Week 10

TAKING CLOSE-UP PHOTOS

When we view an object up close, we become more aware of its texture, structure, and detail. Photographing this hidden world requires patience, technical know-how, and a fair amount of curiosity—but once you've mastered the basics, you'll soon be viewing everyday objects with renewed fascination.

In this module, you will:

- **judge how close-ups** differ from macro photography;
- **understand the theory** and master the main technical challenges facing close-up photographers;
- **try it yourself** by taking close-ups during a photoshoot;
- **experiment** with shooting close-up subjects;
- **review your close-up shots,** looking at what worked, what didn't, and why;
- **enhance and fine-tune your photographs** by making local adjustments to color and tone;
- **recap what you've learned** about magnification, manual focus, and depth of field, and see if you're ready to move on.

Let's begin...

TEST YOUR KNOWLEDGE

How close is close-up?

In a macro image, the subject is recorded life-size (or greater) on the sensor. In a close-up, the subject appears less than life-size. Use the information here to decide which of the pictures are close-up or macro.

A Macro: Reveals minute details in illustration and text.

B Close-up: Highlights design details without turning objects into unrecognizable abstracts.

C Macro: Makes tiny mechanical parts seem larger than life.

D Close-up: Allows a little distance between the camera and a nervous or dangerous subject.

E Macro: Draws attention to a very specific part of the frame, while the rest falls out of focus.

F Close-up: Turns background blurry, but depth of field places nearby objects in focus.

G Close-up: Can be used to reveal the different ingredients of a meal.

H Close-up: Emphasizes pattern and repetition of objects without making them hard to recognize.

I Macro: Requires creative use of light—subjects may be backlit.

J Close-up: Retains some background information, placing a subject in context.

ANSWERS

A/ 1: Detail from a dollar bill
B/ 8: A headlight on a red car
C/ 9: A watch mechanism
D/ 6: Male lion
E/ 10: Flower stamens
F/ 5: Hands touching
G/ 7: A pizza on a wooden table
H/ 2: Ripe plums
I/ 3: Translucent leaf skeleton
J/ 4: Jogger in fall

NEED TO KNOW

- When a subject appears life-size (or greater) on the sensor, the image should be classed as macro. Magnification that is less than life-size should be described as close-up.
- To achieve the best results, macro photographers need to use lots of specialty equipment, such as tripods with removable central columns, and dedicated macro lenses that allow them to shoot just a few inches from a subject.
- By way of contrast, close-up photographers are capable of creating eye-catching images with just a few screw-on accessories, such as close-up attachment lenses and reversing rings.

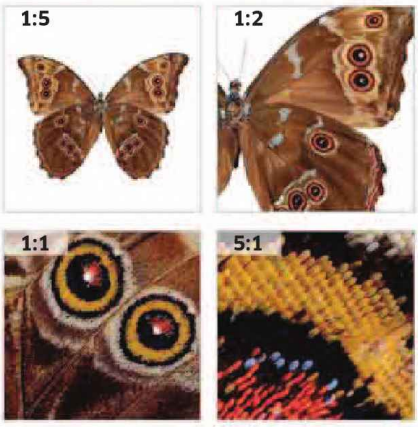
Review these points and see how they relate to the photos shown here

UNDERSTAND THE THEORY

Close-ups versus macros

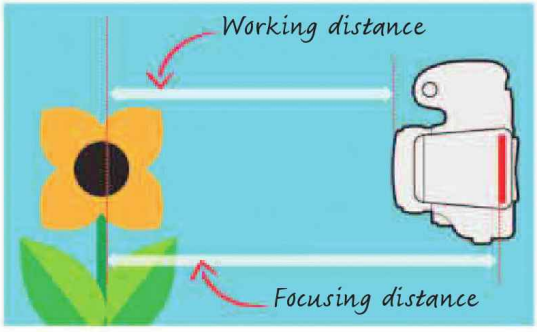
For an image to be considered macro, the subject needs to appear life-size or larger on the sensor—anything smaller than this is simply classed as close-up. To obtain life-size magnifications or greater, you need a macro lens or screw-on accessory, but close-up pictures can be achieved using standard or telephoto lenses. Understanding the difference between the two will help you to appreciate what can be achieved with your camera equipment and what, if anything, you need to buy to take things further.

MAGNIFICATION RATIOS

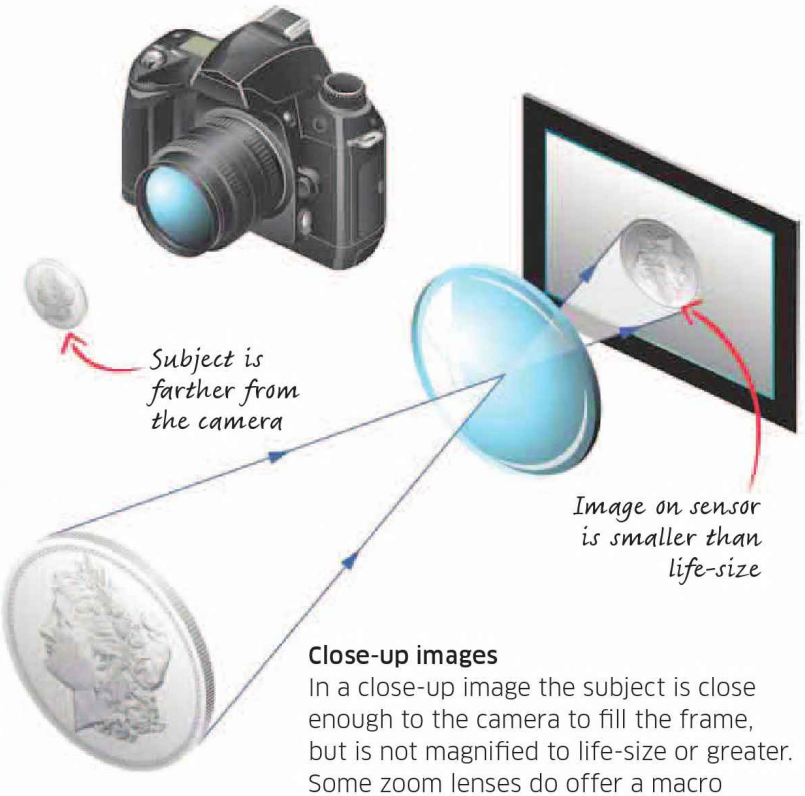


The relationship between the size of an object and the size it appears on the sensor is shown as a ratio: a fifth of life-size is 1:5, half life-size is 1:2, life-size is 1:1, and five times life-size is 5:1. As a magnification, a fifth is 0.2x, half life-size is 0.5x, life-size is 1x, five times life-size is 5x, and so on.

DISTANCES



It's a common misconception that focusing distance is measured from the front of the lens to the subject, but this is actually the working distance. The focusing distance is measured from the focal plane (sensor) to the subject. Macro lenses with long focal lengths achieve large magnifications, allowing you to fill the frame with your subject while enjoying the benefits of greater working distances—perfect for insect photography.



Close-up images
In a close-up image the subject is close enough to the camera to fill the frame, but is not magnified to life-size or greater. Some zoom lenses do offer a macro setting but images taken with these lenses are not truly macro, and lack much of the detail captured by a true macro lens.

Pro tip: The terms close-up and macro refer to the object's size in real life compared to its size on the sensor.

Pro tip: It's tempting to think that the closer you get to your subject, the better the results will be, but a short working distance is not always a good thing: subjects that are easily spooked will be disturbed by your presence.

GEAR: MACRO LENSES

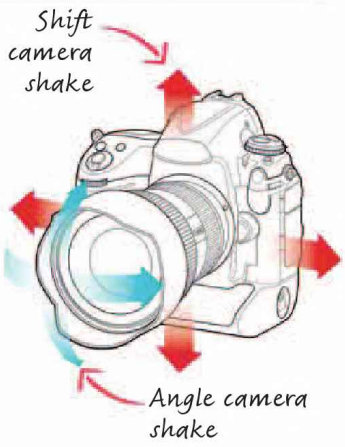
Many zoom lenses feature "macro" settings but are incapable of life-size magnifications. To achieve 1:1 reproductions without close-up accessories, you need a macro lens. These come in focal lengths ranging from 50 to 200 mm. Short minimum focusing distances allow you to get extremely close to your subject.

Macro images

True macro lenses can focus on a subject that is very close to the lens. As such, the image produced will have a magnification ratio of 1:1 or even higher.

CAMERA SHAKE

If you're using lenses or accessories that magnify a subject, any movement, from either the subject or the camera, will also be magnified. Many lenses feature Image Stabilization (IS) systems that compensate for camera shake, but to be sure everything is as still as possible, you need to use a reliable tripod. Another trick is to keep your subject steady by using props (see p.177).



SHALLOW DEPTH OF FIELD

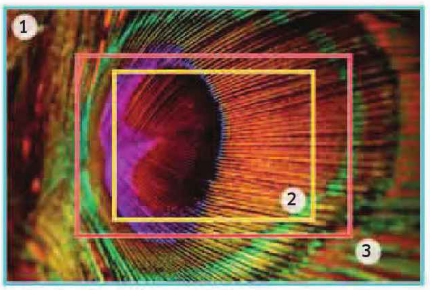
The closer you are to a subject, the less depth of field there is. Further, when a subject is magnified, background blur is magnified too, giving the appearance of reduced depth of field. This means that the high magnifications and short focusing distances commonly used for macro and close-up photography result in an extremely shallow depth of field.

SENSOR SIZE

Cropped or smaller sensors (see p.127), appear to increase the focal length, making objects loom larger in the frame. This is useful for close-up photography because it allows you to keep your distance from a subject while still obtaining frame-filling shots. In reality, what's happened is that the lens has experienced a reduction in its angle of view, allowing it to "see" less of the scene.

Sensor formats

1. Full-frame
2. 4/3s
3. APS-C



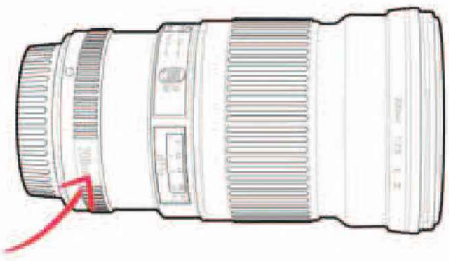
LEARN THE SKILLS

Shooting a close-up

When you fill the frame with your subject, it creates a number of challenges. Before you release the shutter, you need to be sure that the area is well lit, the point of focus is pin-sharp, and the camera remains rock-steady. Follow these steps to achieve a compelling close-up using minimal equipment.

1 Attach a standard or telephoto lens

Make your choice based on how far from the subject you need to be. Without specialty accessories, most standard and telephoto lenses aren't capable of true macro reproduction. For close-ups, however, even cheap kit lenses will do a good job.



Telephoto lenses allows you to take close-up images without getting too close and disturbing your subjects

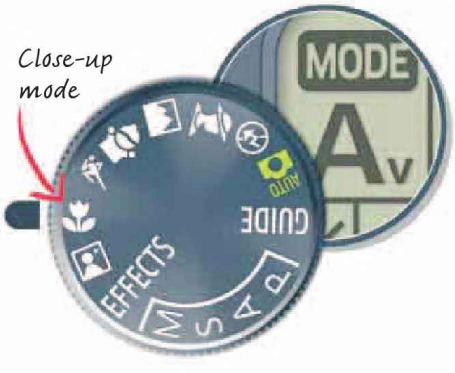
2 Reduce camera shake

Mount the camera on a tripod and use a remote release or a self-timer function. The camera's mirror, which directs light to the Viewfinder, flips up just before the shutter release, and can cause the camera to vibrate slightly, potentially blurring a close-up image. Some dSLRs let you lock the mirror up to reduce vibration.

The Mirror lock-up function flips the mirror up several seconds before the shutter is opened

6 Choose your mode

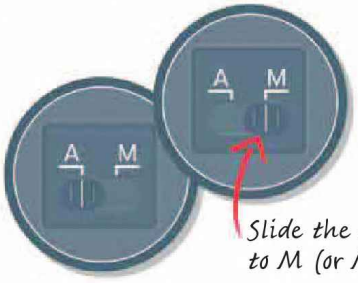
If you select Aperture Priority, the camera sets the shutter speed but still lets you control the other aspects. If you use Close-up mode, however, the camera sets the ISO, aperture, white balance, AF mode, Metering mode, and Drive mode.



Close-up mode

7 Switch the lens to Manual focus

Activate Live View. Slide the switch on the lens barrel to M and use the focusing ring to obtain rough focus. Position the magnifying frame exactly where you want it, and then enlarge the area. Turn the focusing ring again to refine your focus. Finally, return the display to its normal size.

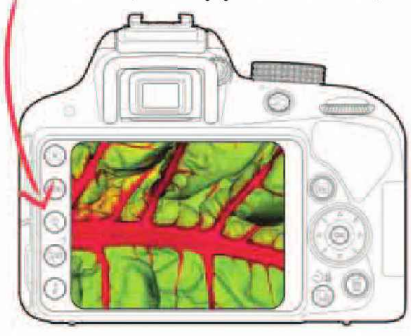


Slide the switch to M (or MF)

8 Shoot and review the results

Take a few shots and look at them in Playback. Scan around the edges of the frame to make sure that nothing unwanted has crept into the shot.

Zoom into your images to check that the point of focus is sharp

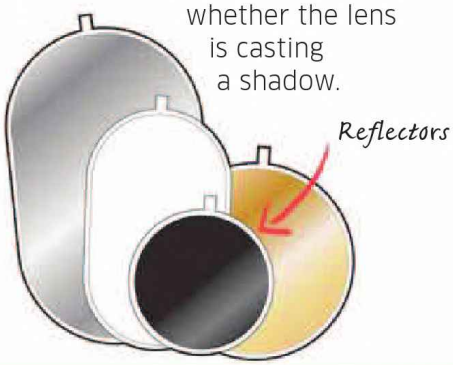


Where to start: Head outside on a calm day. Select a suitable subject, and consider it from every angle. Make sure you can keep the subject steady, and that it is free of any flaws or blemishes.

You will learn: The pros and cons of using Close-up mode, when to use a reflector, the benefits of using Manual focus, and when to use the Mirror lock-up function.

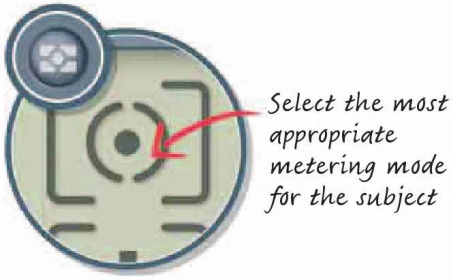
3 Make sure the subject is well lit

Light levels can be extremely low when an object fills the entire frame, so use a reflector to bounce sunlight into shady areas. The camera's built-in flash can be useful, but if the subject is less than 3 ft (1 m) away, check whether the lens is casting a shadow.



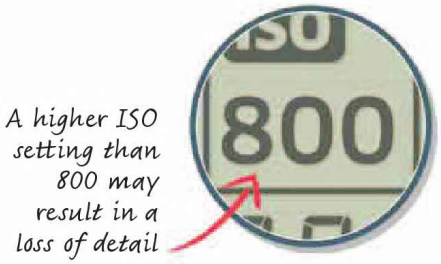
4 Adjust metering and drive modes

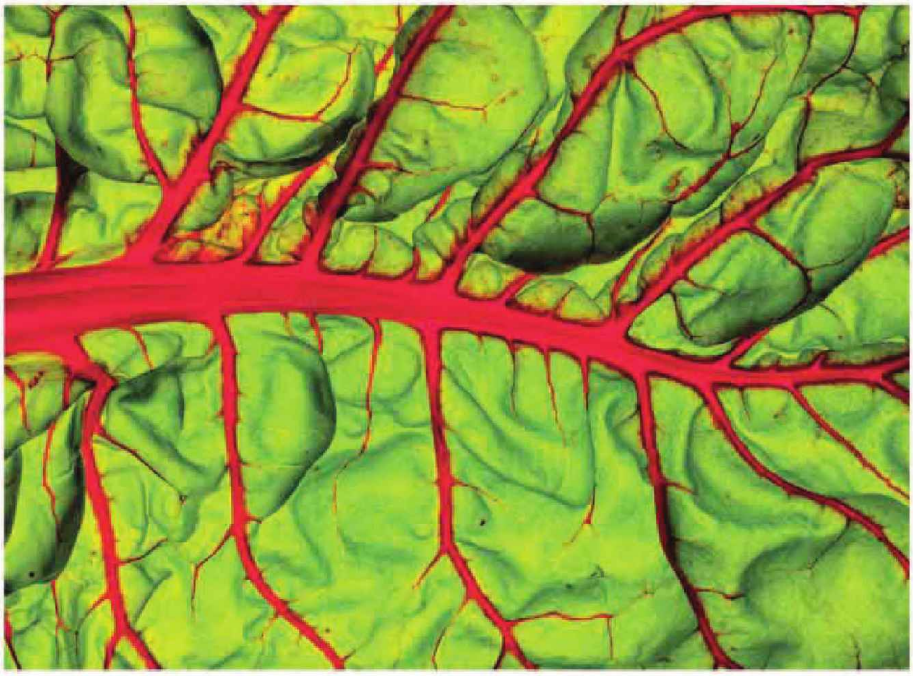
Decide whether to use spot, partial, or center-weighted metering based on the subject. Similarly, whether you take a single shot or keep the shutter firing will depend on whether your subject is moving or not and, if so, how quickly.



5 Choose a higher ISO setting

When you're using small apertures to maximize depth of field, the shutter speed may not be fast enough to freeze any movement. As a result, you may need to use a higher ISO speed—anything up to ISO 800 is usually fine.





WHAT HAVE YOU LEARNED?

- Camera shake and subject movement are more noticeable in close-up shots.
- Light levels can be very low when an object fills the frame. You might need to use a flash or reflector.
- If you select Close-up mode, the camera makes most of the decisions for you. For more control, select Aperture Priority and Manual focus.

PRACTICE AND EXPERIMENT

Exploring close-ups

Close-up photography can reveal a secret world where everyday objects become abstract forms and tiny details gain new significance. Now that you understand the basics, it's time to tackle a few assignments, and relax the rules a little.

EASY

45 MINUTES

INDOORS OR OUTDOORS

FLOWERS

BASIC + lens capable of Manual focus, skylight filter, petroleum jelly, tripod

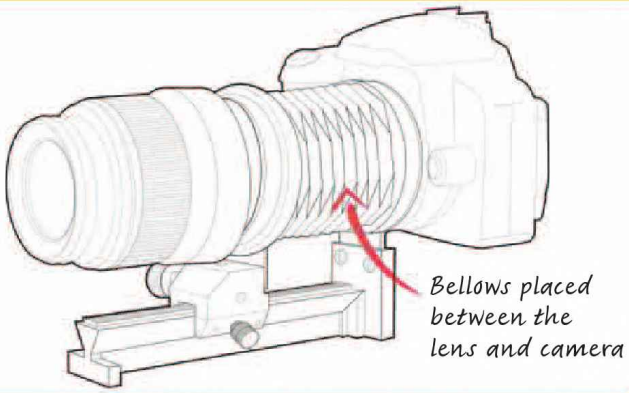
You can introduce a soft-focus effect by shooting through objects close to the camera. Flowers lend themselves well to this technique.

- **Position** your lens very close to any foreground flowers, switch to Manual focus, and train your lens on a distant bloom.
- **Practice** this technique, then try another soft-focus effect: screw a cheap skylight filter to the front of your lens, and compose your shot.
- **Dab** a small amount of petroleum jelly on the filter over any areas you want out of focus, and shoot. Make sure you clean the filter afterward.

Soft focus turns the flowers in the foreground into a blurred frame

GEAR: CLOSE-UP ACCESSORIES

Extension tubes fit between the lens and the camera and increase the distance between the focal plane (sensor) and the rear of the lens, reducing the minimum focusing distance. This allows you to get closer to your subject, making it larger in the frame, while still keeping it nice and sharp. Bellows are placed between the lens and the camera, and they perform the same function as extension tubes. Unlike extension tubes, though, bellows are flexible and allow precise control.



Bellows placed between the lens and camera

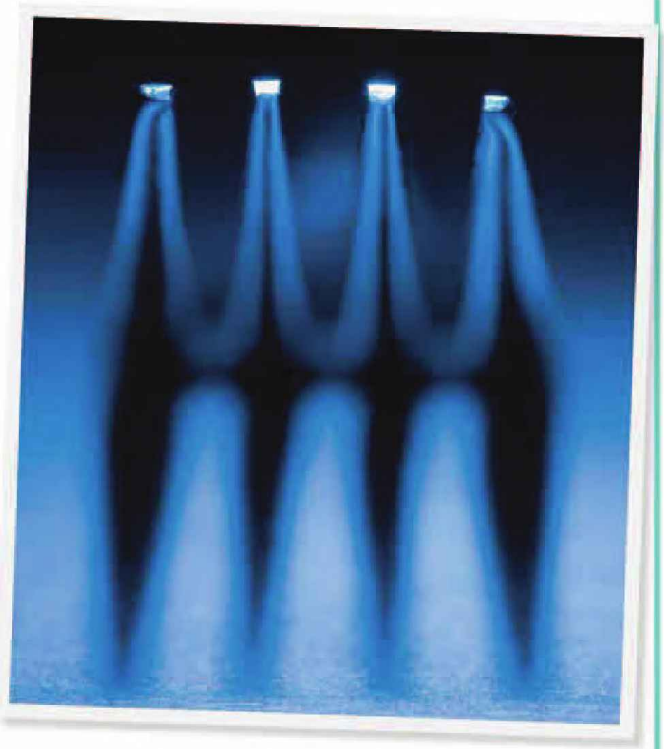
Pro tip: When you're shooting flowers or foliage, head out early, since there'll be less wind. Bright but overcast days are ideal for capturing rich, saturated colors. If it starts to rain, don't pack up—head for a wooded area where you'll be more sheltered.

GETTING ABSTRACT

EASY | **INDOORS**
45 MINUTES | **HOUSEHOLD OBJECTS**
BASIC + tripod

Everyday items take on a totally different appearance when viewed up close: the prongs of a fork turn into huge metal sculptures, the leaves of a cabbage look like wrinkled skin, and scissor blades resemble a bird's beak.

- **Select** three household objects and study them up close.
- **Handle** each item, viewing it from every angle, before settling on a small section of it to isolate and shoot.



With clever lighting, a simple fork can be turned into an interesting abstract.

KEEP IT STEADY

MEDIUM | **OUTDOORS**
1 HOUR | **FOLIAGE**
BASIC + clips, wire, windbreak, tripod

When working with minimal depth of field, it's vital to keep your subject still. There are several handy tools: crocodile clips can be used to hold plant stems steady; floral wire can keep distracting foliage out of the way; specially designed cubes can be placed around your subject to reduce wind.

- **Wait** for an overcast day when the wind speed is 5 mph (8 km/h) or less, and then head outside.
- **Choose** a sprig of foliage and use any of the tools listed above to hold it steady. When there is a lull in the wind, take your shot.
- **Remove** the props, take a second picture, and compare the results.

Plant stems and small branches can be held steady using various tools.

WHAT HAVE YOU LEARNED?

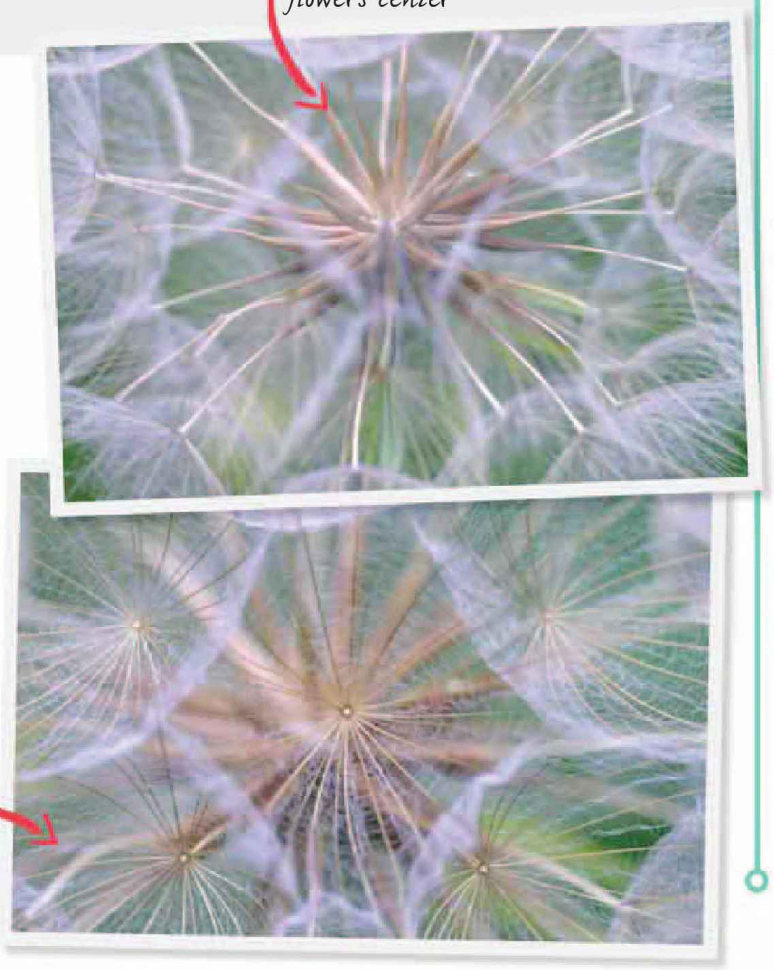
- You can create a soft-focus effect by shooting through foreground objects.
- There are various tools available to hold your subject steady.
- Everyday objects can be viewed with fresh enthusiasm when you move in close.

SHIFTING THE FOCUS

EASY **INDOORS OR OUTDOORS**
45 MINUTES **PARTLY OBSCURED SUBJECT**
BASIC + lens capable of Manual focus, tripod

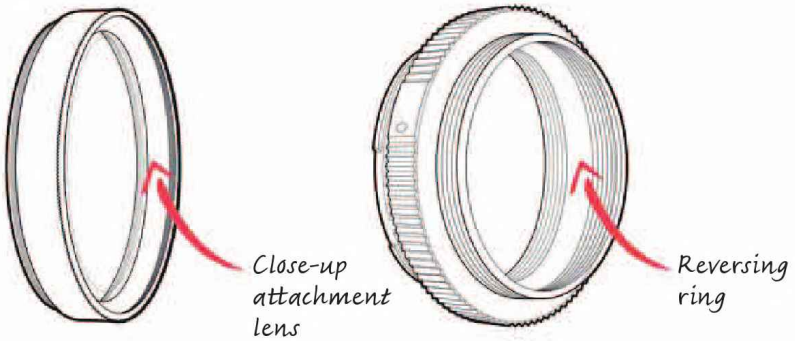
If you use autofocus to shoot through an object—such as a fence, petals, fabric, or a window—the camera will often lock on to the foreground obstruction, rather than the intended subject. Here's how to prevent that from happening.

- **Switch** to Manual focus.
- **Mount** your camera on a tripod, activate Live View, and then enlarge the area you would like sharp.
- **Use** the focusing ring to fine-tune your focus. This method lets you control exactly which areas of the frame will be sharp.
- **Try** focusing on different parts of the subject. See how a quick twist of the ring changes the feel of the composition, and where your eye is taken to first.



GEAR: MORE CLOSE-UP ACCESSORIES

Close-up attachment lenses screw to the front of your lens and reduce the minimum focusing distance. They come in different powers—the higher the number, the greater the "magnification." Reversing rings allow you to mount a lens backward on your dSLR, effectively turning it into a high-quality magnifying glass.



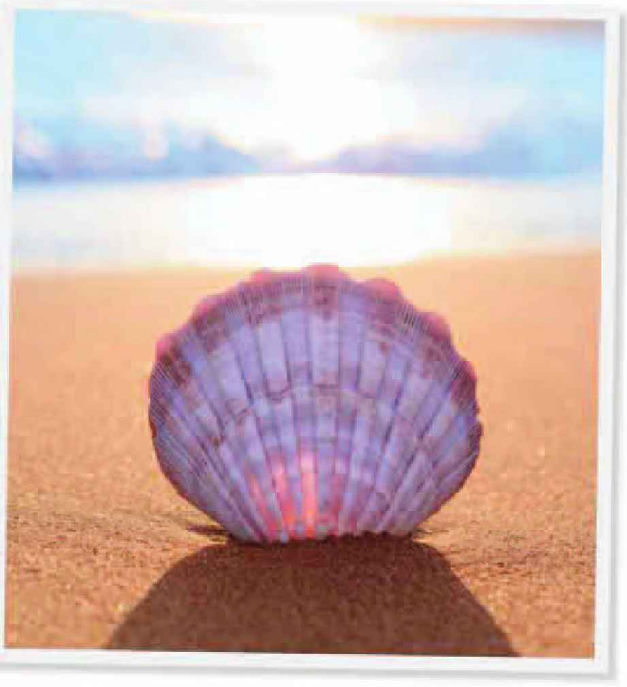
BACKGROUND CONTEXT

EASY | **OUTDOORS**
45 MINUTES | **SUBJECT OUT IN THE OPEN**
BASIC + wide-angle lens, tripod

You don't need a macro lens to create striking close-up images. Wide-angle lenses have a short minimum focusing distance and a wide angle of view, making objects closest to the lens seem very large, and those farthest away seem very small. This is perfect for getting close to non-sensitive subjects, such as fungi and flowers, while still including much of the surrounding landscape.

- **Find** a static subject in a fairly open environment, such as a shell on the beach or a mushroom in a field.
- **Get** as close to the subject as you can with a wide-angle lens.
- **See** how much of the landscape you can include in the picture.

The wide-angle lens has captured the shell close up, but also retained a good deal of the background.



GET DOWN LOW

HARD | **OUTDOORS**
1 HOUR | **SUBJECT ON GROUND**
BASIC + tripod, groundsheet, beanbag

There are countless close-up subjects beneath our feet—from plants and pebbles to ripples in the sand—but getting low enough and staying there long enough to shoot them can be challenging. Lying on damp ground is never nice, so invest in a groundsheet.

- **Spread** the groundsheet on the ground, taking care not to crush any plants or insects.
- **Use** a beanbag to support your camera. If it's still awkward, see if your camera has an articulated LCD screen—it will let you compose your shot without planting your chin in the dirt.
- **Experiment** with these accessories to see just how low you can go.

Shooting subjects on the ground may be tricky, but it can produce some stunning results.

WHAT HAVE YOU LEARNED?

- Switching to Manual focus can give you greater control over your compositions.
- You can use a variety of inexpensive tools to allow ground-level shooting.
- Wide-angle lenses can also be used to create striking "close-ups" that distort a sense of scale.

ASSESS YOUR RESULTS

Reviewing your shots

Having turned an everyday object into abstract art and sunk to your knees in search of a ground-level subject, choose your favorite photographs and run through the checklist below. If you find it hard to edit your work, enlist the help of someone else.

Should you have used MF? If light levels are low—as in this image of a rose—your camera may struggle to focus. To make sure the focus is where you want it to be, switch to Manual focus, activate Live View, and enlarge the area you want sharp.

Does the background complement the subject? Make sure any colors or shapes at the rear of the image complement the key parts at the front. This pink musk thistle works well against the yellow.

Did you use a tripod and remote release? Close-up subjects, such as this leaf, are often found on the ground, but holding yourself at an uncomfortable angle is more likely to cause camera shake. To minimize the risk, attach your camera to a tripod and use a remote release to trigger the shutter.

Is the subject in perfect condition? Torn petals and leaves can ruin close-ups, so select the best specimens you can find—this tulip has no distracting blemishes. Remove any dirt and pollen using a fine paintbrush or tweezers.

> If your images aren't **good enough,** then you're not **close enough.**
>
> ROBERT CAPA

Is the depth of field adequate for the subject?
The closer you are to a subject, the less depth of field there is. As a result, you need to choose your aperture and point of focus carefully. Our attention here is drawn to the python's face, while the rest of its body is thrown out of focus.

Did you disturb your subject?
When you're trying to get a frame-filling shot of a small animal, such as this frog, it's easy to frighten your subject by moving in too close. Keep a respectful distance and swap your lens for one with a longer focal length rather than risk upsetting your quarry.

Is the subject adequately lit?
Light levels can be limited close up, so use a reflector or off-camera flash to illuminate your subject. Here, a wide aperture has been used to make the most of the light.

Did the subject move?
Even a slight breeze can lead to out-of-focus pictures, so check the weather forecast. Select a time of day when the air is most likely to be still and delicate subjects, such as these, can be captured with pin-sharp accuracy.

ENHANCE YOUR IMAGES

The Adjustment Brush tool

Many of the enhancement tools described in previous modules are known as global adjustment tools; this is because they affect the entire image. However, there are times when only a small area of a photo needs adjusting. When you import a RAW file using Adobe Camera RAW or use Adobe Lightroom, you can make use of the Adjustment Brush to make very localized image alterations.

Dense, dark shadows

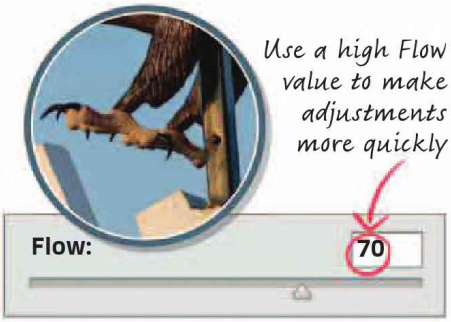
1 Using the brush

Select the Adjustment Brush in the tool strip. This lets you adjust any area in your image. The type of adjustment is controlled by sliders, which alter the tonal range, color saturation, and sharpness.

Set values to 0 before you start

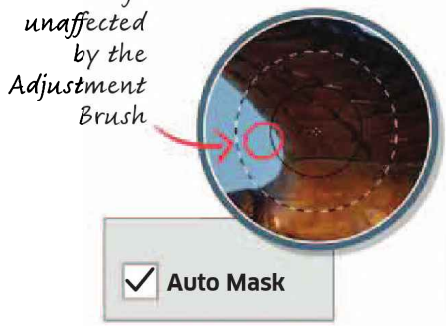
5 Vary the flow

The Flow slider controls the rate at which the brush effect builds up as you paint. The range is from 0 to 100. Set to 0, the flow rate is slow, and you'll need to paint repeatedly over an area before an effect is seen. Set to 100, the flow rate is fast and the adjustment effect is instant.



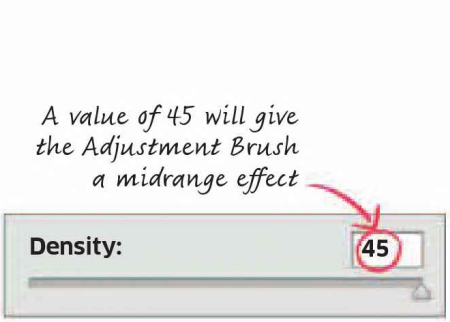
6 Set the Auto Mask

Select Auto Mask and the Adjustment Brush will detect edges and boundaries in your photo as you paint. If a boundary is detected, the mask will prevent you from painting over it.



7 Alter the Density

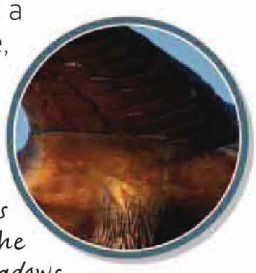
Use the Density slider to control the maximum opacity that an Adjustment Brush applies to a photo. You can paint repeatedly over an area, but the level of adjustment will never exceed the Density value. A value of 0 has no effect, while 100 has the maximum possible effect.



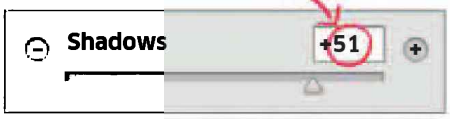
Pro tip: You are not limited to just one adjustment brush per photo: you can apply multiple adjustment brushes by selecting "New." Each adjustment brush you apply is shown as a pin overlay, and can be moved or deleted.

2 Adjust the sliders

Move the sliders according to the type of adjustment you want to make. For example, set the Contrast slider to a minus value and contrast is lowered where you paint. Set a positive value, and the contrast is increased.

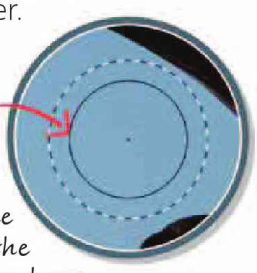


Shadows lets you adjust the brightness of shadows



3 Alter the brush size

Change the size of the brush according to how fine you want the adjustment to be. Pull the Size slider to the left to make the brush smaller or to the right to make it bigger.

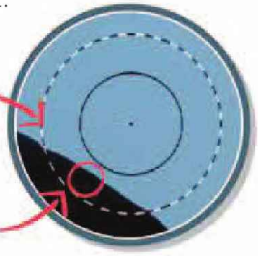


The edge of the Adjustment Brush

The higher the Size value, the larger the brush

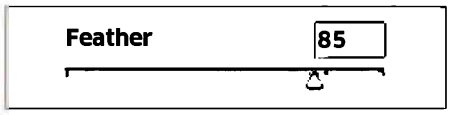
4 Feather the brush

Use the Feather slider to control how soft the brush is within a range of 0 to 100. At 0 the brush has a very hard edge, while a value of 100 makes the brush very soft.



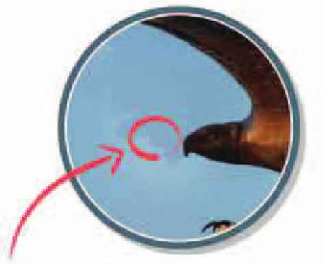
The feather edge

The amount of feathering

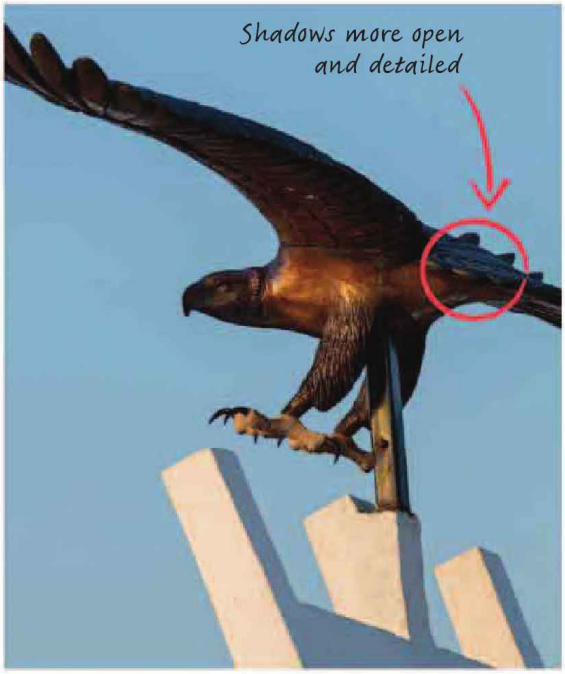


8 Erase

Select the Erase brush to correct a mistake. You can change the Size, Feather, and Flow of the Erase brush to make broad or subtle brushstrokes as required.



The sky here was lightened by an Adjustment Brush—Erase can be used to paint out the error



Shadows more open and detailed

OTHER TOOLS

The most similar Photoshop tools to the Adjustment Brush are the Dodge, Burn, and Sponge brushes. Just like the Adjustment Brush, you paint Dodge, Burn, and Sponge onto your photo to make a change. Dodge lightens an area in a photo as you paint, while Burn darkens an area. Sponge can be set to either Desaturate, to reduce the vividness of color, or Saturate, to increase the color intensity.