

Puzzle

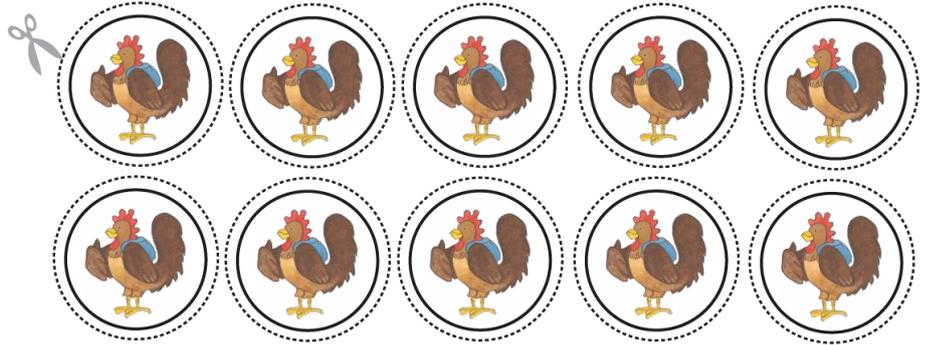
Puzzles like this are great for developing mathematical logic skills, as well as training us to be resilient if a solution proves tricky to find...!

Nim

First a game...

Play this ancient game with someone else. Follow these instructions.

- Find 10 counters, supermarket tokens, Lego™ bricks or other small toys. Or you can use the chicken counters.



- Arrange them in a line.



- You can choose to remove 1 or 2 counters from the line.
- Take it in turns to do this.
- The person who has to remove the very last object loses.** Boo hoo... 
- So... You want to try to make your opponent remove that last counter!
- Play this game at least four times so that you understand it.

Now for the puzzle...

- There are 3 counters left. If you want to win, should you remove 1 or 2 counters? Why? Try it out. Can you definitely win?
- There are 4 counters left. If you want to win, should you remove 1 or 2 counters? Why? Try it out. Can you definitely win?
- Now try 5 counters. If you want to win, should you remove 1 or 2 counters? Try it out. Can you definitely win?
- What numbers of counters do you want left when it's your go so that you know can definitely win?

Now you know all this, play the game again. You can definitely win!