

# **TIME LAPSE PHOTOGRAPHY**

## **An Introduction**

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# Some Background

- Pioneers
  - Georges Méliès — Carrefour de L'Opera (1897)
  - F. Percy Smith — Birth of a Flower (1910)
- How It Works
  - Video frames are shot much slower than a normal rate
  - On play back, action moves much faster than reality
  - “Time Lapse” refers to the interval between two frames
- Do Not Confuse Frames with Frames Per Second
  - Frame = one image in a time lapse video
  - Frames Per Second (fps) = video standard for taking/playing video

<https://www.masterclass.com/articles/how-to-shoot-time-lapse-photography#>

# My Camera Equipment

- iPhone
  - Time lapse option exists in Camera app
  - iPhone automatically adjusts the time-lapse recording settings
  - <https://gohustl.co/time-lapse/iphone-time-lapse-calculator/>
- Nikon D7500 DSLR - Time Lapse Video Mode
  - Settings for interval between shots & total shooting time
- Nikon D7500 DSLR - Single Shot Mode
  - Take individual images using built-in intervalometer
- GoPro - Time Lapse Video Mode
  - Settings for interval between shots & total shooting time

# Other Equipment

- Tripod or Equivalent Solution
  - Useful to keep camera steady for a long period of time
- Intervalometer
  - A tool that accurately measures short intervals of time
  - Connects to camera and manages camera shutter
- Neutral Density Filters (*optional*)
- High Capacity Memory Cards or Lots of Device Memory
- Egg Timer
  - Optional but can provide for interesting/unusual results
  - Stay tuned ... more about this later
- A Lot of Patience, Curiosity & Experimentation

# Choosing a Time Lapse Interval

- What's the subject that you want to capture?
- How fast is the action taking place?
- How long do you want the final result to be?
- How much time do you want spend to capture the frames?
- SPECIAL NOTE — The interval **MUST** always be longer than shutter speed
- Check out PhotoPills at <https://www.photopills.com/calculators/timelapse>

# Time Lapse Interval Examples

- Fast movement = shorter intervals & slow movement = longer intervals
- 1 Second
  - Moving traffic, fast moving clouds
- 1 to 3 Seconds
  - Sunsets, sunrises, crowds, slow moving clouds
- 15 to 30 Seconds
  - Moving shadows, sun across the sky with no clouds, stars
- 90 to 120 Seconds
  - Fast growing plants such as a vine
- 5 to 15 Minutes
  - Construction projects

Nothing is cast in concrete — be curious & experiment

# Be Patient

- It takes time to make a short video
- An Example
  - Shooting interval = 5 seconds
  - Duration of final video clip = 30 seconds
  - Frame rate of video = 24 frames per second
- And the Result
  - Time required to take the 30 second video = 1 hour
  - Number of images = 720
  - Size of video = 11.25GB

# Shooting In Low Light

- Worth Repeating
  - *The interval **MUST** be longer than the shutter speed*
- Sunrise & Sunset
  - Going from dark to light or vice-versa can be an interesting challenge
  - Use a device like Pluto Trigger to manage bulb-ramping
    - <https://plutotrigger.com/>
  - Or ... let the camera manage the exposure setting ... but remember the interval length
  - Either method ... you need to plan & experiment
- Flash vs LED
  - If you must use extra lighting, use an LED lamp
  - If you use a flash you **WILL** get a light flicker in the result

# Post Processing

- Input = Video Clip
  - Use any software that handles video clip processing
- Input = Series of Single Images
  - You will need software that lets you create a video from a series of single images
    - Eg., Photoshop, iMovie, Adobe Premiere Pro, DaVinci Resolve
    - Many, many others

# Soft Boiled Video Photography

- The Equipment
  - GoPro Camera
  - IKEA Ordning Stainless Steel Timer
  - Brass Tripod Connection
  - Flat GoPro Clamp
  - Liquid Weld
- The Process
  - Liquid weld tripod connection to timer
  - Attach GoPro clamp to timer
  - Mount GoPro on clamp and timer on a tripod
  - Decide on an interval (1 second) and shooting duration (1 minute)
  - Start camera, set egg timer to one minute and enjoy the results

<https://www.youtube.com/watch?v=X174P4tYLmQ>



**GoPro Hero 4 Camera**

**Flat GoPro Clamp**

**IKEA Ordning Stainless Steel Timer**

**Brass Tripod Connection**

**Liquid Weld**

**Tripod**