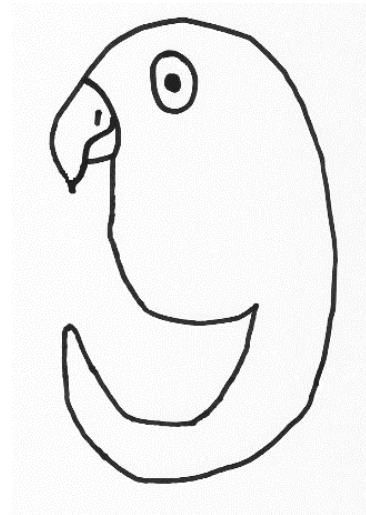


Balancing bird

Materials

- Balancing bird template
- Cardboard
- Scissors
- Ball of plasticine



Instructions

1. Use the template to cut out a bird shape from the cardboard.
2. Try balancing the bird on one finger.
3. Attach a ball of plasticine somewhere on the bird to make the bird balance on your finger. It can be fun to ask children to suggest where the plasticine should go.

What happens?

When you try to balance the bird on one finger, it is very difficult to keep it up the right way because most of the bird's weight is above your finger. The most stable position for the bird to be is with the weight as low as possible and so it flips upside down. Adding plasticine to the bottom half of the bird changes the location of the bird's centre of gravity. The centre of gravity is the centre of the bird's weight (or more correctly, it is the centre of the bird's mass). This time when you try to balance the bird, its centre of gravity is below your finger and it is much more stable. Rather than balancing, the bird is in fact hanging on your finger.

Why does it matter?

A hanging object is much more stable than a balancing object because the centre of gravity is below the point of support. In this activity the point of support is your finger.

Health and safety considerations

- Choking hazard for young children (plasticine)