

Making the most of your visit: COLOUR AND PATTERN

How and why do animals use colour and pattern?

Some animals are the colour they are because of their diet. Flamingos are pink because of the pigment in the shrimp they eat.

Chameleons are masters of colour change, but they do so to reflect their mood rather than for camouflage. An angry or territorial male will become more brightly coloured, while a sleeping chameleon becomes duller in colour.

Many butterfly species have 'false eyes'. These eyespots are positioned on the wings and so divert a predator's attention away from the body.

Some animals have developed bright colours and patterns to warn predators that they are dangerous. Other non-dangerous species, such as hoverflies, have copied this system to take advantage of predator avoidance.



Colours are also used for attraction. Black-headed gulls, for example, only develop their dark-coloured heads during the breeding season. At other times, they just have a brown spot behind their eyes.



See it · Sense it · Save it

Before your visit

- 1) Take advantage of the free pre-visit deal for group leaders. You can familiarise yourself with the Zoo layout and locate species related to your topic.
- 2) Show the children pictures and videos of animals that display different colours and patterns and ask the children to choose words that describe what they see, such as bright, striking and dazzling.
- 3) Ask the class to pick an animal with colours and patterns that interest them. Get them to draw it, including the colours and patterns. Ask them to think about why the animal looks like it does.
- 4) Look at examples of animal art, from cave paintings to the works of Rousseau and Shepherd, as well as wildlife photography. Discuss the different ideas, styles and subjects.
- 5) Get the class to think of some ways that colour in the natural world is used descriptively in the English language e.g. white as the snow, black as coal, green-fingered. Write down how colours are also used to reflect moods – e.g. green for envy, red for anger, blue for sadness. What do different colours represent to different cultures?

In the Zoo

- 1) Go to the Reptile House and find the poison dart frogs. Discuss why they are brightly coloured and how people use these animals in the rainforest.
- 2) African penguins have different spots on their chests unique to each individual – a bit like human fingerprints. Ask the children to choose a penguin in Seal and Penguin Coasts and remember or sketch its spot patches. Later in the day, see if they can identify it again.
- 3) Ask the children to choose a fish tank in the Aquarium and to make some observations and sketches of all the species in this tank as well as the plants (See 'After your visit' for what to do next).
- 4) Get the students to try making tables to compare different animal patterns such as stripes and spots, or comparing where the bright colours are on birds e.g. beak, wing, tail.
- 5) Ask the group to find three different camouflaged animals that come from three different habitats.

After your visit

- 1) Combining the sketches and observations made in the Aquarium, ask the class to create a wall collage. Use different fabrics, materials and textures of various colours and patterns. Ask them to include some species that are camouflaged and some that might be using warning colours.



- 2) Source some pictures of various habitats – e.g. desert, rainforest, polar or deep sea. Encourage the class to create painted models of animals that would be well-camouflaged here.
- 3) Get the children to pair up and create matching face masks. Talk about how monkeys such as marmosets and tamarins use a variety of colours, manes, tufts and moustaches to identify members of the same species.

4) Ask the children to write a short story that includes at least five different ways that people use colour and pattern for communication and camouflage, e.g. traffic lights, make-up, army clothes, uniforms.

- 5) Look at different animals and find out where their colours come from, e.g. diet, pigments, iridescence, green algae growing on fur of sloths.

For more information

- 1) Check out the Zoo's website – we have factsheets on many of the Zoo's species and wildlife-related issues. You can also download this and other leaflets.
www.bristolzoo.org.uk
- 2) Find out how camouflage works in this article:
<http://science.howstuffworks.com/animal-camouflage.htm>
- 3) For younger kids, make pasta necklaces to investigate patterns
www.pbs.org/parents/earlymath/act_g_pasta.html
- 4) Discover more about the symbolism of colour here:
www.paintcafe.com/en/couleur/langage/symbolique/vert.asp

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Colour and pattern:

Why are zebras stripy and leopards spotty?
Which colours do animals use for warning?
How do people use colours?

This session gives you the chance to have these and many other fascinating questions answered. Meet and touch live animals that use colour and pattern for camouflage and communication. There may even be an animal hiding in the room when you arrive...

You will also have the chance to explore our large collection of skins, feathers, eggs, shells and minibeast exoskeletons, in a spectacular variety of colours and patterns. Many of these have been loaned to us by HM Revenue &

Customs, after being confiscated from smugglers and tourists. You can also book an art session where your group will have the opportunity to use these biofacts for sketching.

If you haven't booked an education session this time, but are interested in finding out more, please contact the Education Department on 0117 974 7369, or education@bristolzoo.org.uk