Block patterns
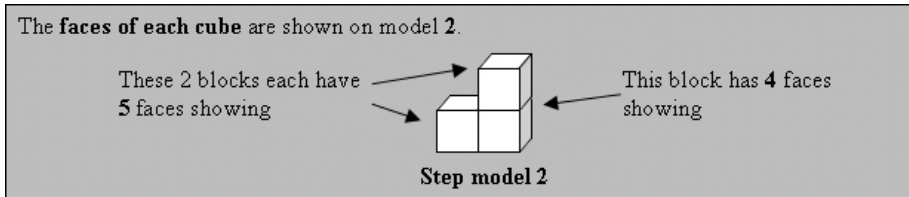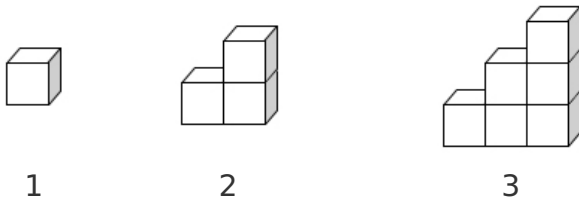
This task is about continuing spatial patterns.

Practical task
Here are the first 3 patterns of a sequence of step models.

1   2   3

The **faces of each cube** are shown on model **2**.

These 2 blocks each have 5 faces showing

This block has **4** faces showing

Step model 2

Use multi-link blocks to build a set of 6 step models to use in your investigation.
Show your models to your teacher before you start your investigation.
Each block in a step model has a number of faces showing.

a) i) Using your models, count the number of faces on each cube that can be seen in models 4, 5, and 6.
Record your information in the table below. Models 1, 2, and 3 have been done for you.

   ii) **Have your work checked by your teacher.**

Step model	1	2	3	4	5	6	7	8	9	10
6 faces	1									
5 faces		2	2							
4 faces		1	2							
3 faces			2							
2 faces										
1 face										

   iii) Now use the information you have gathered to complete the tables for models 7 and 8.

   iv) **Have your work checked by your teacher.**

b) Now use the pattern from your table above to help you complete the table for models 9 and 10.