

SHUTTER SPEED PERFORMANCE COMPARISON: MACRO MOTION vs. FREEZE

LONG SHUTTER SPEED 2"

**MOTION BLUR
(CONTINUITY & FLOW)**



Long
Exposure



Fast
Snap

FAST SHUTTER SPEED 1/1000

**FREEZE MOTION
(ACTION CAPTURE)**



REDUCED
MOTION BLUR
INCREASED
ACTION FREEZE

INCREASED
MOTION BLUR
CONTINUITY
OF MOTION



Instructional Goal	Recommended Setting	Why this works for the learner
Show proper hand placement when sewing	1/1000 (fraction of a second)	A quick shutter speed will freeze the action in the moment without any blur which might make the image confusing to understand.
Demonstrate that the needle of a sewing machine moves faster than the fabric it sews	2" (2 full seconds)	Will show a lot of motion blur on the needle while the fabric is minimally burred. The machine stays still so it will be crisp and clear in the photo.

Challenge 3: Capturing Time

(slow shutter speed)

Instructional Goal: Capture a high-velocity moving part (e.g., a sewing machine needle or 3D printer extruder) in mid-operation with zero motion blur. The image must provide the impression that something is moving while the surrounding environment is still.

Technical Constraints:

- **Shutter Speed:** Maximum **1/15s** or lower.
- **Exposure Balance:** Compensate for the increased light by increasing ISO or aperture. Reduce environmental lighting if needed.
- **Use a tripod:** You will not be able to stay still enough for this photo!

Technical Documentation: Attach/Describe Image Output

Lead &/or Supervisor Feedback

Synthesis, Reflection, and Feedback

Self-reflection: Technical Proficiency Checklist

For each of the following categories, mark yourself as “need help” “need practice” or “ready to go.”

Technical Skill	Need Help	Need Practice	Ready to Go
Optimization of ISO settings to minimize digital noise while maintaining exposure balance.			
Strategic use of Aperture (f-stop) to control depth of field for instructional emphasis.			
Calibration of Shutter Speed to accurately capture motion without unintended blur.			
Precision manual focusing (with or without utilizing focus peaking) to ensure critical instructional components are sharp.			
Technical choices (ISO/Shutter) result in a clean, professional image free of distractions or technical errors.			
Depth of field and composition choices successfully isolate the subject to reduce learner distraction.			
The overall production quality aligns with standards for educational and corporate media.			
Other feedback or comments....			

What is one skill you'd like to continue practicing?	
What is one thing that can't be fixed using digital photo editing software?	

Synthesis, Reflection, and Feedback

Feedback from your Supervisor

Objectives	Comments
By the end of this workbook, you will be able to create high quality (good exposure, in focus, compositionally clear) digital content that will support their online tutorial.	
High quality digital content: Good Exposure	
High quality digital content: In Focus	
High quality digital content: Compositionally clear	
High quality digital content: Would support a tutorial	
<i>Overall Feedback...</i>	

Reflect	
How can proficiency with the triangle of exposure help you develop quality tutorial content?	
What is one way that you plan to reduce cognitive load through tutorial photography?	

Feedback for your supervisor

Feedback about this assessment	Comments
What was great?	
What could have been better?	
Did you learn what you hoped to learn?	
Did you learn what you needed to learn?	
What major are you in? In what ways has your prior educational experience prepared you for this guidebook?	
Feedback about this assessment	Remove any stars to rate how much this workshop helped you with each goal
Can adjust the ISO, aperture, and shutter speed to take a well exposed photo.	    
Can adjust the composition of a photo to have a clear focal point in the picture.	    
Can use the Canon R10 to capture quality media for my online tutorial	    
This was a good balance of supports and challenge.	    
This was a manageable workload.	    
The pacing was engaging, not boring and not overwhelming.	    
Overall Feedback...	