



# Investigation Guide

## Aiming High? Dig Deeper

Use in conjunction with the DIY video workshop *Aiming High? Dig Deeper* from Cube Tube.  
<http://www.mathematicscentre.com/mathematicscentre/cubetube.htm>

### You Need

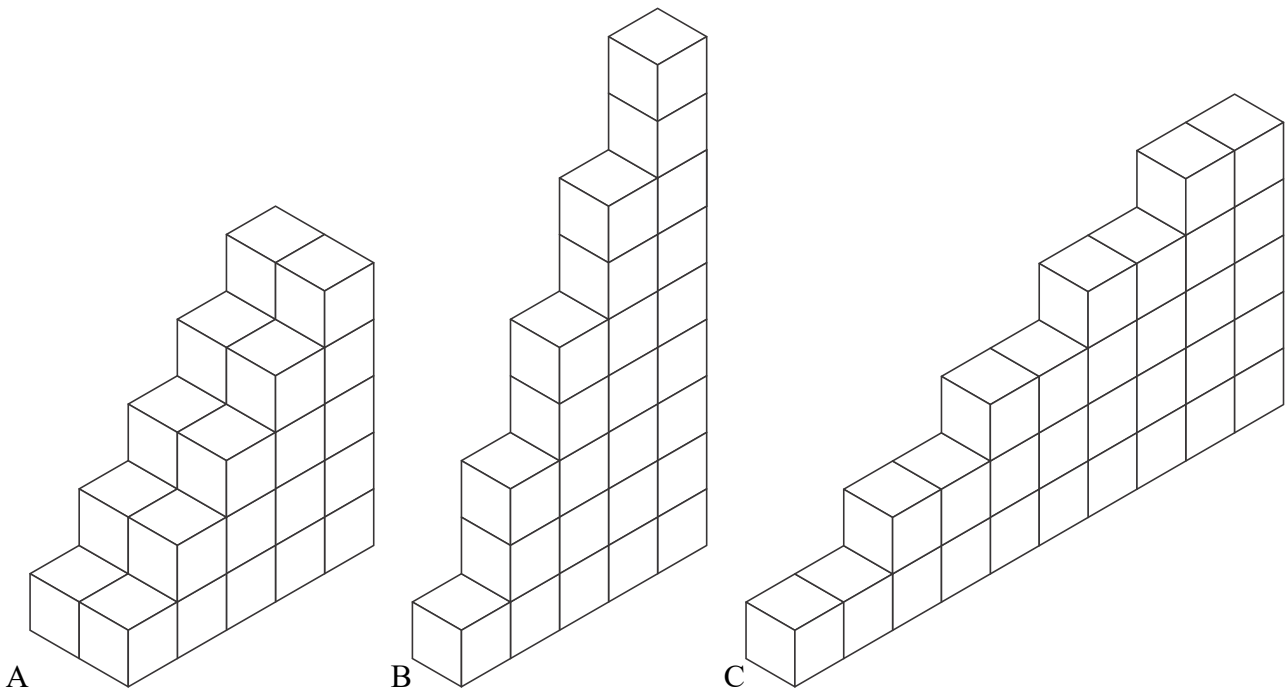
- ◆ Isometric dot paper (next page)
- ◆ 2cm cubes - 1cm cubes will work (so will sugar cubes)

1. On the isometric paper, draw the smallest possible single cube by joining dots.  
If you do it as intended every corner will be on a dot and there will be no dots inside.  
(Doing all your drawings this size saves paper.)
2. Tower 1 and Tower 2 together (as in the video) make a Tricube. Draw a Tricube by joining dots.
3. (Optional) Draw the 5-step staircase in the video.

### Challenge

For at least one of these alternative 5-step staircases investigate...

- blocks needed to build each tower  
(towers are 2 columns deep in A and 2 columns wide in C)
- cracks created between blocks as each tower is built
- visible horizontal and vertical cracks created as each tower is joined on



How do you know?

Can you check it another way?

If I tell you any tower number can you tell me...?

# Isometric Dot Paper

