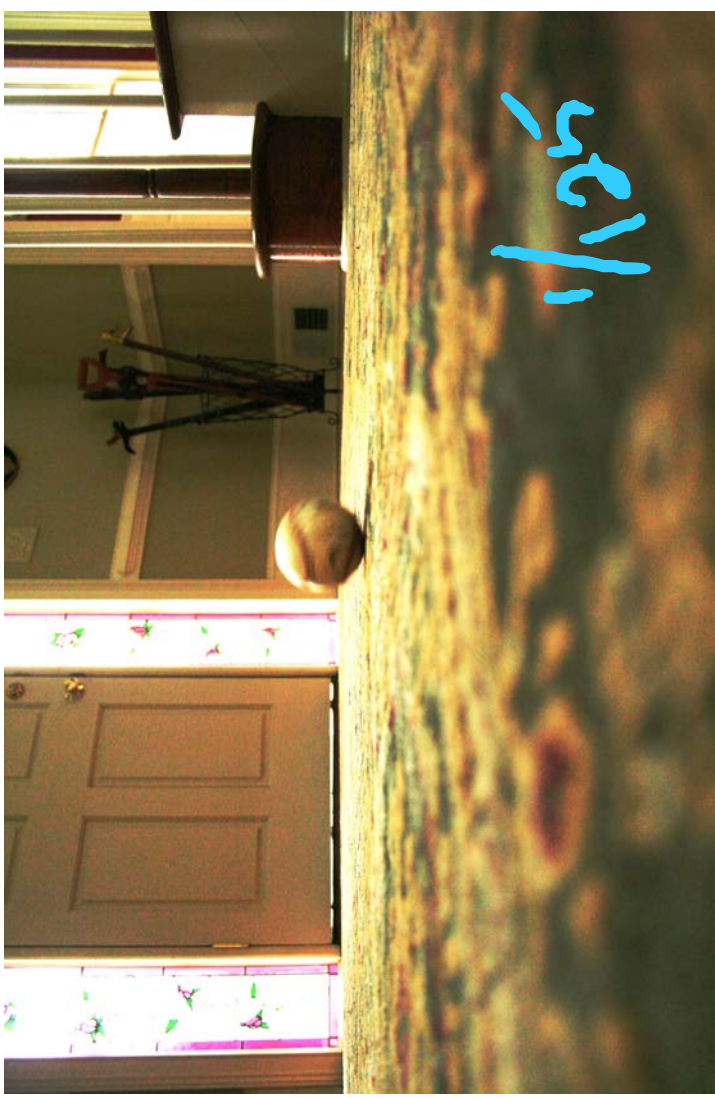
- You will experiment with your shutter speed.
- Set your camera to Tv mode.
- Select one object to photograph.
- You must take at least 5 different photographs (of the same object) using 5 different shutter speeds.
- Upload and edit your photographs.
- Label your photos with the shutter speed you used to take it.

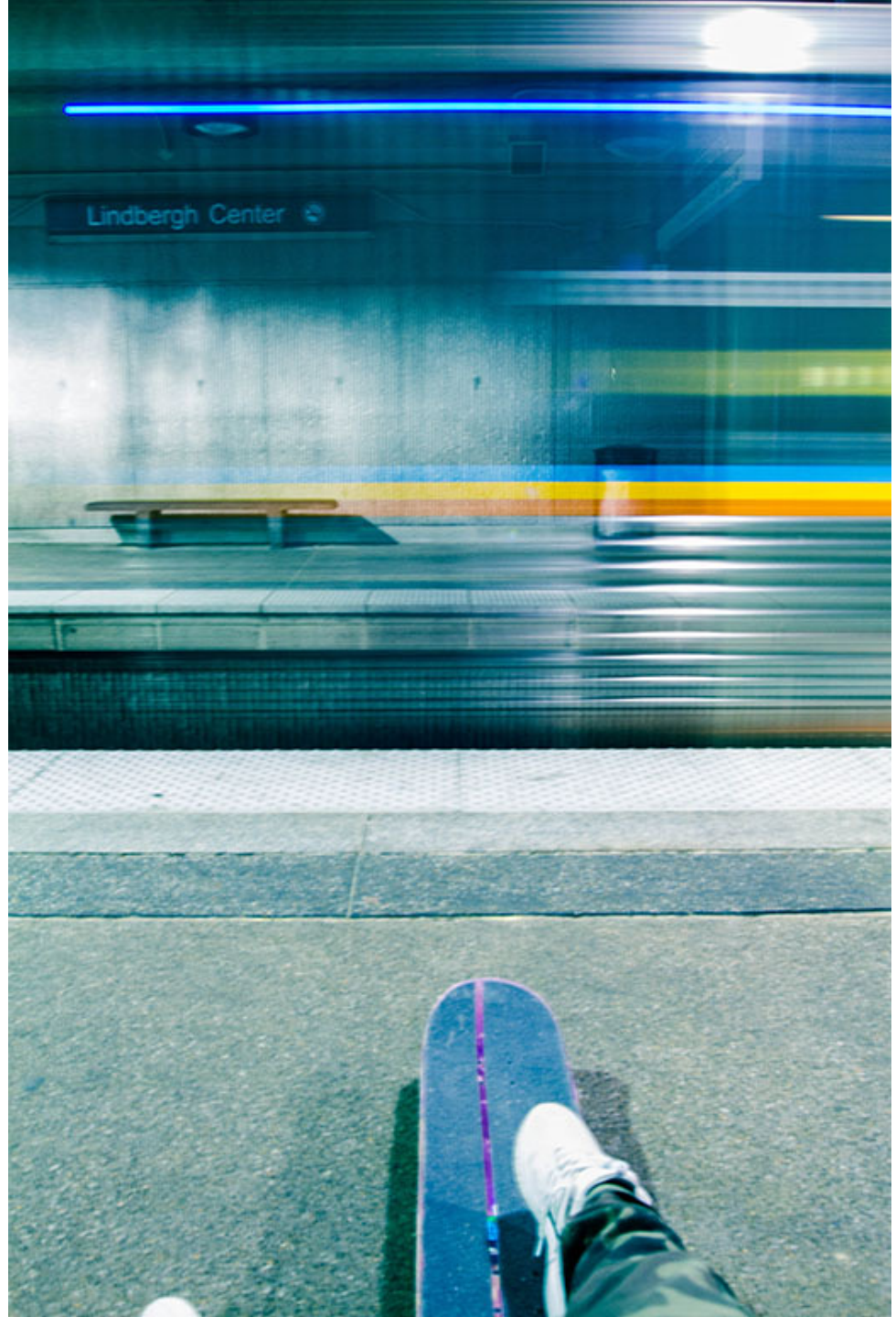
Comparing Shutter Speeds:







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How to Download

01

1. Place SD card into the SD card slot.

OR

02

2. Airdrop/Bluetooth

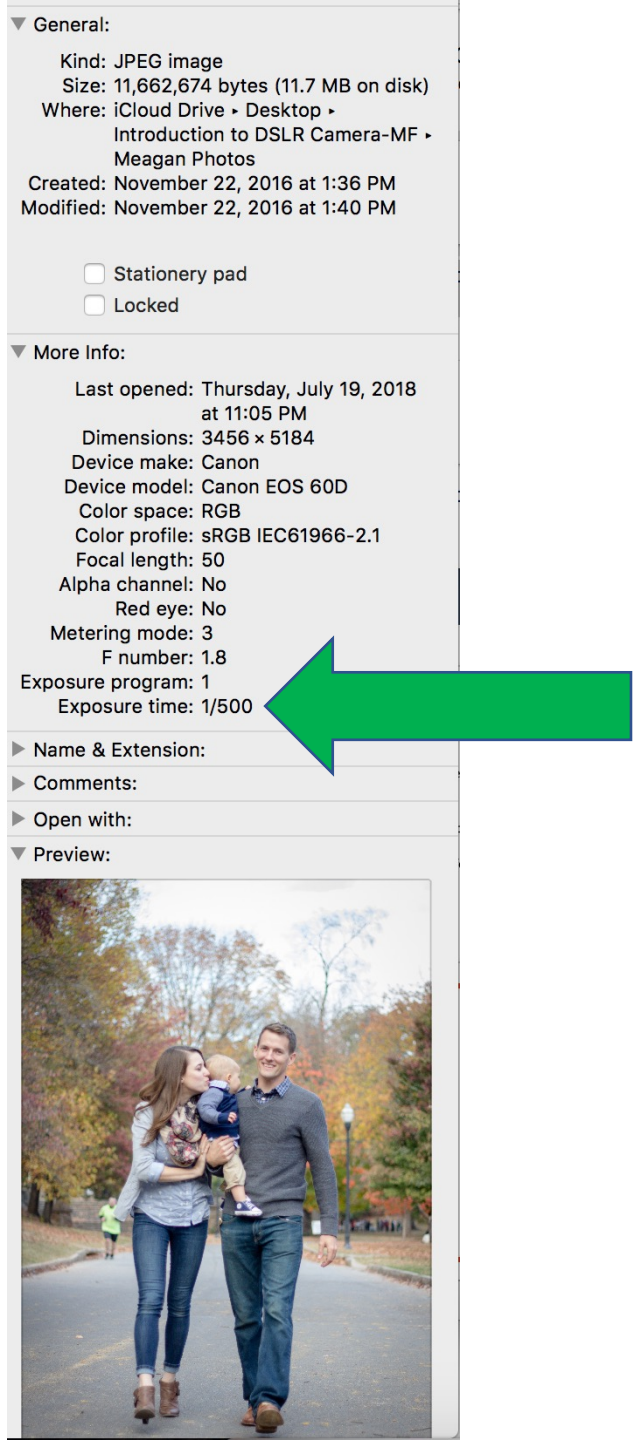
OR

03

3. Use the camera's cord to plug into USB slot on computer.

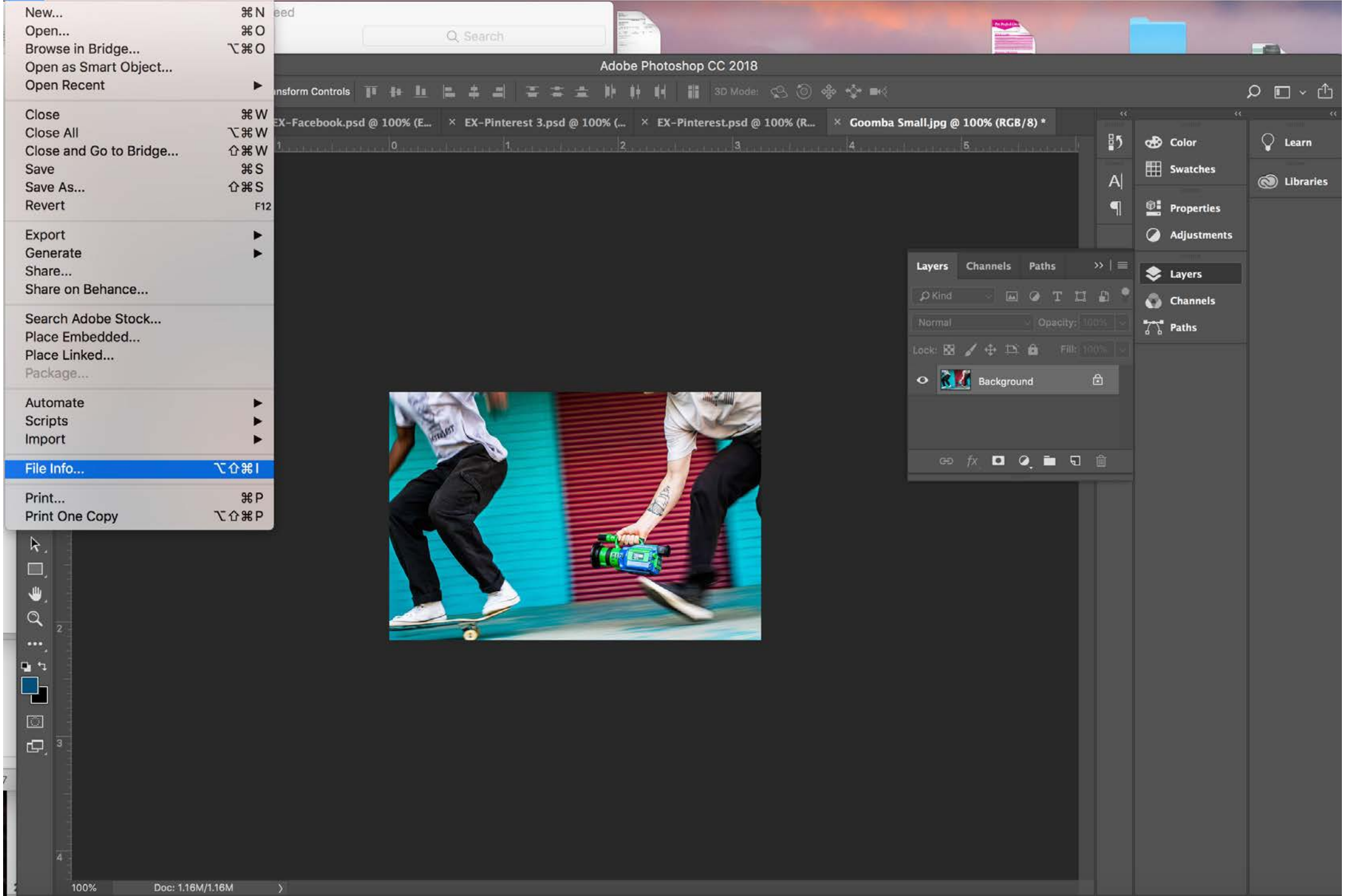
What was my shutter speed?

- Technology generally makes life easier, and it's no different in digital photography.
- Rather than relying on note taking as you capture your pictures, check your metadata after uploading your picture to determine the shutter speed.
- All you have to do is:
  - Download your picture to your computer.
  - Right click on your picture and select "Get Info," click the arrow for "more info."
  - The shutter speed number is listed here under exposure.
  - *Finding metadata may vary slightly based on the computer you are using.*



Another way to check your shutter speed:

- Open your photograph in Adobe Photoshop.
- Select “File,” “File Info.”
- In the pop up box select “Camera Data” from the menu to the right.
- Look under “Exposure” for shutter speed, f-stop, ISO, and camera settings information.


New... ⌘N
Open... ⌘O
Browse in Bridge... ⌥⌘O
Open as Smart Object...
Open Recent
Close ⌘W
Close All ⌥⌘W
Close and Go to Bridge... ⇧⌘W
Save ⌘S
Save As... ⇧⌘S
Revert F12
Export
Generate
Share...
Share on Behance...
Search Adobe Stock...
Place Embedded...
Place Linked...
Package...
Automate
Scripts
Import
File Info... ⌥⇧⌘I
Print... ⌘P
Print One Copy ⌥⇧⌘P
Adobe Photoshop CC 2018
EX-Facebook.psd @ 100% (E...
EX-Pinterest 3.psd @ 100% (...
EX-Pinterest.psd @ 100% (R...
Goomba Small.jpg @ 100% (RGB/8) *
Color
Swatches
Properties
Adjustments
Learn
Libraries
Layers
Channels
Paths
Kind
Normal
Opacity:
Lock:
Fill:
Background
100%
Doc: 1.16M/1.16M

Goomba Small.jpg

- Basic
- Camera Data
- Origin
- IPTC
- IPTC Extension
- GPS Data
- Audio Data
- Video Data
- Photoshop
- DICOM
- Raw Data

Camera Information

Make:	Canon
Model:	Canon EOS 7D; S/N: 1070710170
Owner:	
Lens:	17–35mm

Shot Information

Focal Length:	35.00 mm
Exposure:	1/60 sec; f/5.6; ISO 250; Manual; Pattern metering
Image Size:	780 x 520
Orientation:	1 (Normal)
Resolution:	240.00 Pixel per Inch
Flash:	Did not fire

Powered By xmp

Preferences | Template... | Cancel | OK

Reminders:

- Set your camera to Tv (s) mode, this gives you control over the shutter speed settings and the camera takes care of the rest.
- Allow enough time to return to class to upload your photos.
- Check your metadata as a reminder of your shutter speed number.
- Label your photograph as soon as you upload it so you don’t forget which shutter speed setting was used for which photo.

THE END