

Balancing Figures

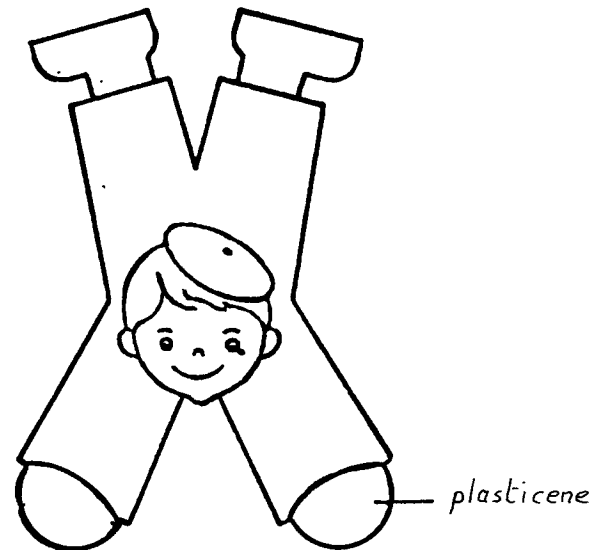
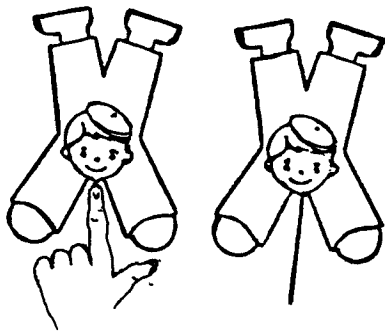
The following two toys are simple to make and can be used as an introduction to balancing and centre of gravity.

AN ACROBAT

Suitable for the 7 to 10 years age range.

This balancing figure is simply constructed from paper and stiff card, with a little cutting and pasting, as follows.

- i. Draw an acrobat by cutting out the figure shown or drawing your own. Make a second acrobat exactly like the first by tracing around the first figure.
- ii. Paste the figures onto stiff card. Cut out the figures on the card and stick them together. Brightly colour the figure.
- iii. Put a small ball of plasticene around each hand (the balls should be about the same size).
- iv. Try to balance the figure, as if it were an acrobat, by putting your finger, a pencil, or a matchstick under his chin as shown in the sketch below.



Educational Concept/Skill to be developed

To develop an understanding of balance and stability, leading towards the idea of centre of gravity.

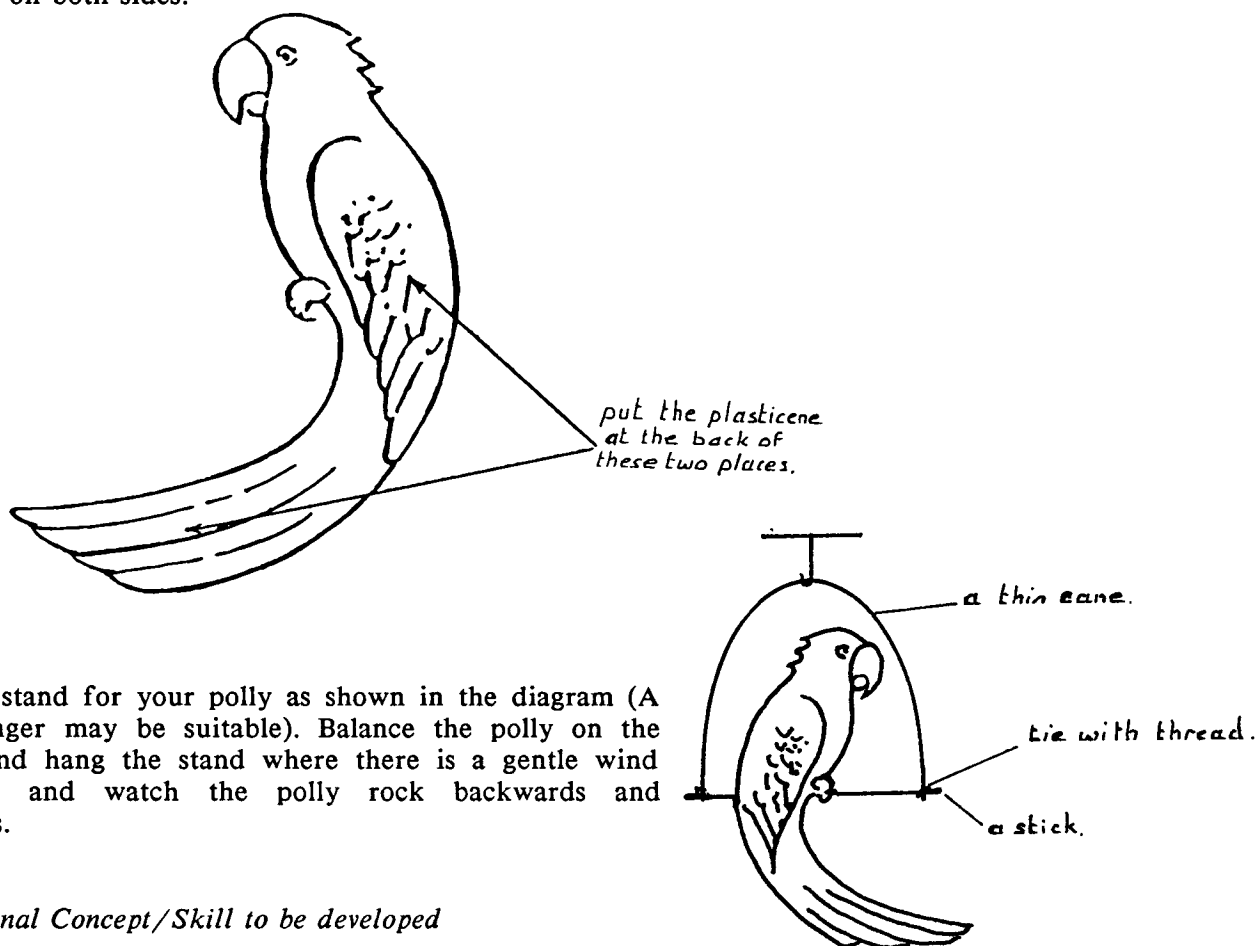
Points for the teacher to consider

Time required. 30 to 60 minutes depending upon the time it takes for the paste to dry.

A POLLY ROCKER

Suitable for the 7 to 11 years age range.

To make a polly rocker cut out the drawing of the parrot or draw your own. Then make an identical copy by drawing around the polly and cutting that one out. Paste both parrots onto a piece of card facing each other; colour them both and then cut them out. To the back (uncoloured side) of one polly fix some plasticene in the positions shown in Figure 1. This is to give the polly some extra weight. Stick the two polly's together to form one polly which is coloured on both sides.



Make a stand for your polly as shown in the diagram (A coat hanger may be suitable). Balance the polly on the stand, and hang the stand where there is a gentle wind blowing, and watch the polly rock backwards and forwards.

Educational Concept/Skill to be developed

- i. To develop an understanding of balance and stability leading towards the idea of centre of gravity.

Points for the teacher to consider

Time required. 30 to 60 minutes depending upon the time it takes for the paste to dry.

If used as a class activity with more than one parrot being made, a discussion with the class as to why all of the parrots are not balanced in the same position (amount of plasticene used at each position/relative positions of the plasticene, etc) can lead into investigations on centre of gravity.

These two examples of toys were submitted via ICASE and suggested by the Curriculum Development Unit, Singapore.