Maximizing the value of ISO adjustment in photography

Raising the ISO level increases the camera's light amplification.

Increasing ISO too high distorts the photo quality. Just like raising your phone volume too high distorts the sound quality.

Why take ISO off of "Auto"?

Enhance your ability to increase your focus depth or reduce motion blur without adding artificial light, such as a flash, to the scene.
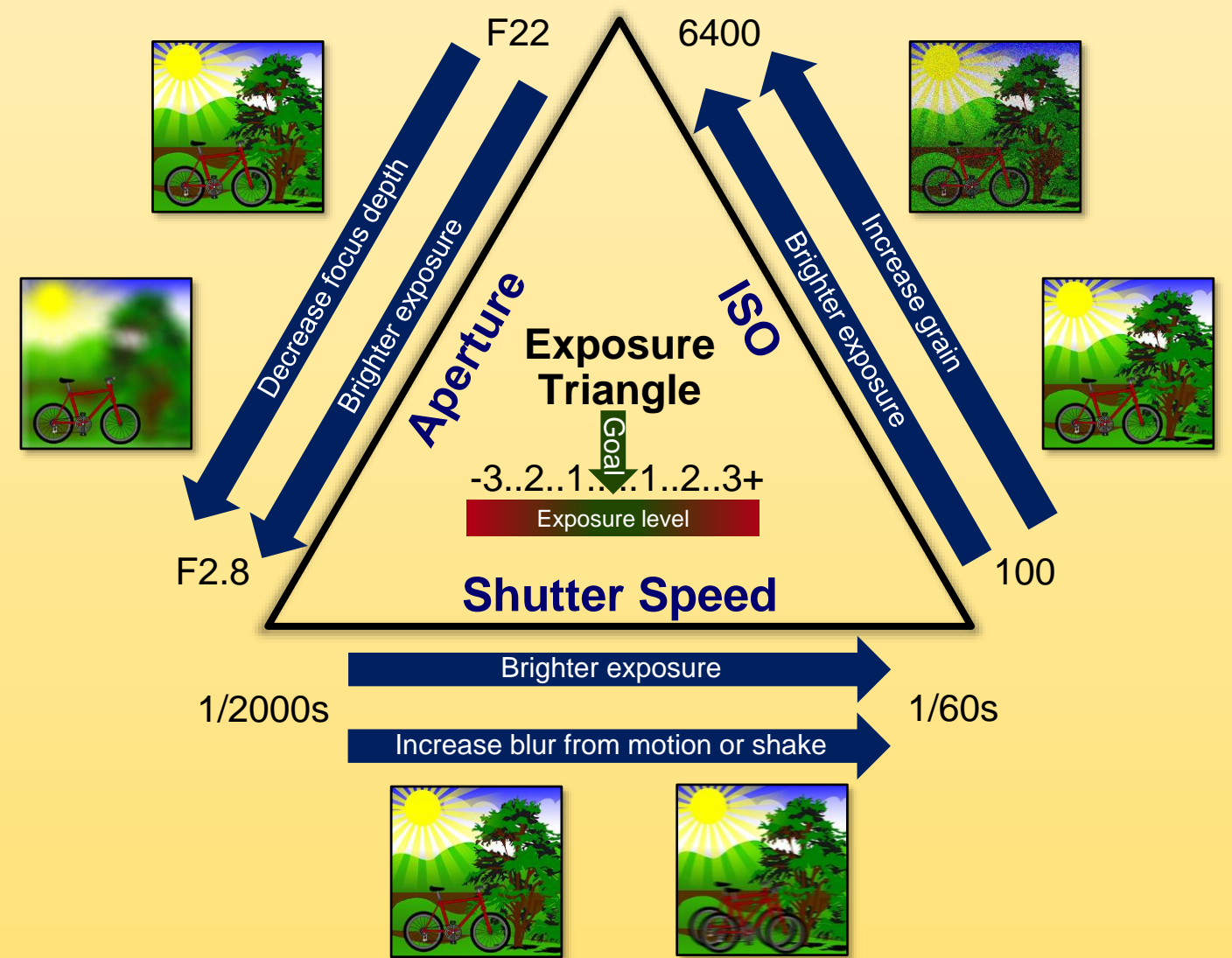
What ISO should I use?

First, look at the scene conditions and think about the Exposure Triangle. For example, you're indoors taking photos of your child on stage and every photo is blurry from shake or motion. First think, does the scene allow for decreasing focus depth (aperture) to increase the shutter speed enough to remove the motion blur. If not, increase the ISO.

What is the maximum ISO to use?

A grainy photo is 100 times better than a blurry photo and a million times better than no photo. Never be afraid to use your camera's maximum ISO as your last resort to capture a moment in your life.

What is the "normal" ISO to use?

This is highly dependent on your camera and how you plan to use the photo. Do a quick test of your camera using aperture priority mode (mid range). Shoot the same scene with a range of ISOs. Zoom in to review the photos, looking for graininess. If you are taking photos for social media sharing, use 1 full stop smaller than the grainy photo. If you are taking photos for printing larger than 8"x10" use 2 full stops smaller.

ISO → International Organization of Standardization - old days of film graininess standard

Exposure Triangle diagram: Aperture (F22, F2.8), ISO (6400, 100), Shutter Speed (1/2000s, 1/60s). Decrease focus depth / Brighter exposure; Increase grain / Brighter exposure; Brighter exposure / Increase blur from motion or shake. Goal -3..2..1...X...1..2..3+ Exposure level

ISO	100	200	400	800	1600	3200	6400
Modern mobile phone	6	6	6	6			
Average point and shoot camera	6	6	6	6	6		
Average DSLR camera	6	6	6	6	6	6	6
Better DSLR camera	6	6	6	6	6	6	6