

What effects does changing the Shutter Speed have, and why would you choose certain speeds ?

Basics

Adjustment of the shutter speed also, as in the aperture, lets more or less light into the camera onto the sensor.

More advanced.

To vary the speed of the shutter, has a more artistic side-effect, but can be practical as well. You may find that in very bright sunlight you will not be able to use a slow shutter speed even though you have used a small aperture.

Use of a slow shutter, below 1/30th of a second will usually result in a blurring of the image (depending on how steady you are at holding the camera), without the aid of image stabilisation aides, either on the lens/camera or the use of a tripod.

Above the 1/30 of a second will result in a sharper resulting image, but this is greatly dependant on your subject. An F1 car will still be blurred.

The normal setting for the shutter speed, to have a reasonable chance of getting a sharp result is to use the reciprocal of the lens length, for example, a 50mm lens would require a 1/50th of a second, and as that doesn't usually exist on a camera, 1/60 is the more normal setting as its on the faster side of the setting. A 300mm lens would require a 1/300th of a second, so a 1/500 would be set on the shutter/camera.

But you may be using the shutter, not to freeze movement, but to record it. In the much used effect to show moving water, you would set around 2 seconds to record this. This brings up another problem, too much light, or the other settings on the camera, the aperture for instance or even the ISO, can't be adjusted enough to enable you to get a suitable image. This would then be achievable with the use of a Neutral Density Filter. ND filters are available in 3 strengths typically and can be combined to get the length of shutter required or adjust for the light levels.