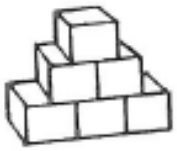
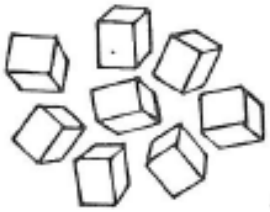


Square Patterns

- Look at the patterns made with squares.
- Draw the next two shapes in each pattern.
- Count the number of squares in each shape and write it in the circle.

1st	2nd	3rd	4th	5th
☐ (1)	☐☐ (2)	☐☐☐ (3)	◯	◯
◯	◯	◯	◯	◯
◯	◯	◯	◯	◯
◯	◯	◯	◯	◯
◯	◯	◯	◯	◯
◯	◯	◯	◯	◯

- Predict the number of squares in the 10th shape for each pattern.
- Draw them to find out if you were correct.



Square Patterns - Ideas Page

Aims

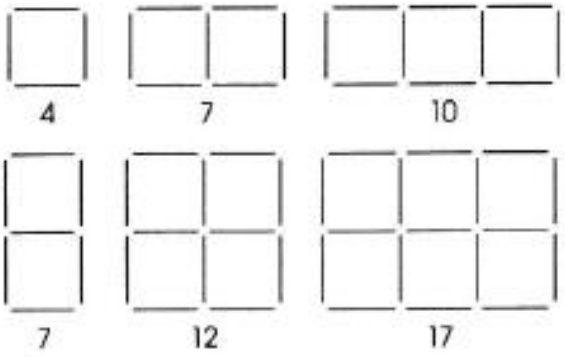
- To search for patterns in number sequences obtained by extending a series of shapes.
- To describe different number sequences.
- To create number sequences.

Number sequences					
1st	2nd	3rd	4th	5th	10th
1	2	3	4	5	10
2	4	6	8	10	20
1	4	9	16	25	100
1	3	6	10	15	55
1	5	9	13	17	37
1	3	5	7	9	19

- The answers are shown in the table above.
- Ask the children to describe each of the number sequences in the table.
  The answers are:
  - counting numbers
  - even numbers
  - square numbers
  - triangular numbers
  - adding 4, starting at 1
  - odd numbers.

Activities

- Matchsticks could be used to create new patterns.
- Ask the children to make each sequence with matchsticks. Instead of counting the number of squares, count the number of matchsticks used. This creates a new set of number sequences, for example:



1st	2nd	3rd	4th	5th
4	7	10	13	16
7	12	17	22	27

- Make some more square shape patterns using matchsticks.
- Record the number sequences for the number of squares and then for the number of matchsticks used.

Extension

- Extend the activity by asking the children to create triangular patterns.
- Some examples could include: