A guide to shutter speeds…

For shutter speeds below 100th second a tripod is recommended unless practiced and experienced

	Shutter speed	Outcome	Suggestions	Comments
Aircraft	100th to 750th second	Lower shutter speed will create propeller blur	100th to 125th sec will get best prop blur	Will need to pan the camera with the aircraft
Vehicles	60th second (vintage) 1000ths sec (racing speeds)	Lower speeds - older slower vehicles For racing cars you will need to pan with it as it passes.	500th sec will freeze a car at 70mph. 1000ths sec will freeze (with wheel motion) a racing car at 150mph	Use the lower shutter speed for that vehicle speed to show wheels blurred. Frozen wheels make car look stationary.
Sports activities	250th sec - 750th second	Freezes action	15th sec – 60th sec for movement blur	Faster action needs faster shutter speed to freeze it. Shoot as action is at peak.
Walking speed	60th sec to 200th second	100ths sec. freezes medium walk 200ths freezes slow jogging speed.	Use slower than 60th to show motion while panning (difficult – requires practice)	Slow panning speeds are more difficult to keep sharp than fast panning.
Working hands	5th sec. to 30th sec.	blurred	Freeze from about 60th sec to 200ths sec	Low speed looks like hands are working when rest of body stationary
Small birds flying	100th sec to 400th sec	Slower speed gets blurred wings Higher speed freezes	160th sec ends of wings blur	Panning complicates the wing blur – practice with specific species
Birds of prey	160th to 500ths	Lower speed gets wing blur; higher speed gets fast swoop in frozen action	If panning work at the mid-range to give background linear blur and slight wing blur	Larger birds tend to fly at slower speeds. Use lower speeds if B.of.P is soaring.
Water blur	1/30th to 1 second	Will give a milky waterfall. Watch for burn out in bright light.	Use longer exposures for flat waters (1 or 3 seconds)	Try longer exposures for lakes with wind-blown surfaces and swell/waves to flatten the water.
Light trails (cars at night)	½ sec to 8 seconds	Will provide a good trail but may be too intense if lots of ambient light	Vary aperture (f5.6 to f11) to lower ambient light and use shutter speed to capture the trail (work at ISO 100)	Local street lights and numbers of other vehicles affect the ambient light levels – try test shots first.
Light painting	Bulb setting. 15secs to 15mins	Light is shown only for a few seconds but a sequence of lights can be painted over longer periods	Exposure length depends on how many light painting sequences your scene requires to finish	If you wear black you can move around in front of the camera without being seen on a long exposure.
Star trails	5 mins to several hours. Use 'bulb' setting	Better to use shorter shots and combine them later rather than excessive exposures	Exposure length depends on how dark the environment is.	Get out into the country as far as possible to get away from streetlights lighting the sky.