

Main subject:
Mathematics

Linked subjects:
1. DT

Year
9

Title

The aim of this extension task is to introduce you to the branch of Mathematics known as Combinatorics.

Why Not?
It's just for fun!

Context of task:

You have 8 beads, 4 are white and 4 are black.

Questions / Issues to address:

1. How many different bracelets can you make?
2. If you find the problem difficult consider it with 2 black and 2 white. How many *different* bracelets can you make?
3. Once you have answered the question for 8 beads, you might want to try and generalise to $2n$ beads, n of which are black and n of which are white.



Expectation

You should present your working as a fully explained document either hand-written or word-processed.

You might want to also produce a video

Deadline:

Note to students:

It is not essential, but you are encouraged to extend this task into an area of your own particular interest . If you would like to do so, please discuss your ideas with your teacher.