

Okay, the best way to go about learning all of this is to make a picture.

So, we'll work with a device you've seen before: The inside of a music box.

We'll be looking at getting the right exposure; that is capturing the right amount of light from your device or sample onto your camera setting with your 105 lens.

So let's do this step-wise.

I've previously installed the software specific to my camera.

So I'll open it up.

I keep my dock on the left.

I'll click on it, and, lo and behold [LAUGHS], I get a message that no camera is detected.

[laugh] So now what?

I'm afraid I do this a little too often, something I want to alert you to and then I forget.

Yes, I think it's a good idea to turn your camera on for all this to work.

So I'll do that.

Turn the camera on and so here we go.

Our software opens up and we see the screen which finally gives me the way to set exposure settings to adjust the shutter speed and aperture setting.

But first we're going to go to another screen -- at least in this software ' giving me the ability to set the ISO number.

I'll set it to the lowest possible number the cameral offers so that we get the finest picture possible.

And that's what we'll do here: We'll set it to 200.

Now that number tells the sensor how sensitive it should be while letting in the light from your material.

The higher you set the ISO number, for example, 6400, the more sensitive you make your sensor.

In low-light conditions, that could be the way to go, but remember we have control over our setup, and, in

principal, should be able to add as much light as we need.

But there is a problem when you set your ISO number high: The sensor becomes so sensitive that it picks up noise, electronic signals from the circuitry in your camera.

The noise appears as graininess.

It's not digital information from your subject.

And it's not what we want.

Take a look at the difference between these two images.

One is set at 200 ISO, pretty low number, compared the other set at 6400.

The graininess of the 6400 ISO image is not what we want.

And by the way, I hope you are viewing these images on a computer or a tablet.

I'm not sure you'll be able to pick up the differences on a phone.

It's really significant.

In this software, we have to go back to the first screen to set the aperture, which we'll do now.

We're going to set it at F/32.

For our purposes, we want as much as possible in focus.

And notice down here that we see F/32 indicated as well.

Okay, now we set the shutter speed which we decide while looking at the exposure readout.

We're aiming for the readout to indicate 0, smack in the middle.

Notice it here in the readout: not under exposed, nor overexposed.

The exposure readout is in fact very similar to what you would see in your viewfinder, just easier to see, in my opinion.

And here's where the tripod comes in.

You might have to set the shutter speed at maybe a half a second, for example.

Now I don't know about you, but if I hand-held the camera in that very slow shutter speed, the image would just not be sharp when I blow it up.

See these two images, one while I partially hand-held, leaning the camera on the tripod, and the other with the camera securely mounted on the tripod.

Quite a difference.

You'll have the luxury of shooting at slow shutter speeds without the worry of a quivering camera if you use a tripod.

Okay, so I have set the ISO, the aperture, and shutter speed, and we will now click on Live View, which is another great thing about the software.

We can see two things.

First, we see if we have to make adjustments in composition, to see if it's straight, perhaps.

We also see the image with the aperture setting we've set.

We see what is in focus.

Okay, we're ready to take the picture and we click on Shoot.

The image is immediately captured on the camera and now watch while the image immediately downloads onto the computer.

Pretty fast!

Much faster these days than it used to download.

And here, too, even with this small thumbnail, you can see if the exposure is pretty much on target and if your composition is right.

Again, if the image seems crooked, you can go back and forth and fix it in Live View to make it work.

So let's review the reasons why you should consider using software to adjust your exposure setting.

First, you can easily see your exposure settings.

Second, you can immediately see if your settings are right.

Third, you can adjust your composition in Real Time and Live View.

And, that view is the aperture you've set, showing you what is and what is not in focus.

And fourth, you can store the image directly onto your computer without worrying about storage room on a camera card.

But again, if you choose not to use a software, all your exposure settings can be made in your camera.

Just read your manual.