

Birds are the only living creatures that have feathers. They use their feathers for many different things and they are very important.

Most feathers are waterproof. There is a very thin waxy substance that covers the feather which the bird must keep in tip top condition. The feathers insulate the bird from the cold and insulate them from the water. Feathers also provide a wind barrier. The fluffy down feathers that you see on a bird or the fluffy bit at the end of the feather nearest the Quill traps air against the birds' body and helps keep it warm. Some birds put their beaks into their feathers and blow warm air in to help keep them warm!

Birds have seven different types of feathers and these all have their very own special job. Three of these feathers are wing, tail and contour. Wing feathers help the bird fly; they have a short edge to help the bird change direction when it is flying. The tail feathers help the bird steer when it is flying. The feathers on the birds back are called contour feathers and these can help the bird camouflage into its background. These feathers can also be really brightly coloured and help the male birds show off and attract a mate.

The 5 uses of a feather are:

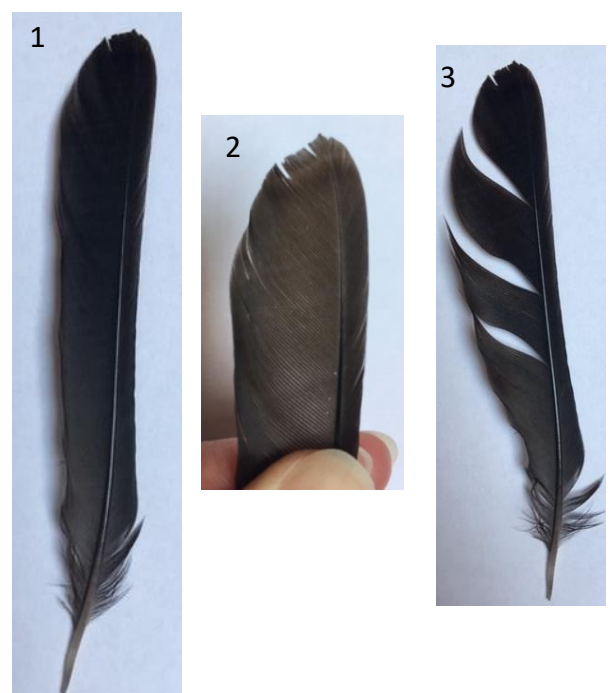
1. Help the bird fly.
2. Help the bird stay warm.
3. Help the bird keep dry.
4. Keep the bird camouflaged.
5. Help the bird show off to attract a mate.

Feather challenge

Find a feather

Use the following worksheets to help you identify the 6 different parts of the feather, plus complete the activity below:

1. Hold the feather by the quill in one hand.
2. Very gently, using your fingers and thumb of the other hand, take hold of the vane and pull it downwards towards the quill. See how the feather 'sticks' together like Velcro.
3. If your feather parts into sections you can move it back in the right direction so it joins back together.





Explore feathers and find the 6 hidden parts

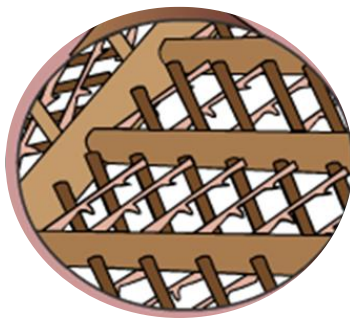
Quill



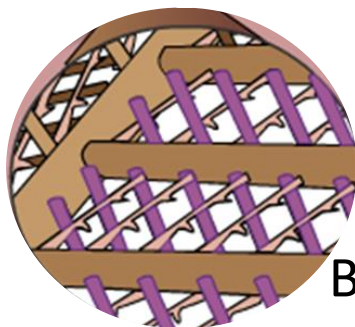
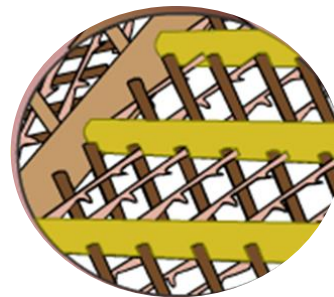
Shaft



Vane

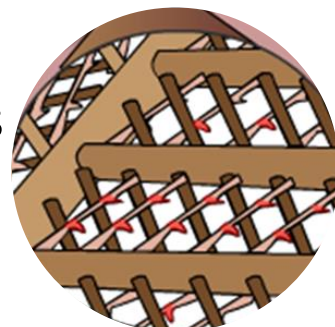


Barbs



Barbules

Hooks



Education Programme
Parts of a feather
Part 1 - Quill



Quill

The quill is the smooth, hollow, pointy end of the feather.
The quill inserts into the skin of the bird.



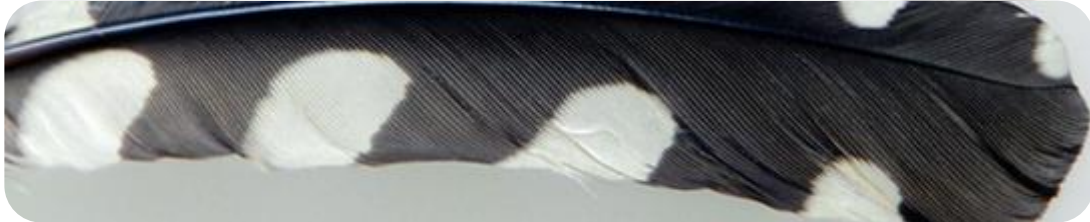


Shaft

The shaft is the central part of the feather.
Barbs come out from the shaft.

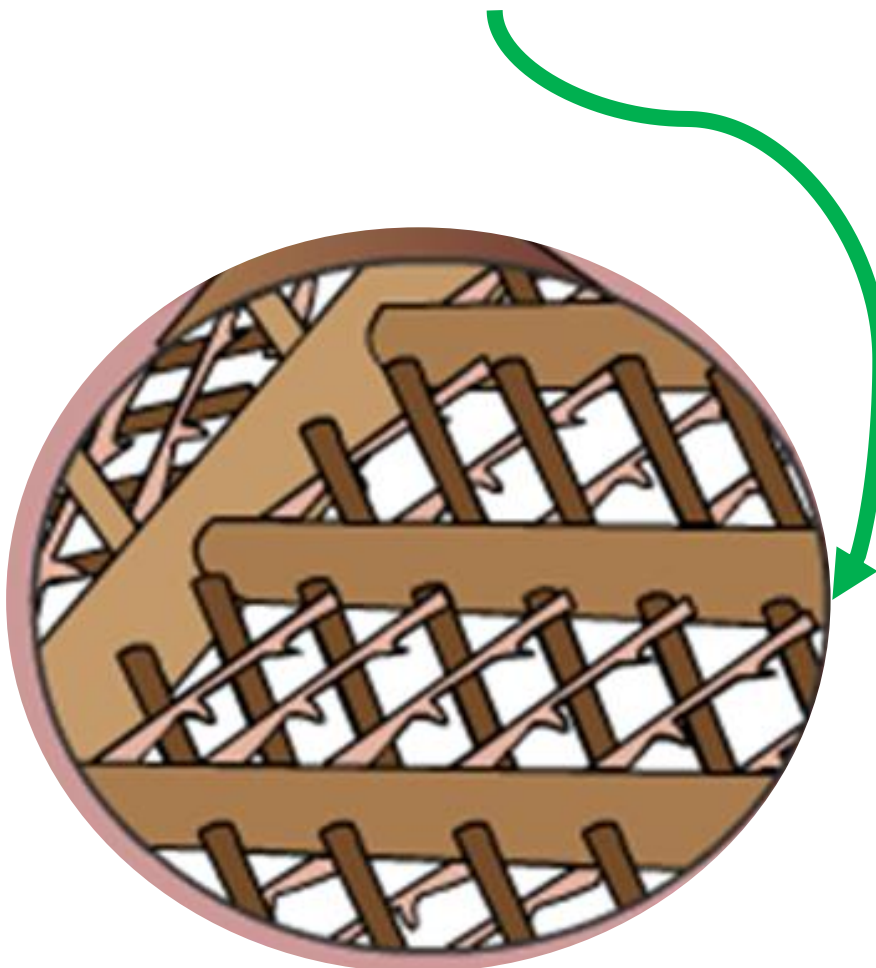


Can you count how many yellow shafts are on this wing?



Vane

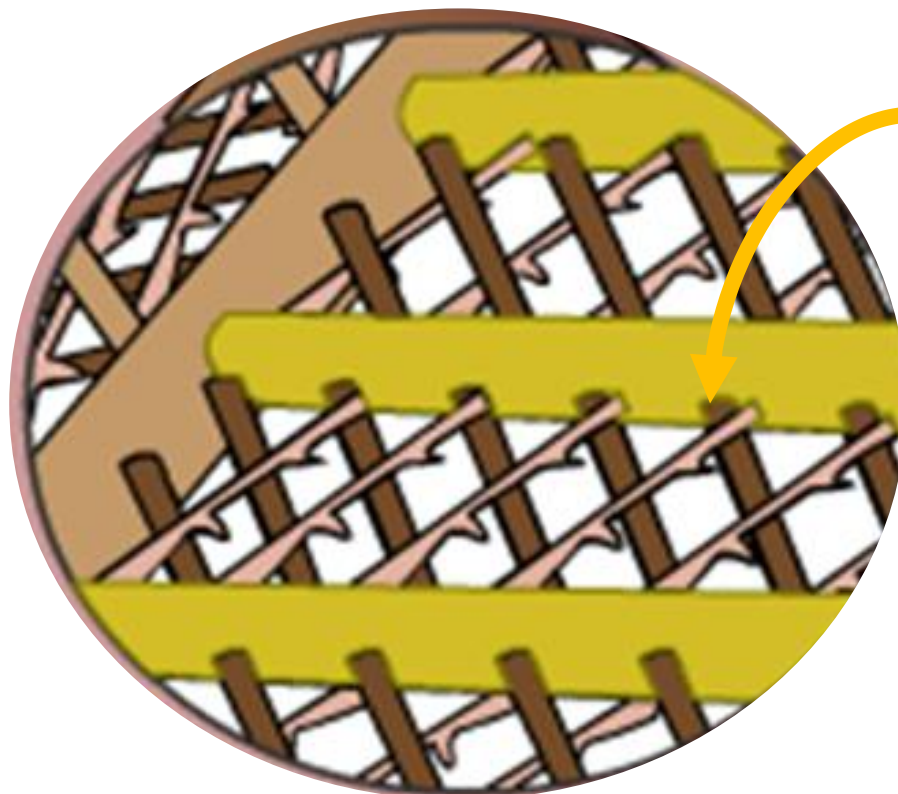
The vane is the whole part of the feather located either side of the shaft. It is made up of barbs.





Barbs

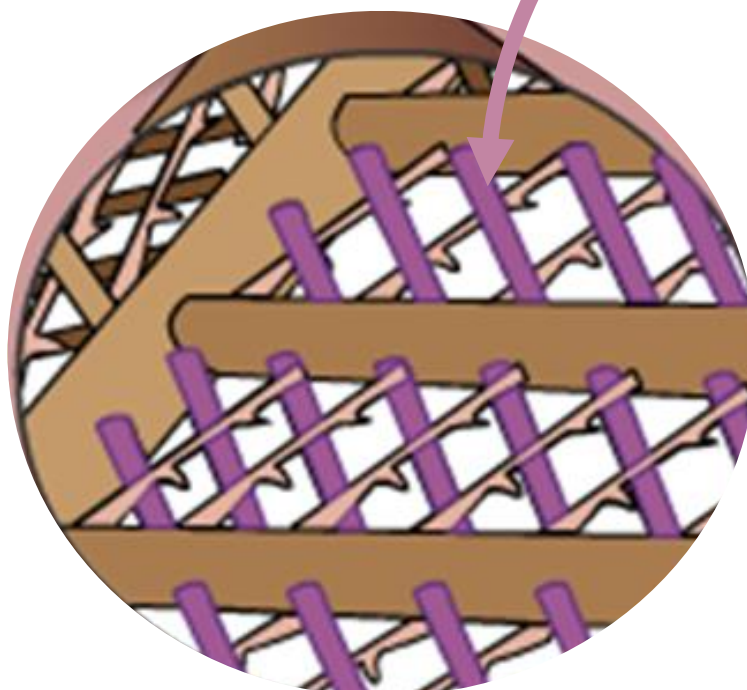
Barbs come off the shaft at 45-degree angle. The barbs join together to form the vane of the feather.





Barbules

Barbules are very small fibres coming from both sides of the barbs.





Hooks

Hooks are located on the barbules and hook them together, like a zip to form a tight smooth surface.

