

# Hiding IN PLAIN SIGHT

Camouflaging,  
Countershading & Mimicry

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One day, as I was walking down my favourite trail, I heard a tremendous whirling of feathers. A ruffed grouse exploded into the air right next to my foot. She then began to do her broken wing trick, dragging one of her wings along the ground to make it seem like she was hurt—I recalled that this species of bird does this to lead predators away from her nest. And sure enough, when I looked down at my feet, I spotted her leafy nest nearby on the forest floor with 12 cream and speckled eggs nestled inside. I had seen neither the grouse nor her eggs because she was so beautifully camouflaged. She had remained completely still until I ventured too close. Her brown, black and tan colouring helped her to vanish into the landscape when she was frozen in place. But when she felt it was too dangerous, she burst upward from the forest floor, giving her just enough time to deflect my attention away from the eggs.

Many animals use camouflage as a way to protect themselves; the use of colour and pattern to help an animal hide is called *concealment camouflage*. Hiding works best when you are completely still. That is why you'll notice animals frequently stopping and freezing, then moving again when they deem it safe.

There are so many examples of camouflage in nature, from the mottled green colouring of frogs to the rusty brown pattern on the wings of a moth. Some animals also use *countershading* as a way to protect themselves. This means they are slightly lighter from underneath. Look at the belly of a frog or a white-tailed deer—it's noticeably paler. When light falls on a three-dimensional object, it naturally appears lighter on top and darker on the bottom. Countershading offsets this effect by doing just the opposite and helping to break the form and shape of the animal. There is also *mimicry*; a Walkingstick insect is a great example. Animals take on the form and shape of something else to conceal their true selves. Crab spiders imitate bird poop, while Polyphemus moths mimic predators' eyes when they flash their hind wings to reveal an oval shape reminiscent of an owl's eyes. There are thousands of ways insects, birds, and mammals imitate other things in order to hide and deceive. Their survival depends on having a convincing disguise!

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## Eggcellent CAMOUFLAGE

If you think about it, a bird egg is a beautiful thing, which comes in a variety of shapes, sizes, and colours. What's even more spectacular is that within this fragile container comes the promise of new feathered life. Regardless of their shape, however, eggs can roll—and a rolling egg is not a safe egg. That's why birds make nests, to keep their eggs both warm and safe. Sometimes a bird's nest is an elaborate affair like the woven, hanging nest of a Northern Oriole, and sometimes it's as simple as a hollow scrape in the ground like that of a Killdeer. Birds that lay their eggs on cliffs, like Common Murres, often have pointy eggs—that way if it rolls, it will roll in a tight circle instead of falling off the cliff face.

Many ground-nesting birds rely on camouflaged eggs to protect them. Often, they will mimic the microhabitat they are in. For example, the mottled, striped and spotted pattern of a Killdeer egg imitates the surrounding vegetation and rocks. Two main egg pigments create the amazing diversity of colour and pattern we see in them: the reddish-brown colour comes from the pigment called Protoporphyrin, and the pigment Biliverdin creates hues of blue and green. By regulating how much of each pigment is laid down, each mother bird creates unique and varied background colours and markings that are characteristic of her eggs.



### MAKE YOUR OWN CAMOUFLAGED EGG

- » You'll need hard-boiled brown chicken eggs (one for each participant), and eco-friendly, non-toxic markers and/or paints
- » Check out the colour photos of bird eggs. Study their patterns and colours. Have each participant colour an egg, using these pictures as a guide
- » Have one person close their eyes while you hide your egg. Select an area that best matches the colour pattern you've created. Have them find the hidden egg. Then switch and try your luck with theirs!
- » If you like, peel and eat your art/game piece after the game



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