## Something to make

Snakes and ladders
Have fun making your own snakes and ladders board... ...and do some maths along the way!

You will need: Game boards (see resources) and colouring pencils


## Snakes and ladders differences

- Look at the snake between 20 and 10 . The difference between 10 and 20 is 10.
- What numbers is the other snake between? What is the difference between those two numbers?
- Now look at the ladders. One ladder is between 3 and 12 . What is the difference between 3 and 12?
- What numbers is the other ladder between? What is the difference between those two numbers?
- If you went down both snakes on this board, you would go down 9 and 10 , that is 19 . If you went up both ladders, you would go up 9 and 11 , that is 20 .

It's a nicer game if you get to go up more than you go down!

## And now the Challenge!

Design a Snakes and Ladders board following these rules:

- The difference between the numbers at either end of every snake is the same. (It must be less than 15.)
o The difference between the numbers at either end of every ladder is the same. (It must be greater than 10.)
- The difference between the ladders must be greater than the difference between the snakes. This means that you go up more than you go down.


## Example



Cat decides that on her board...

Snakes have a difference of 6
So $1^{\text {st }}$ snake goes from 13 to 7

Ladders have a difference of 8
So $1^{\text {st }}$ ladder goes from 3 to 11.

Choose which board you want to use. Which do you think will work best?

- It's up to you how many snakes and ladders you draw on it!
- Once you've designed your board, test it out !

See below for the boards

Resources
Board 1

| 36 | 35 | 34 | 33 | 32 | 31 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 25 | 26 | 27 | 28 | 29 | 30 |
| 24 | 23 | 22 | 21 | 20 | 19 |
| 13 | 14 | 15 | 16 | 17 | 18 |
| 12 | 11 | 10 | 9 | 8 | 7 |
| 1 | 2 | 3 | 4 | 5 | 6 |

Resources
Board 2

| 64 | 63 | 62 | 61 | 60 | 59 | 58 | 57 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 |
| 48 | 47 | 46 | 45 | 44 | 43 | 42 | 41 |
| 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 |
| 32 | 31 | 30 | 29 | 28 | 27 | 26 | 25 |
| 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| 16 | 15 | 14 | 13 | 12 | 11 | 10 | 9 |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |

Resources
Board 3

| 100 | 99 | 98 | 97 | 96 | 95 | 94 | 93 | 92 | 91 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 |
| 80 | 79 | 78 | 77 | 76 | 75 | 74 | 73 | 72 | 71 |
| 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 |
| 60 | 59 | 58 | 57 | 56 | 55 | 54 | 53 | 52 | 51 |
| 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 |
| 40 | 39 | 38 | 37 | 36 | 35 | 34 | 33 | 32 | 31 |
| 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| 20 | 19 | 18 | 17 | 16 | 15 | 14 | 13 | 12 | 11 |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

