

Learn PHOTOGRAPHY

manual mode photography cheat sheet



CAMERA EXPOSURE: APERTURE, ISO & SHUTTER SPEED



APERTURE

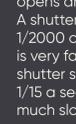
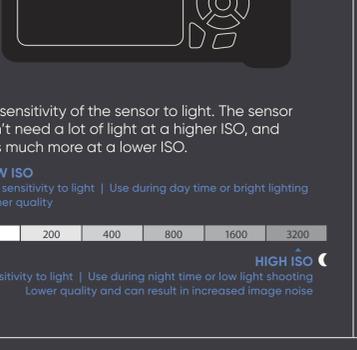
Aperture refers to how wide the lens is open, which determines how much light is let into the camera.

low numbers = large aperture = more light



high numbers = small aperture = less light

IMPORTANT: Changing the aperture also affects the depth of field.



SHUTTER SPEED

The shutter speed is how fast the shutter opens and closes. A shutter speed of 1/2000 of a second is very fast, while a shutter speed of 1/15 a second is much slower.



slower = brighter = blurrier motion

faster = darker = sharper motion

IMPORTANT: Changing the shutter speed also affects motion blur.



ISO

Is the sensitivity of the sensor to light. The sensor doesn't need a lot of light at a higher ISO, and needs much more at a lower ISO.

LOW ISO Low sensitivity to light | Use during day time or bright lighting Higher quality



High sensitivity to light | Use during night time or low light shooting Lower quality and can result in increased image noise

EXPOSURE SETTINGS IN ACTION

Moving waterfall



f/4

100/400

1/30 or less

Slower shutter speeds will blur motion; faster will freeze the motion

Bokeh effect



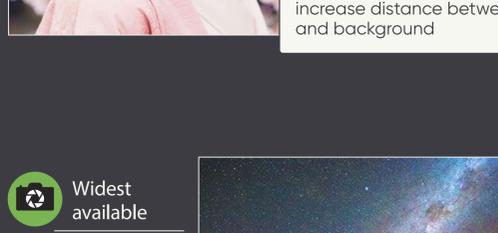
f/4 or wider

100/400

1/60 or faster

Keep a good distance between the subject and background; have a source of light in the background

Blurred background for portrait



Widest available

100/400

1/60 or faster

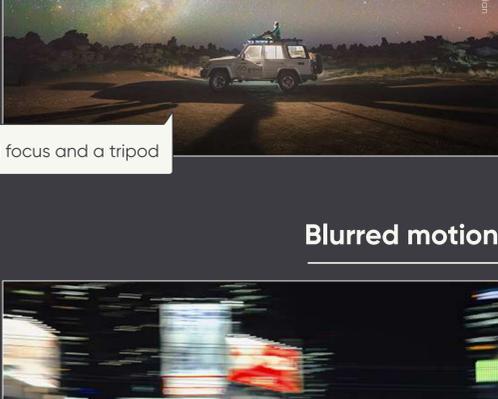
Use a prime lens with wide aperture; increase distance between subject and background

Photo of stars

Widest available

800/6400

20 seconds or longer



Use manual focus and a tripod

Blurred motion

f/8 - f/16

100/200

Slower than 1/60



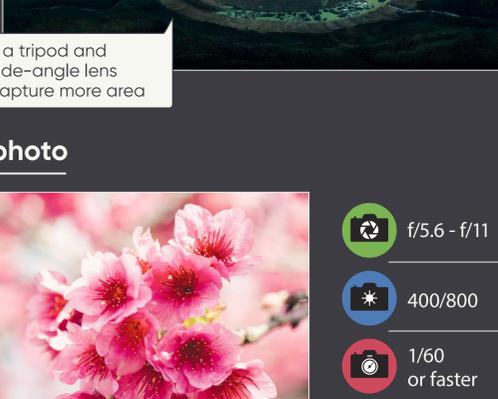
Use a tripod and pan along with your subject

Landscape

f/11 - f/16

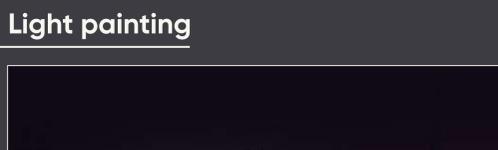
100/300

1/60 or faster



Use a tripod and a wide-angle lens to capture more area

Macro flower photo



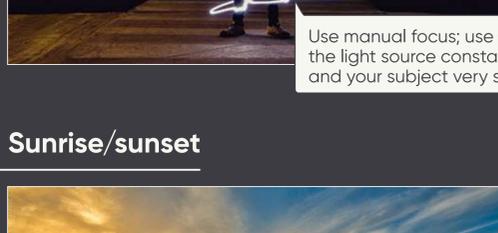
f/5.6 - f/11

400/800

1/60 or faster

Use a macro lens to get close to your subject; use manual focus and shoot from a tripod if possible

Light painting



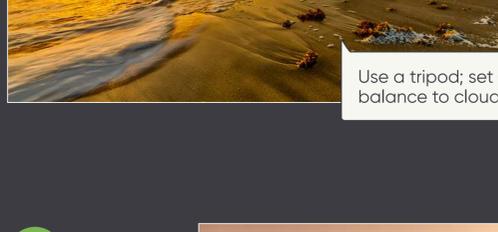
f/8 - f/22

100

10-30 seconds

Use manual focus; use a tripod; keep the light source constantly moving and your subject very still

Sunrise/sunset



f/11 - f/16

100/400

Varies

Use a tripod; set white balance to cloudy or shade

Golden hour

f/2.8 for bokeh, f/11 f/16 for landscapes

100/400

5 seconds or longer



Use a tripod for slower shutter speeds; set white balance to cloudy or shade

Water blur

f/22

100

1/15 or slower



Use a tripod and neutral density filter on bright days

Freezing action

f/11/f16

100/400

1/2000



Focus as the subject comes into the frame, then take photo

Light trails



f/5.6 - f/11

100

10-15 seconds

Use a tripod

Food photography



f/4 or wider

100/400

1/60 or faster

Use natural light but not direct sunlight

Concert photography



f/2.8 or wider

640 or higher

1/125 or faster

Use a zoom lens with a wide aperture



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