

Max's Prime Number Investigation

Learning objective: To identify, describe, and record prime numbers up to 100 and understand why they are unique.

Help Max the Monkey solve his mathematical puzzles! Use this fact-file to define what a prime number is, identify examples, and explain why some numbers are not prime. Fill in each section carefully to complete your investigation.

Word bank: Prime number · Factor · Composite · Divisible · Multiple · Product · Calculation

1. The Definition: In your own words, explain what makes a number a 'prime number'. Mention how many factors it must have. (2 marks)

2. Prime Spotting: List five different prime numbers between 1 and 20. How do you know they are prime? (3 marks)

3. The Composite Challenge: Choose a number that is NOT prime (a composite number). List all of its factors to prove why it is not prime. (2 marks)

4. The Number One Riddle: Max is confused! Is the number 1 a prime number? Explain your reasoning using your knowledge of factors. (2 marks)

5. Prime Patterns: If you were to add two prime numbers together, would the result always be an even number? Give an example to support your answer. (3 marks)

Extension challenge: Max has challenged you to find all prime numbers up to 50. Use a 100-square grid to circle the primes and see if you can spot any patterns in where they appear!