

Hints & Tips for movement

- Freeze action with sharp subjects use fast shutter speeds $\geq 1/250^{\text{th}}$ sec
 - (alternatively inc. ISO, e.g. ISO 200 – 800 inc. shutter speeds 1/250 – 1/1000)
 - Try sports mode first
 - Use continuous shooting mode if present
- Blurred subjects use slow shutter speeds
 - Speeds slower than $1/30^{\text{th}}$ sec best in daylight
 - Smaller aperture may be required to stop overexposure
- Panning with subject (keeps moving subject sharp against blurred background)
 - Keep moving subject in the frame
 - Stand with feet firmly planted and swing upper part of body
 - Follow its movement in LCD and judge right moment
 - Fire shutter release at desired point while continuing to track subject (slide 1)
 - Secret is to have v smooth panning, i.e. match direction & speed of camera to subject
 - Motorsports try 1/250 – 1/500
 - Athletics from 1/30 for long distance runners to 1/125 for sprinters
- Key is timing

Fast Shutter Speed

- Shutter speed required depends on
 - How fast subject is moving
 - How big it is in the frame
 - Direction of travel in relation to camera
- Fast shutter speed freezes action
 - The faster the movement – use faster shutter speed e.g. $\geq 1/250^{\text{th}}$ sec and large aperture e.g. F3.5 (slide 2)
 - Water
 - Freeze water seeing individual drops requires v. fast shutter speed, e.g. $1/2000^{\text{th}}$ sec (slide 4, 5 & 6). Shoot on a bright day with plenty of light.
 - Use high ISO if required
- Experiment first
 - Ask friend to bicycle past you repeatedly at same distance & speed
 - Try using shutter speeds of $1/125$, $1/250$, $1/500$ & $1/1000$ sec. Subject gets progressively sharper as length of exposure diminishes (slides 6a, 6b, 6c)
- Subjects moving towards you need slower shutter speeds than those going across the camera, e.g. $1/125$ sec vs $1/1000^{\text{th}}$ sec. Ensure auto focus is set (slides 7, 8 & 9)

Peak action

- Allows you to freeze graceful shapes where the subject often seems to hang in the air (slides 9a, 9b, 9c, 9d)
- Anticipate by pushing the button as subject is peaking
- Need fierce concentration and fast reflexes

Slower Shutter speed

– Creates blur

- walking people use $1/30^{\text{th}}$ sec + panning gives dynamic feel (slide 10)
- Sports activities given extra interest (slide 11, 12, 13)
- To make water look milky use long exposure e.g. 1 sec (slide 14, 15, 16, 17)
- Speeds $< 1/30^{\text{th}}$ sec are best in daylight, using smaller aperture (higher F no. To stop overexposure).
- Slow shutter speeds at night e.g. 8 secs captures car light trails, funfair's ferris wheels (slide 18, 19)
- If you can't reduce shutter speed enough because it is too bright, reduce ISO to its lowest setting

Shutter lag

- Time delay between pressing the shutter release & shutter actually firing. To avoid:-
 - Pre-Focus
 - Determine point object will pass
 - Half press shutter to focus on point
 - Follow subject
 - Press rest of way when subject at desired point
 - Use same techniques without panning to give sharp subject & blurred background
 - High speed burst or continuous motion
 - Camera takes around 3 frames/sec

What focal length

- Longer focal length where you can't get close, e.g. 10x zoom lens or D-SLR with ≥ 250 mm
- But longer focal lengths mean slower max. shutter speeds (slide 19a)
 - Watch out for camera shake
 - Increase ISO to get faster shutter speeds
 - Larger aperture e.g. F2.8

Creative blurr

- Camera movement
 - Moving camera during long exposure allows you to use it like a paint brush (slide 20)
 - Combine with ISO
 - Low ISO is smoother
 - High ISO is more impressionist
 - Try shooting from moving car or train
 - use long shutter time ≥ 0.5 sec
 - then deliberately moving camera during exposure OR
 - Zoom lens during exposure (slide 21)

Summary Freezing action

Recommended shutter speeds		
Subject	Across frame	Towards camera
<i>Runner</i>	1/250 sec	1/125 sec
<i>Trotting horse</i>	1/250 sec	1/125 sec
<i>Sprinter</i>	1/500 sec	1/250 sec
<i>Galloping horse</i>	1/1000 sec	1/250 sec
<i>Car (60 mph)</i>	1/1000 sec	1/250 sec
<i>Motorsports</i>	1/1000 sec	1/500 sec

Sports tips

- Motorsports
 - Shoot cars or bikes coming towards you (max impact)
- Tennis
 - Players have preferred style, e.g. baseline. Exploit this by pre-focussing in this area
- Athletics
 - Pre-focus on particular part of track, press shutter release just before the subject reaches it
- Football
 - Very difficult sport to photograph. Take advantage of corners or free kicks when action is less frenetic