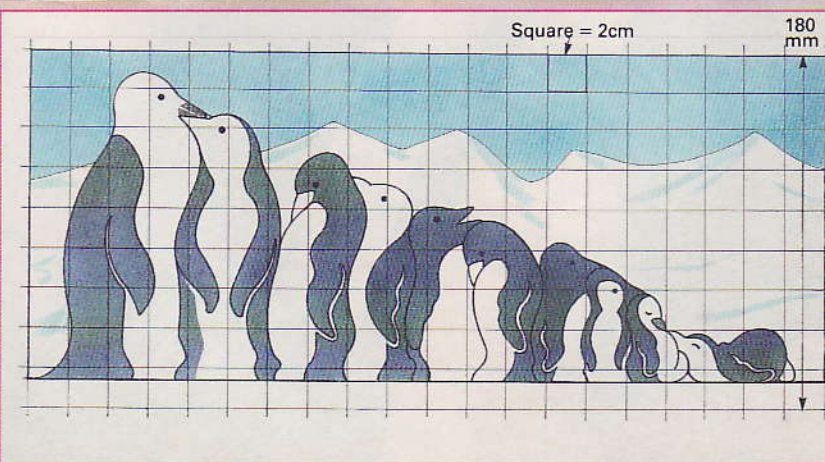
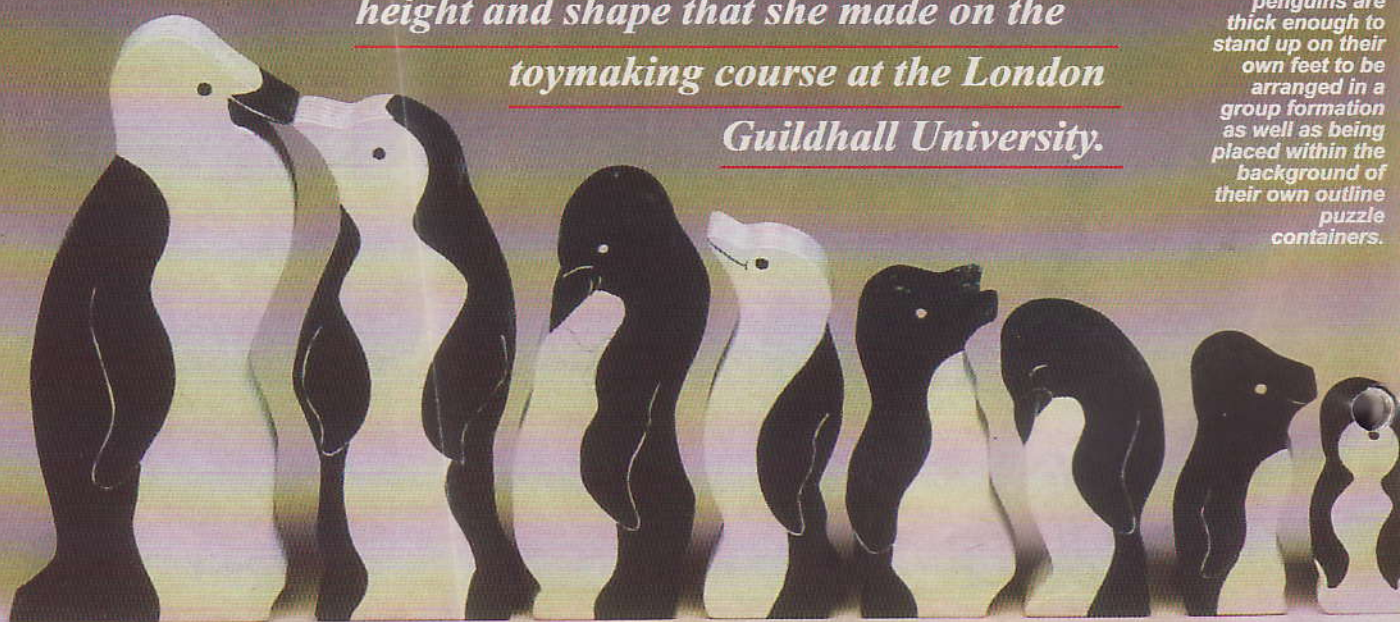


# Puzzling Penguins

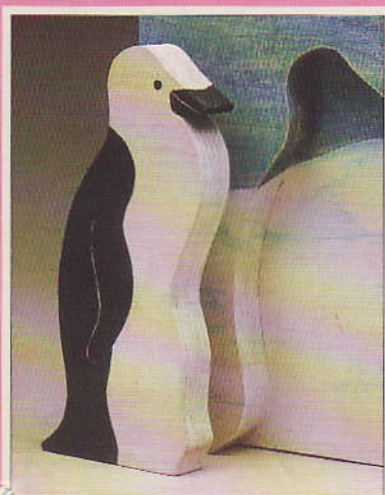
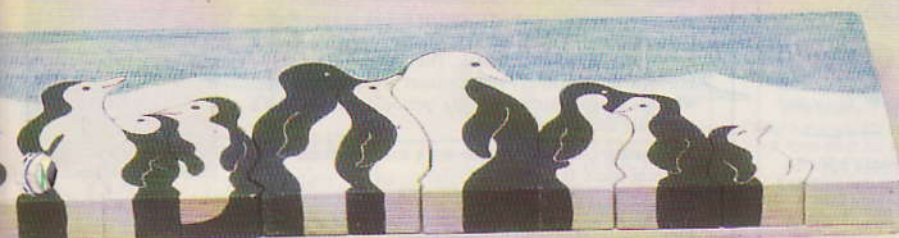
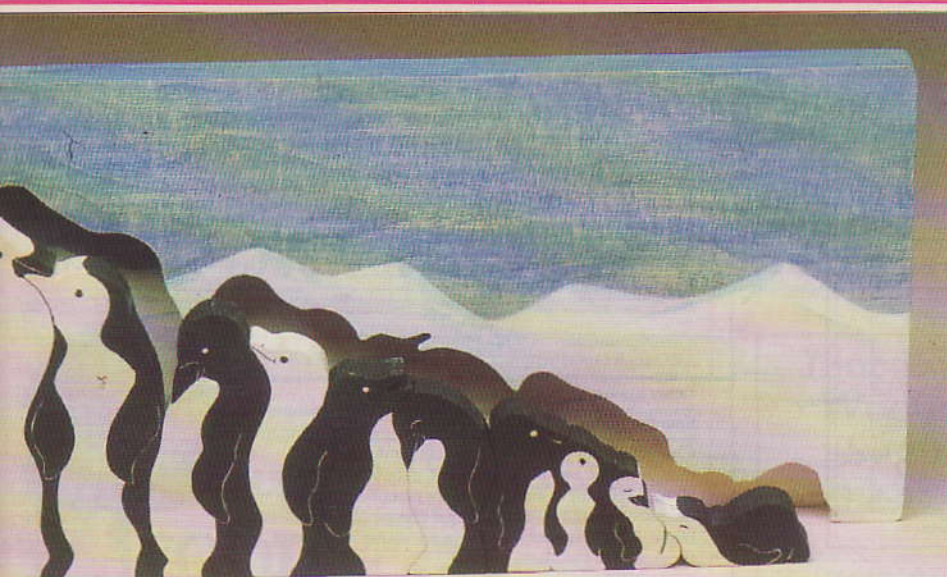
*As an occupational therapist, Denise Webb finds toys both useful and fascinating. Here she describes a pair of puzzles to teach*

*height and shape that she made on the toymaking course at the London Guildhall University.*

Made from 18mm plywood, the penguins are thick enough to stand up on their own feet to be arranged in a group formation as well as being placed within the background of their own outline puzzle containers.







**T**HESE two amusing little puzzles are a simple way for a small child to learn about height and shape whilst playing. The larger puzzle is the simpler of the two in that it starts at one end with the smallest penguin and works up to the largest one at the other end. But, as the figures are painted on both sides, the child must also work out which way round the penguin goes in order to make it fit in.

The smaller puzzle is a little more difficult because the penguins do not follow an obvious pattern. But, although none of the penguins is the same height, they can be removed from the base and still be arranged in order of height in a free-standing way if the child wishes.

#### Making the puzzles

Both puzzles are made out of birch ply with 18mm thickness used for the

penguins themselves; these are set onto a 3mm ply backing board. The overall dimensions are shown on the drawings although these are to a large extent arbitrary. It is important, however, to ensure that the puzzles are sufficiently large to obviate any possibility of a child choking on any of the pieces if placed in the mouth.

Initially the outlines of the penguins are drawn on the ply in pencil with the base of them being flush with the bottom edge of the wood. They were then cut out, quite slowly, using a fretsaw. I found it helpful in most cases to cut them out in groups of two or three in the first instance and divide them up into singles afterwards.

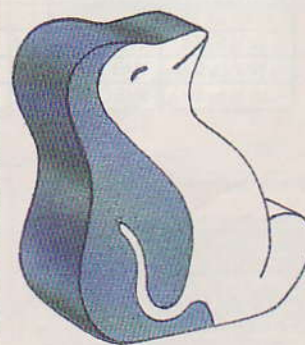
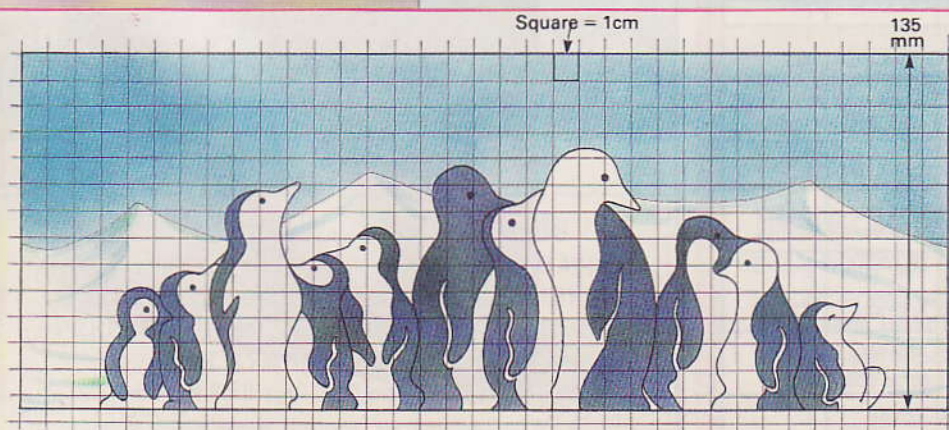
After sanding down all the pointed beaks and smoothing off the figures in general, everything was sealed with a thinned-down coat of wood sealer applied with a rag and left to dry.

#### Painting

Initially I used a thin coat of white paint overall (emulsion or non-toxic acrylics are fine) so that the grain of the wood still showed through. The character details of the penguins were then picked out in black allowing a thin definition line around the flippers of each bird.

#### The backing board

The 3mm backing board was then stuck onto the remaining outline 18mm ply and sanded smooth. The background was painted on using a thin coat of blue for the sky, and white with blue highlights for the snow. Everything was then sealed with two or three coats of non-toxic spray matt varnish, with a final light sanding given to the finish. This is a delightfully simple toy to make yet it has enormous appeal for the children as well as a subtle and highly beneficial educational content. It is inexpensive and can be quickly made.



The shaded area is painted from one side to the other, across the width of the wood.