Shooting Macro

Using your digital camera's macro mode will let you get really close to the subject and produce super magnified results.

Adapted from: http://www.ephotozine.com/article/Using-your-digital-cameras-macro-mode-4848
Words & Pictures Peter Bargh of ePHOTOzine

Nearly all digital cameras have a macro mode. You'll know if yours has one because one of the menu buttons will have an icon of a flower on it. This switches the camera into a special close focus mode and many allow you to get less than 10cm from the subject. With some cameras from makers such as Nikon and Ricoh you can get as close as 2cm from the subject which allows incredible closes ups of tiny subjects such as insects, but the macro mode is, for example, also really useful for making a photographic record of your jewelry for insurance purposes and for creative close ups too.

When you start to use macro mode you'll notice a few things. First it's harder to focus. Your camera may struggle especially when you've just taken a shot at infinity, because the focusing system has to work out that the really blurred object is actually what you want to shoot. This is worse when you've moved too close and the camera then couldn't focus on the subject even if it wanted to. So don't expect to see a bee and get an instant shot before it buzzes off. In such instances it's safer to focus up on another similar distance subject such as your hand close up or nearby flower then at least you'll have the camera prepared.

Also the depth of field is reduced. Some digital cameras are fully automatic and you cannot change this. If your camera has an aperture-priority mode you can switch to that and select a smaller aperture, and on many cameras you'll notice the LCD view change so that the subject appears sharper from front to back.

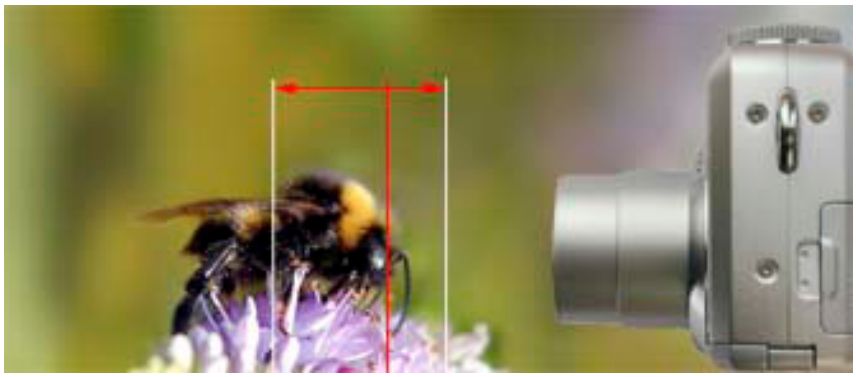
If you do not have a manual control check to see if your camera has an ISO adjustment. Most are set to auto and at ISO 100, but some can be adjusted and you can often increase to ISO 400 which, potentially, gives you an aperture that's two stops smaller resulting in greater depth-of-field, I say potentially because the camera may increase the shutter speed and leave the aperture unchanged. Adjusting the ISO increases the noise in your photos, but, depending on the camera, not always by significant amounts. Noise appears as tiny irregular colored pixels across your photo. It's a bit like how the grain becomes bigger and more visible when you load up with ISO 400 film in a traditional camera.

When you change to a smaller aperture you'll see that the shutter speed also changes and becomes slower. This may mean that you need to use a tripod to prevent camera shake. For close up photography you need a tripod that has more control. One with legs that can splay right out ensures you

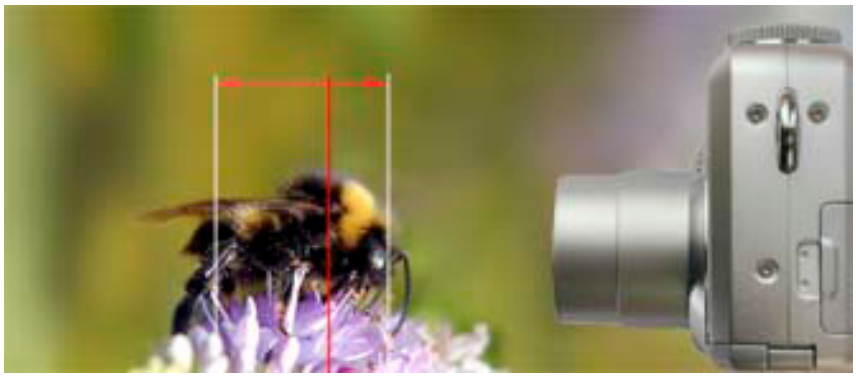
can get the camera to a low level when taking flower photos, for example. One with a macro arm will let you slide your camera over the subject to get into the right spot.

If the subject is static use the camera's self timer mode to trigger the shutter without causing any vibration that you may get when pressing the shutter button with your finger. If the camera has a remote control use that for moving subjects as you get a more instant response and it's more instant for moving subjects.

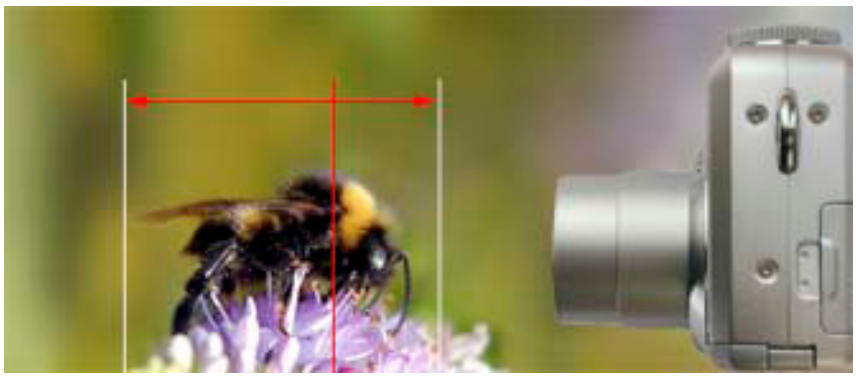
So a bee turns up on the garden flower and you spring into action - camera pointing at subject, macro mode set. But which bit do you focus on and why does the focus keep zipping backwards and forwards? Good depth-of-field and ensuring optimum focus point are key to good close ups. With a subject like a bee if you focus at the front end the back may be out of focus if the depth-of-field is shallow. The trick is to focus somewhere in between to allow depth-of-field to bring anything in front and behind into focus. I'll explain this with the illustrations below. In the first example I've focused on the bee's eye...that's what the books always tell you "always focus on the eyes"!



The focus point is indicated by the red vertical line. Anything that appears sharp in front or behind is the depth-of-field and you get roughly twice as much in focus behind the subject. The range is indicated by the two white lines and anything inside these will be sharp.



So if you move the focus point a little further back the depth of field will cover the eye, but extend further backwards to ensure the rear is sharp too. The trouble here is you may also have liked all the flower sharp too. So that's when you need to adjust the aperture.



By making the aperture smaller (f/8 instead of f/2.8) you increase the amount of sharpness in front and behind the focus point and in this example have ensured all of the bee is sharp and most of the flower. The smaller the aperture the further out the white lines would become.