



## The Bat



### The problem

Jack, Jill and Zog are at school performing their own play called Ghost of the Bat Cave. Zog doesn't want to be the bat; he would much rather be a ghost or a dangerous dragon.

Can you help Jack and Jill design a bat for their play?

# The Bat

## Objectives

Applying knowledge of:

- Levers and gears
- Cams, cranks and timing actions
- Applying principles of fair testing and product reliability

## Other materials required

- A ruler
- Stopwatch or timer
- Decorative materials: wool, foil, card, paper, etc.
- Sticky tape

## Fair testing and fun

- How wide is the bat's wingspan?
- How many times per 15 seconds does the bat flap its wings?
- Can the bat flap at different intervals?

## Extra challenges

- Add another movement to the bat – it could be eye or ear movement.
- Decorate the bat to make it look as realistic as possible.

Need help?  
Look at:



The Walker



Principle Models Building  
Instructions booklet for  
gears and levers