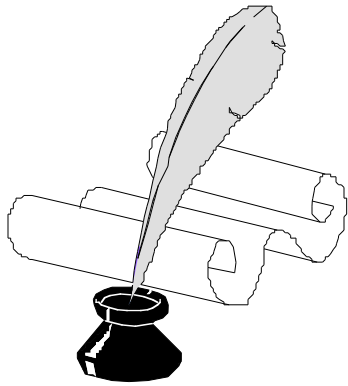


# Making a Quill Pen

Feathers start out as a pulp-like material, soft and moist. As they grow, a hard shell known as the quill grows around the pulp. When the feather is fully grown the pulp inside the quill dries up and leaves the quill hollow.

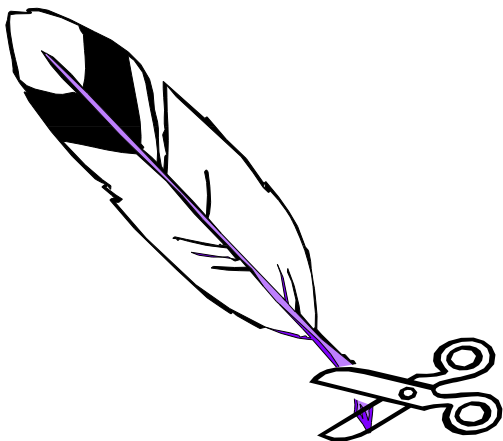
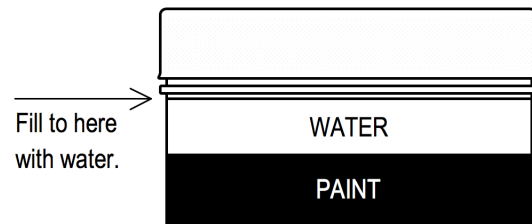


Pioneer children used these hollow quills to make pens. Turkey feathers such as the ones in this kit make good quill pens.

**Did you know??** A bird's bones are basically hollow, like the quill of the feather. Hollow bones and feathers are very important for flight. Can you think why?

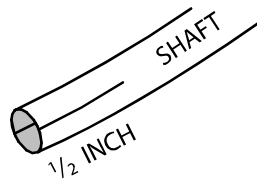
**WHAT YOU NEED:** a wing feather, a jar of black powder paint, and a cup partly full of water. You will need to provide a pair of scissors and some paper to write on.

**MAKING THE INK:** Add 1 tablespoon of water to the powder paint, cap it tightly and shake it up. If you don't have a tablespoon handy, you can just follow this picture.



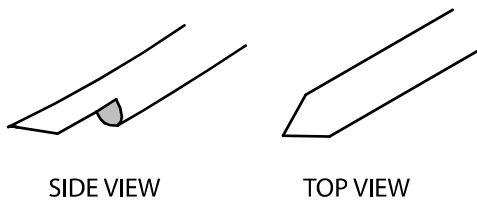
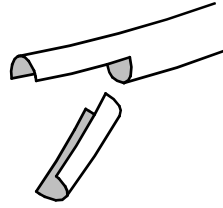
## MAKING THE PEN:

- 1 Soak the quill in a cup of water for two or three minutes to soften it.
- 2 Snip off the tip of the quill. (You may need an adult's help with this.)



- 3 Use your scissors to split the quill roughly in half for about half an inch up the shaft. (Don't worry about breaking it.)

- 4 Cut away the back half of the split part. Scrape away any dried pulp.



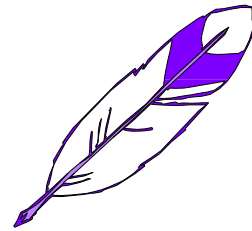
SIDE VIEW

TOP VIEW

- 5 Cut the remaining tip to a point.
- 6 Trim away the feather fluffies that might get in the ink.

## Writing with your Pen

Put your ink bottle on a plate or in a cup in case of spills. Have some paper towels or rags handy.



Dip the point of the pen into the ink and tap off any excess ink.

*Dear Grandma,*

*I love science!*



Practice writing your name. You may notice that down strokes work best and up strokes spatter the ink. Do not press too hard or your pen will quickly get a dull point.

If the tip gets dull, or doesn't work well, rinse it off and resharpen it.

After you have practiced using your new pen, try doing something more challenging . . . like writing a letter to a relative or friend.

Rinse and save your pen. You will need the wing feather again.