



## The Magic Lock



### The problem

Jack wants to keep his secret treasure locked away in a box. But he knows Jill can undo almost any lock and she is always so curious and wants to know his secrets!

Can you design a secret way to 'lock' a box that does not use a key?

# The Magic Lock

## Objectives

Applying knowledge of:

- Levers, structures and hinges
- Observing and investigating
- Applying principles of fair testing and product reliability

## Other materials required

- Cardboard
- Markers
- Scissors

## Fair testing and fun

- Does the box stay shut when it is 'locked'?
- Does it open properly?
- How reliable is it?
- How secret is it?

## Extra challenges

- Design and make different box sides so that the content is totally hidden.
- Using cardboard and markers, personalise the sides of your box.

◀ **Need help?**  
Look at:



Principle Models Building  
Instructions booklet for  
levers