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Week

BLACK AND WHITE

Once there was no choice but to shoot in black and white. Although black-and-white photography has since been overshadowed by color, it is still popular and has a timeless quality that color struggles to match.

In this module, you will:

- ▶ **assess what type of photo** is suitable for this treatment;
- ▶ **understand how different colors** are converted to black and white;
- ▶ **see for yourself** by taking black-and-white photos on a step-by-step photoshoot;
- ▶ **practice with shooting** different subjects in black-and-white;
- ▶ **review your black-and-white photos** to see how successful they are, and troubleshoot some common problems;
- ▶ **enhance a color photo** by converting it to black and white using post-production software;
- ▶ **go over** your understanding of black-and-white photography and see if you're ready to move on.

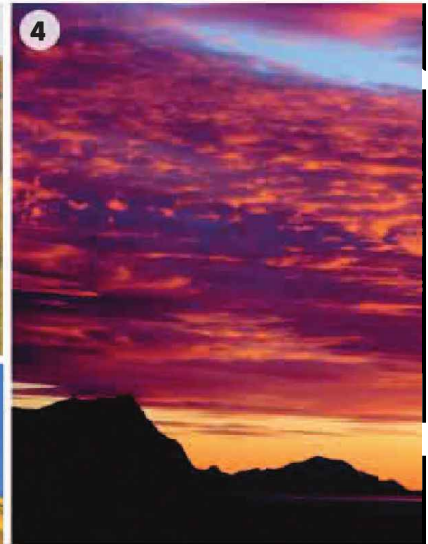
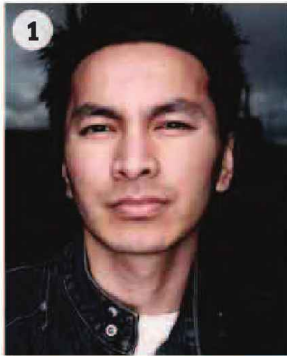
Let's begin...





▶ TEST YOUR KNOWLEDGE

Will black and white work?



Any color photo can be changed to black and white, but some subjects suit this treatment better than others. Can you work out which of these seven images have the potential for black-and-white conversion and which do not?

A Vibrant color: If a photo relies purely on color for impact, it's unlikely to work in black and white.

B High contrast: Deep shadows and bright highlights will work well in black and white.

C Drama: Black and white suits moody weather conditions.

D Similar colors: A limited range of colors isn't usually suitable for the monochrome approach.

E Pattern and texture: A subject with a distinctive shape, pattern, or texture that is revealed by light and shade is often a good candidate for black and white.

F Flat light: Low contrast and subdued color are not ideal for changing to black and white.

G Complementary colors: Colors that are opposite each other on a color wheel are ideal for setting as black and white.

ANSWERS

E/7: Mosaic spiral in Parc Güell, Barcelona, Spain
 F/2: Fall landscape in Ukraine
 G/3: Yellow plastic pipes against a blue sky

A/4: Sunset over northern Norway
 B/1: Portrait of a male model
 C/6: White-capped waves
 D/5: An assortment of pastries



NEED TO KNOW

- Not all photos suit black and white. With practice, you'll soon appreciate which shots will work and which won't.
- There are two ways to shoot black-and-white photos. You can shoot them in-camera; most cameras have a black-and-white (or monochrome) setting. Or you can shoot a photo in color and convert it to black and white in post-production.

- If you shoot JPEG with a black-and-white picture parameter, there's no going back once you've pressed the shutter button: the resulting photo will be black and white. It will be too late if you then decide that color was the better option.
- However, if you shoot RAW, you can undo the picture parameter in post-production and revert to color.



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



▶ UNDERSTAND THE THEORY

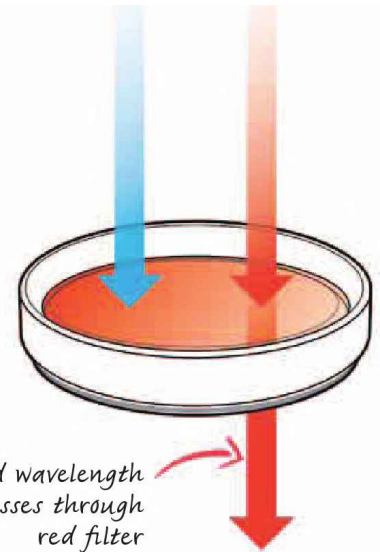
Color to black and white

There is more to taking black-and-white photos than simply removing the color. In fact, it is essential to be aware of the different ways colors are converted into the shades of gray that make up black-and-white photos. Which colors you emphasize will determine the tone and quality of your pictures.

Filtration and channels

Before digital, colored filters were the only way to alter a range of tones in a black-and-white image. The filter lightened its own color, while darkening complementary tones (see pp.236-237) by blocking wavelengths of light that correspond to the complementaries (see right).

Digital cameras with a Monochrome mode often let you simulate the use of colored filters. However, converting color to black and white in post-production will give you a greater range of options to adjust the tones in your photos.



REFLECTIVITY

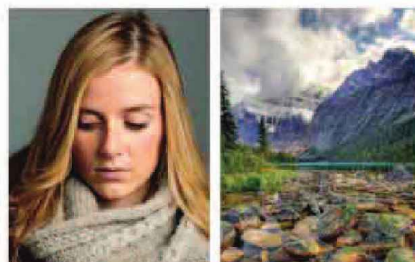
Lighter objects reflect more light, which affects the way they look when converted to black and white. This is useful to know when setting up and editing your shots.

- **Black** A smooth black object absorbs most of the light shining on it and appears very dark as a result.
- **Gray** Objects with a mid-gray tone reflect around 18% of the light falling onto them.
- **White** A white object reflects most, though not all, of the light that falls onto it to create a bright, shiny effect.



COLOR

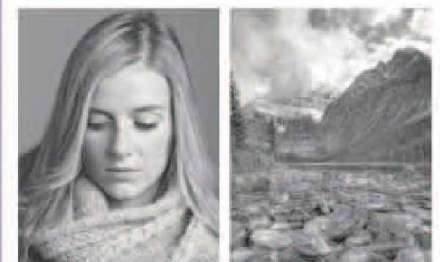
When shooting in color, the red, green, and blue spheres are easy to differentiate. However, they all have the same level of brightness.



In a color photo it is easy to distinguish one object from another.

MONOCHROME

A simple conversion to black and white makes each of the colors into a uniform mid-gray with no tonal separation. The sense of three different spheres is lost.



In a black-and-white photo, differently colored objects may have the same gray value. This would make them difficult to tell apart and result in a flat, uninteresting photo.

Pro tip: Alongside red, green, and blue, yellow and orange filters are also commonly used when shooting in black and white. They have a similar effect to the green and red filters, although they are far weaker.

Pro tip: Blue filters are rarely used for either landscape or portrait photos because they can make blue skies very pale and skin tones very dark. They can be used to lower contrast for a hazy effect.

i COLOR AND TONE

An object's reflectivity is important because it defines the tone it will have when converted to black and white. More reflective surfaces will be brighter than duller, less reflective ones.



In a color photo it is easy to distinguish one blue object from another, such as the sky, mountains, and river in this scene.

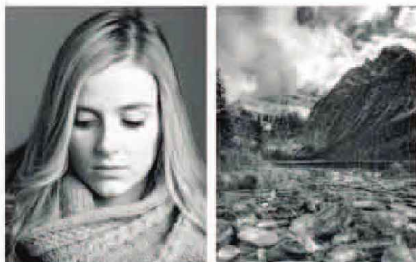
This means that although two objects may be differently colored, if they are equally reflective they could still take on the same tone once converted to black and white.



In a black-and-white photo the sky and sea would have the same gray value, creating a flat photo. Use filters to compensate.

RED FILTER

The red sphere is lightened considerably. The green sphere remains a mid-gray and the blue sphere is now much darker.

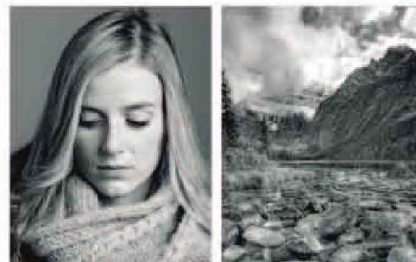


Very pale skin tones.
Red hair lightened.

Blue sky darkened.
Clouds more prominent.
Effects of mist reduced.

GREEN FILTER

The green sphere is now lightest, while the red sphere stays mid-gray. The blue sphere is dark, but not as dark as when the red filter is used.

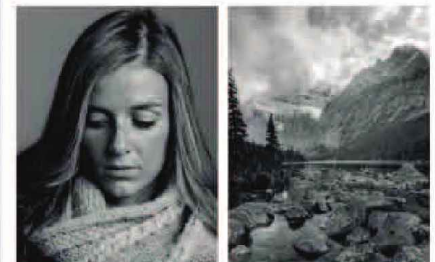


Darker skin tones.

Green foliage made lighter.
Blue sky slightly darkened.

BLUE FILTER

The blue details are the lightest. Both the green and red spheres are darker than a mid-gray, with the red sphere the darker of the two.



Unnaturally dark skin tones.
Red hair darkened.

Very pale sky.
Cloud detail lost.
Effects of mist increased.



▶ LEARN THE SKILLS

Shooting in black and white



When you can't rely on color for impact, you have to think about tones instead. In black-and-white photography, tonal range is partially achieved by the quality of the light and level of contrast. How colors are converted to black and white will also affect the tonal range, and whether they lighten, darken, or stay the same relative brightness.

The bold colors on this steam engine make it a good subject for a black-and-white photo



1 Assess your location

Look carefully at the scene in front of the camera and note how light falls in the image. Are there shadows that add contrast? Look also at the color range. Are there too many colors that are similar or is there a wide diversity of color?

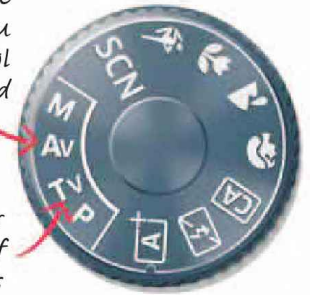


2 Choose a mode

Set your camera to an exposure mode suitable for the type of scene you are shooting. Do not use a fully automatic mode, since you may not be able to switch to black and white.

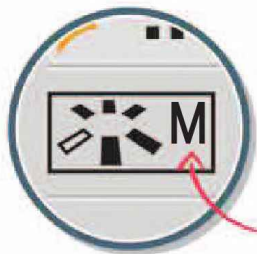
Use Aperture Priority if you need to control the depth of field

Use Shutter Priority if movement is more important



6 Switch to black and white

Go to your camera's picture parameter menu and select Black and White (or Monochrome). If you are using a tripod and your camera has an optical Viewfinder, switch to Live View. This will let you preview your shot on the LCD.



Look for the monochrome symbol in your shooting menu



7 Reshoot the scene

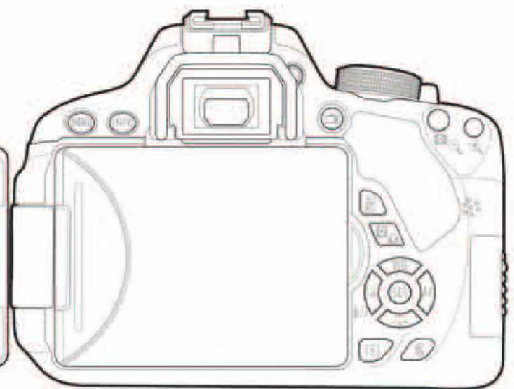
Shooting in black and white does not alter how photos are exposed. Leave the exposure settings as they were and reshoot the photo.

Check the colors in your image



8 Check your photo

Review both the color and the black-and-white version on your camera's screen. In particular, look at how colors have been rendered as shades of gray in the black-and-white photo.



Where to start: Select a scene that you think is suitable for the black-and-white approach; the scene can be indoors or outdoors, but you need to make sure that the colors and lighting will produce a good black-and-white image.

You will learn: How to assess a scene for its suitability as a black-and-white photo; and where to find your camera's black-and-white picture parameter.



3 White balance

Select the correct white balance even though you're not shooting in color. The more inaccurate it is, the fewer true colors the camera can use when converting to black and white.

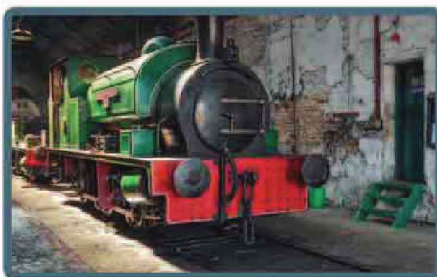


The blue cast of a Tungsten White Balance preset would not be suitable for this scene.



4 Compose your shot

Position your camera and select a lens focal length that produces the most pleasing composition. See where shadows fall and help define certain details.

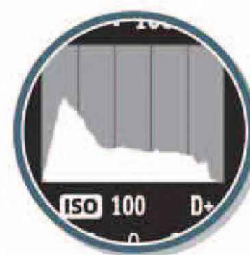


Make sure your composition is tight to exclude any distracting elements.



5 Select exposure and shoot

If you're not using a tripod, check that the ISO is sufficiently high to avoid camera shake. Focus the camera and shoot. Check the histogram to make sure that exposure is correct.



Make sure the histogram isn't displaying clipped shadows or highlights.

WHAT HAVE YOU LEARNED?

- It's generally easier to shoot in black and white during one photoshoot and in color on a different shoot than switch back and forth.
- Your camera's Live View mode will give you instant feedback on a monochrome display, and help you see if a scene will work as a black-and-white photo.
- Don't be afraid to stick to color if you think a scene isn't suitable.

Save both versions and review them later



Interesting shadows can help to improve black-and-white photos



▶ PRACTICE AND EXPERIMENT

Removing color

To develop a sense of what subjects are still effective in a photo without the aid of color, try the black-and-white assignments on the following pages. Remember to set your camera's picture parameter to Monochrome, and shoot both RAW and JPEG images.



MEDIUM

1 HOUR

BASIC + tripod, colored filters (optional)

INDOORS

A VARIETY OF COLORED OBJECTS

Colored filters can help you control how dark or light a color is once it has been converted to gray.

- **Arrange** your colored objects on a tabletop.
- **Set** your camera up on a tripod and compose a shot so that all of the objects are in the frame.
- **Focus** and set the exposure—use a small aperture so that all of your objects are sharp. Shoot one photo.

■ **Select** the Yellow Filter effect from the picture parameter menu, if the option is available, and shoot again using this setting.

■ **Repeat** using the other available filter effects and review your photos.



TEXTURE AND DETAIL

MEDIUM

1 HOUR

BASIC + close-focus lens

INDOORS OR OUTDOORS

TEXTURAL SUBJECTS

Images look more abstract in black and white. Close-ups of texture and detail work well.

- **Set** the appropriate filter effect to alter the tonal range of your subject if necessary.
- **Compose** the shots so that you fill the frame with your subject.
- **Use** a small aperture to keep the whole subject in focus. If the resulting shutter speed is too long, you may need to use a tripod or increase the ISO.
- **Experiment** with lighting, too. Shoot with side, top, and front lighting to see how these affect the contrast in your photos.



Side lighting will accentuate texture, such as the veins on this leaf.

Pro tip: Don't use colored filters if you shoot in RAW: the aim when shooting in RAW is to retain all the color information for conversion later on.

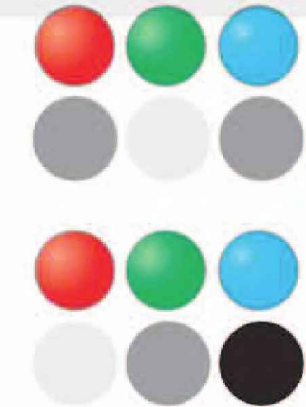
Pro tip: Use a long focal length lens when shooting details. This will help you crop out unwanted elements that could be distracting.



Complementary colors make it easy to separate tones in black and white.



A green filter lightens greens in the photo



A red filter lightens reds and darkens blues



MONOCHROME PORTRAIT

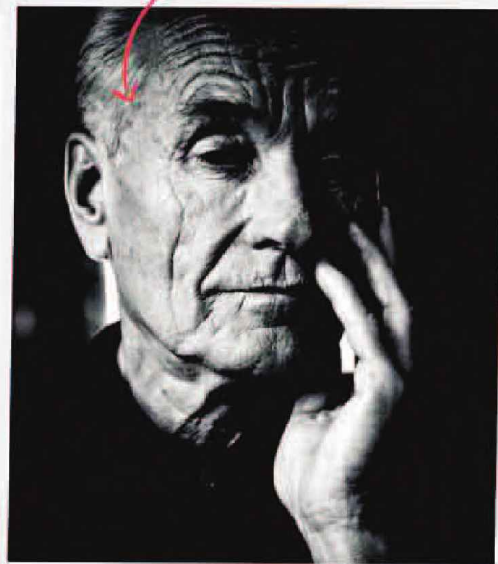
MEDIUM
2 HOURS
BASIC + tripod

INDOORS AND OUTDOORS
A MODEL

Older, weathered faces are often appealing subjects for black-and-white portraits

Portraiture is particularly suited to black and white, but is more heavily dependant on the quality of the light.

- **Shoot** ten shots with your model, both indoors and outdoors.
- **Vary** the lighting. Shoot outside on overcast days, and, on sunny days, shoot indoors with artificial and window lighting.
- **Compose** each shot in a similar way so that your subject occupies roughly the same area of the frame.
- **Experiment** with using different filter effects when shooting portraits. Typically, green filters are the most flattering, while blue filters are the least flattering.





BLACK-AND-WHITE STILL LIFE

EASY

1 HOUR

BASIC + tripod

INDOORS

COLLECTION OF RELATED OBJECTS

When shooting a still life, it's not just about the objects—setting and lighting will both play a key role in the success of your image.

■ **Arrange** your objects on a tabletop and use a background that is sympathetic to your objects—a busy one may be too distracting.

■ **Use** a reflector to bounce light back into the shadows if low contrast is suitable, or increase contrast with a point light source, such as a desk lamp.

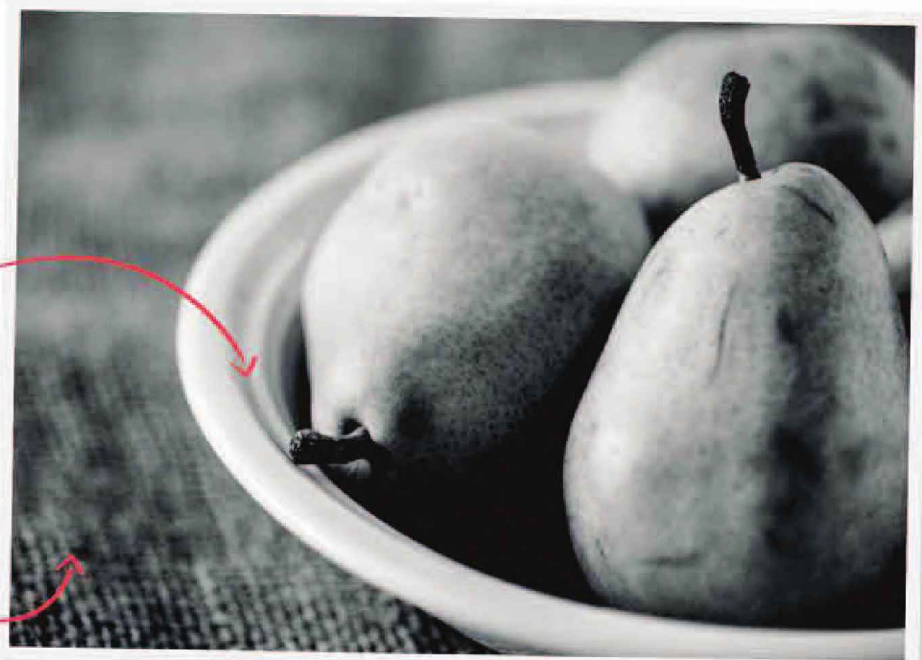
■ **Set** your camera on a tripod and frame your shot.

■ **Focus** on the nearest object and set aperture to achieve front-to-back sharpness.

■ **Shoot** 10 to 12 images. Rearrange your subjects in different ways and experiment with different aperture and color filter effects settings.

Make sure objects are clean and free of dust or fingerprints

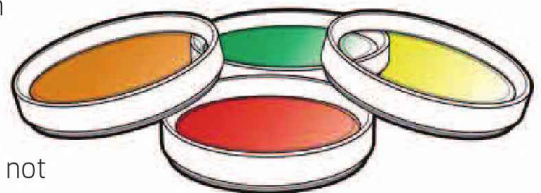
Shoot with a simple background that doesn't detract from your subject



GEAR: COLORED FILTERS

Specialty colored filters for black-and-white photography either attach directly to a lens or fit into a filter holder system. Yellow, orange, red, and green filters are the most useful for everyday shooting; blue filters are often sold separately. Most cameras can now reproduce

filter effects. You can also mimic them when converting in post-production. However, colored filters are still useful if you shoot in JPEG only, and if your camera does not have a filter effect option.






REPORTAGE

 MEDIUM

 INDOORS OR OUTDOORS

 2 HOURS

 A SETTING AROUND WHICH YOU CAN TELL A STORY

 BASIC + zoom lens

Reportage, or documentary photography, is a genre closely associated with black and white. Find a location and tell the story (see pp.332–333).

- **Look** around your location to work out possible shooting positions.
- **Set** the exposure mode to Program so you can concentrate on shooting and not worry about exposure.
- **Use** the full range of your zoom. Use the wide-angle end of the zoom to shoot photos that create context; use the longer focal length end to zoom in on individuals or details.
- **Take** as many shots as you think necessary. Better too many than too few.
- **Review** your shots in chronological order. Choose 10 to 15 shots that best tell the story of the event.




Capturing expressions is an important part of telling a story photographically



LANDSCAPE SHOOTING

 MEDIUM

 OUTDOORS

 2 HOURS

 SCENIC LOCATION

 BASIC + tripod

Black and white is ideal for conveying drama in a landscape. Rain and stormy conditions arguably work better in black and white than in color.

- **Shoot** 8–10 shots of a landscape, employing both the vertical and horizontal orientations and a variety of focal lengths.
- **Use** a tripod. If there is movement in the scene—running water, for example—vary the shutter speed to see how this affects any movement.
- **Experiment** with the color filter effects to see how these alter the sky and foliage.



Effects such as long shutter speeds work well in black and white.

WHAT HAVE YOU LEARNED?

- It can take time to set up a pleasing still life composition, since you need to think carefully about how you arrange your subjects.
- When shooting a documentary, taking more shots than you need will give you plenty of options for creating the perfect narrative.



▶ ASSESS YOUR RESULTS

Reviewing your shots

Once you've completed your assignments, select the ten shots you feel most pleased with. Use the following eight pointers to help you decide what was successful in your photos and what could be refined on future shoots.



⬆ Are your highlights burned out?

Shooting in black and white requires more personal interpretation than when shooting in color. This photo is overexposed—and would look odd in color—but this style is very effective in black and white.

▶ Would color work best?

There are some subjects that just don't suit the black-and-white treatment. This photo—bursting with vibrant color—would be far less effective in black and white.



⬇ Is your black-and-white landscape interesting?

Shadows help define the shape and form of landscape subjects. If you shoot at midday or on an overcast day, the three-dimensional nature of the landscape can be lost. This photo works well because the side lighting creates shadows that help to define the shapes of the buildings.



⬆ Did you need to use a filter?

You don't need to use (or simulate) a colored filter for every black-and-white photo. If you shoot directly into light, as here, then the results are often monochromatic even in color.

“Color is everything,
black and white is more.”

DOMINIC ROUSE

19

WEEK



🔍 **Is your portrait flattering?**
Softer light and lower contrast are more flattering than hard light and high contrast. However, this portrait is effective due to the high contrast.



🔍 **Does your documentary photo tell a story?**
Less is often more. Reject any shots with elements that detract from your main subject. In this powerful image, the car fills the frame.



🔍 **Is the contrast of your black-and-white photo too high?**
Abstract photos—such as this backlit rock formation—work well when shot in a high-contrast way. A portrait would not benefit from having such a high level of contrast.

🔍 **Does your photo look flat?**
What level of contrast is suitable depends on the subject. Low contrast works well for soft, organic subjects—such as this orchid—since it helps convey delicacy. If contrast needs to be higher, use a harder light source or select a different conversion filter.



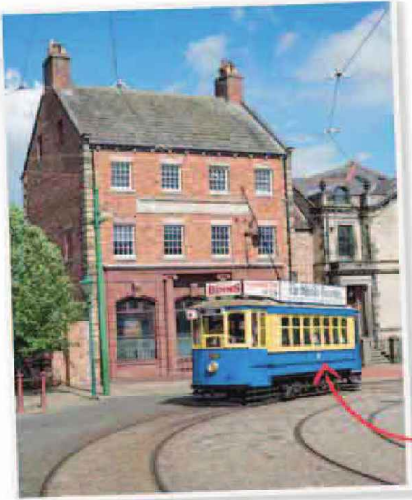
▶ ENHANCE YOUR IMAGES

Black-and-white conversion



Although you can shoot in black and white, post-production conversion gives you more control. The Adobe Photoshop Black and White adjustment tool lets you very finely adjust how

individual colors switch from color to black and white. First, though, assessing how suitable an image is will save time and reduce frustration.

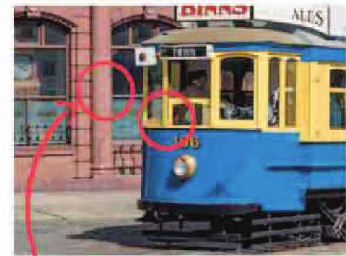


Complementary and contrasting colors will make it easy to separate the tones



1 Assess the photo

Look carefully and decide which colors should be lightened, which ones should stay at the same brightness, and which should be darkened.



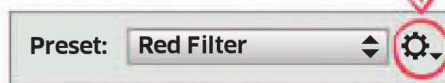
Different colors of similar brightness will be the same tone in black and white unless adjusted



5 Try a preset

Photoshop's built-in set of presets are a useful shortcut for common black-and-white conversions, such as mimicking the effect of a red filter. Create your own preset if you find a particular combination of slider settings works best.

Click here to save or load your own presets



6 Move the sliders

At 0 percent, a pure color, such as red, will be completely black. The higher the slider value, the closer to white the color becomes. Adjust the sliders until a satisfactory black-and-white conversion results.

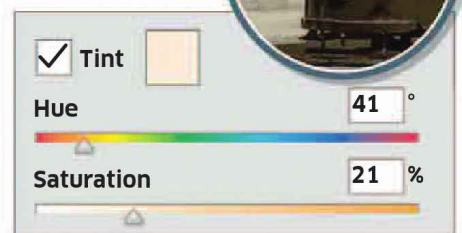
The streetcar's blue isn't a pure blue, so it needs a negative value to darken it sufficiently.



7 If you like, add a tint

Click on Tint. Drag the Hue slider to select the overall color of the tint. Adjust Saturation to alter its vividness: at 0 percent, the photo stays black and white; at 100 percent, the tint is set to maximum vividness.

A subtle orange/yellow tint mimics a sepia effect.



Pro tip: Start with a photo that has an accurate white balance. If white balance is skewed to either red or blue, it will be harder to separate tones during the conversion process.

Pro tip: After clicking OK on the Black and White tool, you can then use the Fade option on the Edit menu. By varying the Fade amount, you can add subtle color back into your photo.



2 Set the photo to 100% magnification

On the Tool bar, double-click on the Magnify icon, which sets the magnification of the photo to 100 percent. This will make it easier to see how fine details in your photo are converted to black and white.

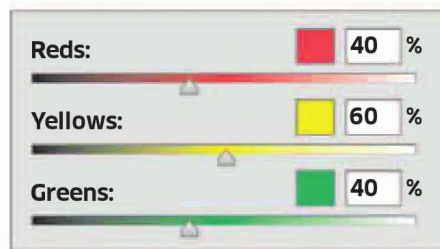


If your photo doesn't fit on screen at 100 percent, hold down the Space key and drag the photo to view a particular area



3 Select Black and White

On the Image/Adjustments menu, select Black and White. The main controls are the sliders representing six colors. These sliders control whether each color is darkened, stays the same brightness, or is lightened when converted to black and white.



4 Select Auto

Click on Auto, and Photoshop will analyze your photo and set the sliders to what it considers are their optimum position. This is a good starting point, but may not achieve the most pleasing black and white conversion.

Various colors have converted to the same tone



SPECIAL EFFECTS: GRAIN



With the red lightened and blue darkened, the image has tonal contrast.

Old photos were often grainy in nature. Photoshop's Add Noise filter can be used to reproduce this effect, but keep it subtle: set the slider to a low percentage value to keep noise under control. It's also worth switching between the Uniform and Gaussian settings. Gaussian produces a less-regular noise pattern and so is closer to the random nature of film grain. Finally, click on Monochromatic so that the Add Noise filter doesn't add color back into your photo.



The higher the Add Noise value, the more fine detail is lost.