

The art and science of

PHOTOGRAPHY

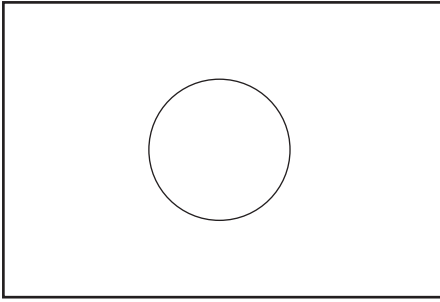
The number 7

Angles grab attention, in particular sharp angles like the number 7.

Triangles can also be used to achieve this effect.

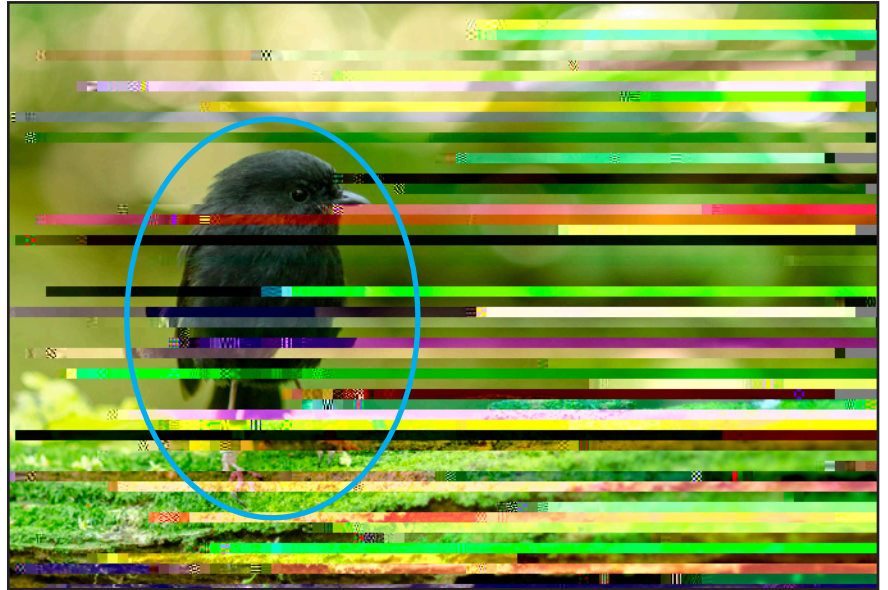
Circles, with their never ending line are also powerful composition elements that capture the viewers eye and force them to pause.

Isolate your subject



Getting up close to your subject allows it to dominate the photo and draw the viewers eye in.

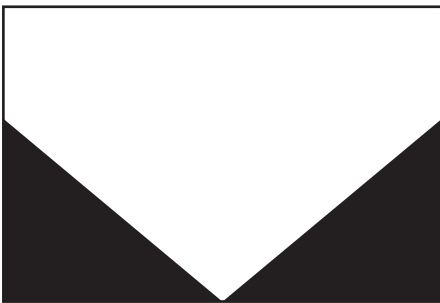
The background will also be out of focus causing the viewers eye to remain on your chosen subject.



By getting down low and moving in close the black robin has become the centre of attention in this photograph.

Remember to always respect wildlife and give them space when photographing

Adding depth



There are several ways to add depth.

A bottom band of elements causes the eye to jump over them to get to the main image. Alternatively the subject can be revealed from behind a foreground object or a large foreground object can anchor the image.



A ring of green plants forces the viewers eye to jump through them to reach the main subject, Josie.

1. |

Which techniques can you identify in the images below? There may be more than one technique used in a photo.



2. |

1. First practice taking some photos using the different techniques described to become familiar with them. You may combine multiple techniques together.
2. Now select a subject for your art photo.
3. Think of a story you want your image to tell.
4. Which techniques would help you tell this story?
5. Have a go at making your photo as planned.
6. Review the image, are you happy with it?
7. Show your photo to someone else and ask them what story it tells to them. Did their story match yours?
8. How could you change your composition to make it even better?

Photo notes

My subject is:

My story is:

Techniques I have chosen to use are:

Self review

Did it work?

What could I change next time?

Photographs are used for recording features of many different scientific specimens, these include plants, insects, marine creatures and even planets.

Scientific photos are taken for recording specimen details, often for later identification or data analysis.

These types of photo must clearly show the subject as it is seen in real life.

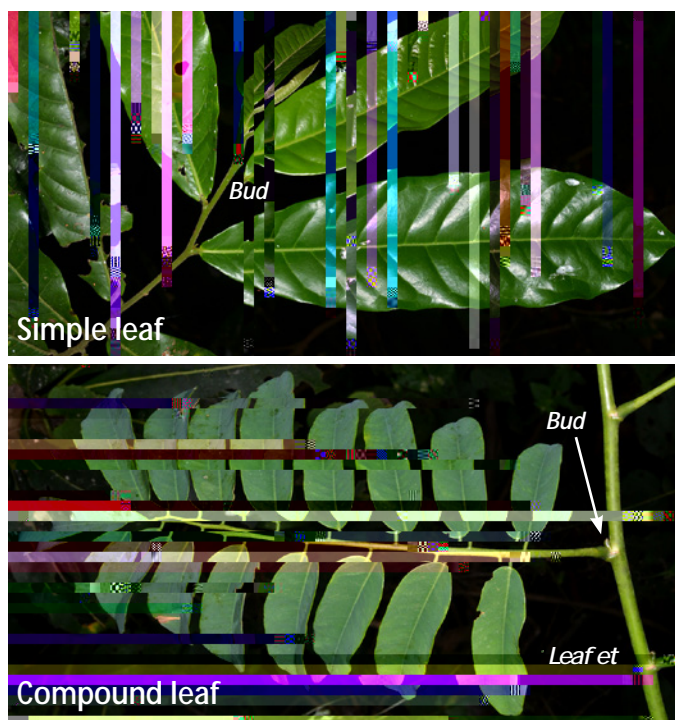
It is helpful to know some of the diagnostic characters for identifying the specimen, this allows you to take photos of the right parts, but this is not always possible so photographing as many different features as possible is a good idea.

Plants are a great first specimen as they are easy to find, do not run away and big enough to photograph with out any specialised equipment.

Helpful hints:

- Use a simple background to help the specimen stand out from other organisms.
- Multiple photos are often needed of the same specimen to show the diagnostic characters.
- Including a scale can be useful to later measure size. Alternatively measure the features with a ruler and record them.
- Make the specimen fill much of the photo, so that small features are clearly visible.
- Record details of features you may not see in the photo

Guide to some plant parts



A leaf has a bud at the base of the petiole where it attaches to the stem. A compound leaf has leaflets, the leaflets have no bud at their base.

This activity could be extended to the use of iNaturalist as part of a citizen science module. Images could be uploaded and identified to become part of the permanent collection.

Further resources: iNaturalist Teacher's Guide <https://www.inaturalist.org/pages/teacher's+guide>

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Plant photography data

Observer

Photographer name

Photo file names

Photography date

Site

Location

Habitat (what does the general area look like)

.....
.....

Features photographed

- Habitat
- Growth habit
- Branch
- Stem
- Leaf, upper surface
- Leaf, lower surface
- Leaves
- Leaflets
- Leaf attachment
- Leaf bud
- Leaf surface detail
- Flower (photograph front and back)
- Inflorescence (when flowers are produced in groups)
- Fruits
- Seeds

Why Science?

The world is facing immense challenges. For every problem, science is helping us find solutions. Science needs curious, young minds with new ideas and approaches. Science needs people like you who want to make a difference.

Where can it take me?

A career in science is limited only by your own imagination. You could be anything — marine biologist, market analyst, psychologist, policy advisor, seismologist to aerospace engineer, and much, much more.

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