PUZZLERS

Teachers can photocopy this page to use in class
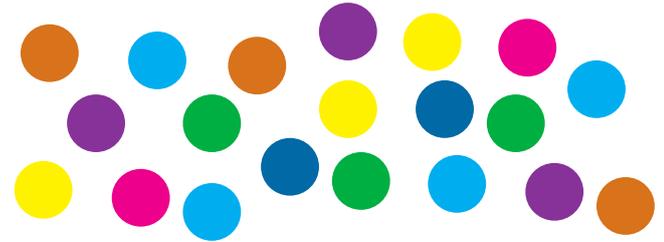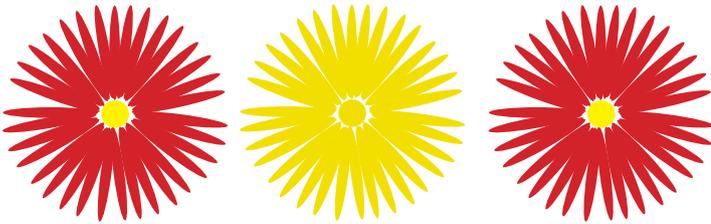
▷ FOUNDATION
FLOWER PATTERNS

I see five flowers in my garden. The first flower is red. The second flower is yellow. The third flower is red. If this pattern continues, what colour is the 5th flower? Offer the students paper, pencils or crayons, materials etc. and have them decide how they will solve this. Allow them to find a strategy to solve the problem with minimal input from the teacher. To extend this task for children who solve it easily, ask 'If this pattern continued and I had ten flowers, what colour would the tenth be? What about the 7th? What about the 9th? Is there a pattern of which number flowers are which colour? Explore this with more flowers, up to 30'.

*www.kindergartenkindergarten.com/patterns/*

▷ YEARS 1 AND 2
NECKLACE

You are making a necklace with 20 beads. You can choose the colours but you need to show a pattern so the whole pattern must be shown at least twice.

What is the least number of colours you would use and how many times would you show this pattern? What is the most number of colours you could use and how many times could you show this pattern? Which numbers of colours will not work because you can't finish your pattern with the 20 beads? I wonder why these numbers don't work?
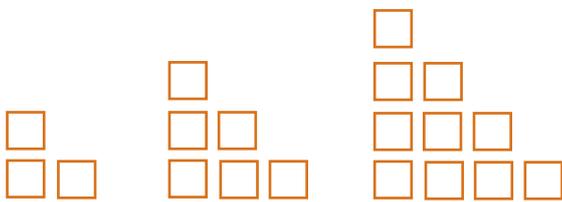
▷ YEARS 3 AND 4
MAKING STAIRCASES

Using square counters or tiles, how many tiles do you need to make a staircase? Are there numbers of tiles smaller than three or larger than 10 you can use to make a staircase? Is there a pattern in the numbers which make staircases? What is the pattern and how could you write a sentence to describe it?

www.schools.nsw.edu.au/learning/7-12assessments/naplan/ teachstrategies/yr2011/

▷ YEARS 5 AND 6
BIRTHDAY CANDLES

Mrs Gillespie is 73 today. She has had a birthday cake every year since she was born. How many candles has she blown out in her lifetime? Instead of adding all the numbers from 1 to 73, is there a rule or generalisation to help us work out how many candles? Can we use this rule to work out how many candles Mrs Gillespie has blown out for any birthday?

www.edu.dudley.gov.uk/primary/strategymaterials/