

# Discussion Problem

## Prime Numbers

### **National Curriculum Objectives:**

**Mathematics Year 5: (5C5b) Know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers**

**Mathematics Year 5: (5C8a) Solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes**

### **About this resource:**

**This resource has been designed for pupils who understand the concepts within this step. It provides pupils with more opportunities to enhance their reasoning and problem solving skills through more challenging problems. Pupils can work in pairs or small groups to discuss with each other about how best to tackle the problem, as there is often more than one answer or more than one way to work through the problem.**

**There may be various answers for each problem. Where this is the case, we have provided one example answer to guide discussion.**

**We recommend self or peer marking using the answer page provided to promote discussion and self-correction.**

# Prime Numbers

1. Complete the grid below so that each row and column add together to make a prime number. An example has been done for you.

5	2
6	35


Investigate the different possibilities.

DP

2. With a partner, take it in turns to roll the die and move forward the correct number of spaces on the game below.

<b>Start</b>	11	27	36	42	51	26	47	18	39	14	41
	21	2	19	23	44	1	33	17	3	52	
	35										
	54	24	5	46	7	28	49	30	53	12	4
	22	13	43	37	32	40	8	16	48	34	
	10										
	29	15	31	20	9	50	45	52	6	25	<b>Finish</b>

Be careful! If you land on a prime number, move back two spaces. If you land on a prime number that is also a prime factor of 30, move forward two spaces.

The first player to reach the finish wins!

DP

# Prime Numbers

1. Complete the grid below so that each row and column add together to make a prime number. An example has been done for you.

Various answers, for example:

5	2
6	35

1	6
2	35

Investigate the different possibilities.

DP

2. With a partner, take it in turns to roll the die and move forward the correct number of spaces on the game below.

Various answers, outcome will depend on the numbers rolled.

Start	11	27	36	42	51	26	47	18	39	14	41
	21	2	19	23	44	1	33	17	3	52	
	35										
	54	24	5	46	7	28	49	30	53	12	4
	22	13	43	37	32	40	8	16	48	34	
	10										
	29	15	31	20	9	50	45	52	6	25	Finish

Be careful! If you land on a prime number, move back two spaces. If you land on a prime number that is also a prime factor of 30, move forward two spaces.

The first player to reach the finish wins!

DP