

Don't let the ladder slip (Post-Primary)

Read it -- Try it safely -- Explore it further

Don't climb a ladder until you learn how it might slip.

Find the material that is least likely to slip on a tiled floor.

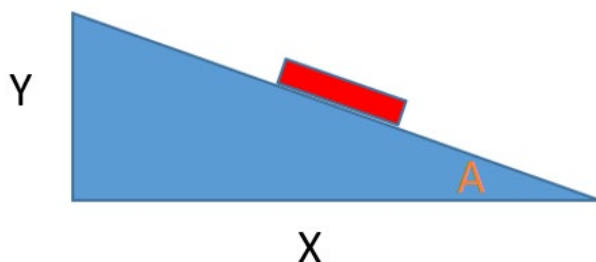
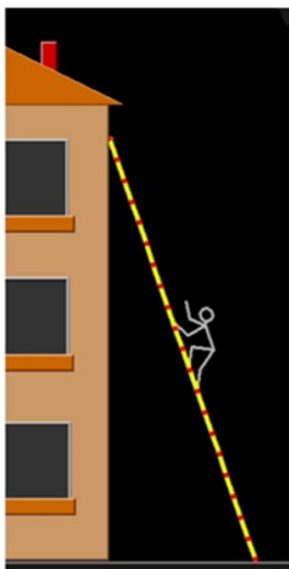
Test many materials on a tilted tile. The steeper the tilt before slipping occurs the safer. Learn how to measure friction with a ruler.

Place a small block on a hard-covered book.

Tilt the book until the block just begins to slip.

Use a ruler to measure the distances shown.

[If a tile is not available any hard flat surface will do.]



Increase the angle A of the ramp until the red block just begins to slip.

Measure X and Y.

Then Friction = $\frac{Y}{X}$

For greater accuracy, repeat many times and find the average.

Extension activities:

Calculate an average value from repeated trials.

Try blocks of different materials.

Try polishing the ramp.

Test if a wet ramp is more slippery than a dry one.