

Year 4 Mathematics Assessment: Mastering Time

Learning objective: To read, write and convert time between analogue and digital 12-hour and 24-hour clocks, and solve problems involving duration.

Read each question carefully. Use your knowledge of hours, minutes, and seconds to solve the problems. Show your working out clearly.

Max the monkey is organising a jungle sports day. He needs to track the time of every race and activity to ensure everything runs smoothly. Help Max solve these temporal puzzles.

Word bank: analogue · digital · duration · interval · am · pm · 24-hour clock · midday · midnight

1. Max starts the monkey long jump at 09:15. It finishes at 10:05. How long did the event last in minutes? (2 marks)

2. Convert 14:30 into a 12-hour clock time, including am or pm. Explain how you know it is in the afternoon. (2 marks)

3. Ellie the elephant arrives at the waterhole at 11:45 am. She stays for 2 hours and 20 minutes. What time does she leave? Write your answer in 12-hour format. (2 marks)

4. Pip the caterpillar is reading a book. He starts at 16:50 and finishes at 18:10. Calculate the total duration in hours and minutes. (3 marks)

5. Compare and contrast the 12-hour clock system and the 24-hour clock system. Why might a scientist like Bea the bee prefer using a 24-hour clock when recording observations? (4 marks)

6. Kit the fox takes a train journey. The train departs at 08:45 and arrives at 11:15. If the ticket costs £12.50, and Kit pays with a £20 note, how much change should he receive, and how many minutes was his total journey? (4 marks)

7. Zara the zebra is designing a mural. She plans to spend 45 minutes painting stripes, 1 hour and 15 minutes painting patterns, and 30 minutes for drying time. If she starts at 13:00, justify why she will or will not finish by 15:00. Show your full calculation. (5 marks)

8. What might happen if the world did not use a standard system for measuring time? Write a short reflection on the importance of synchronisation in daily life. (3 marks)

Draw: Draw an analogue clock face showing the time 20 minutes past 8. Then, draw a digital clock display showing the same time in 24-hour format.

Extension challenge: Total: /25. Challenge: If a leap year adds an extra day to February, explain why this adjustment is necessary to keep our calendars aligned with the Earth's orbit around the Sun.