Max’s Mathematical Prime Pursuit

Learning objective: To identify, describe, and understand prime numbers up to 100, and recognise composite numbers.

Join Max the monkey as he swings through the jungle of numbers! Use your knowledge of factors and multiples to help Max find the prime numbers hidden in the canopy. Good luck!

Answer Key: 1. B (2 is the only even prime); 2. True; 3. 1; 4. False (9 is 3x3); 5. C (13 is prime); 6. True; 7. 19; 8. False (All primes greater than 2 are odd); 9. 2, 3, 5, 7; 10. A (It has more than two factors).

Word bank: Prime · Composite · Factor · Multiple · Divisible · Product · Unique · Sequence

1. Max found a number that is the only even prime number. Which is it? A) 4, B) 2*, C) 8, D) 0 (1 mark)

2. True or False: A prime number has exactly two factors: 1 and itself. (1 mark)

3. What is the smallest positive integer that is NOT a prime number and NOT a composite number? (1 mark)

4. True or False: The number 9 is a prime number. (1 mark)

5. Which of these is a prime number? A) 15, B) 21, C) 13*, D) 27 (1 mark)

6. True or False: All prime numbers are greater than 1. (1 mark)

7. Max is looking for a prime number between 17 and 23. Can you name it? (1 mark)

8. True or False: All odd numbers are prime numbers. (1 mark)

9. List the prime numbers that are less than 10. (1 mark)

10. Why is the number 10 a composite number? A) It has more than two factors*, B) It is prime, C) It is an odd number, D) It is too large. (1 mark)

Draw: Draw Max the monkey sitting under a tree, holding a banana shaped like the number 7. Around him, draw bubbles containing different numbers, some prime and some composite. Colour the prime numbers blue and the composite numbers orange.

Extension challenge: 1. Explain why the number 2 is considered a 'special' prime number compared to all other primes. 2. Compare and contrast prime numbers and composite numbers; what is the main difference in their factor sets? 3. Justify your answer: Is it possible for a large even number like 102 to be prime? Why or why not? 4. What might happen if we tried to divide a prime number by a number other than 1 or itself? 5. Investigate 'Twin Primes' (primes that differ by 2, such as 3 and 5). Can you list three pairs of twin primes? 6. Create your own 'Prime Number Map' for the numbers 1 to 50, marking the primes clearly.