

Calendar and dates problems

CURRICULUM ALIGNMENT

MEA.TIM.3b

identify the relationship between different units and representations of time.

ALG.PRR.3a

identify rules that describe the structure of a pattern and use these rules to make predictions.

INTERACTIVES

Calendar · challenge, display, explore

WHAT THIS LESSON TEACHES

To find a later date, count forward one square at a time along the calendar rows. Moving straight down one square jumps a whole week (7 days) to the same weekday.

→ 10 days after the 3rd lands on the 13th.

→ One week after the 9th is the 16th, directly below it.

MODEL THIS ON THE BOARD

2 WEEKS AFTER THE 5TH

- ① Start on the **5th**.
- ② Two weeks means add **14** days (two sevens).
- ③ $5 + 14 = 19$, so the date is the **19th**.

LESSON ARC

Circle today's date on the month calendar and ask what weekday it will be in one week — without counting day by day. Walk three worked snapshots: days along the rows, weeks straight down a column, then the gap between two dates counted as jumps. Pupils run three more on the interactive together, then answer three questions on their own printed month calendar in copybook. Class Challenge is brisk whole-class practice on the grid; close by naming why a fortnight lands on the same weekday.

TEACHING MOVES

1. **Getting Started.** Circle today's date on the displayed month grid before you ask. Take two or three hands-up answers only. Listen for anyone who names the same weekday straight away — that noticing is the lesson; don't explain the seven-day reason yet.
2. **Watch and Notice.** First snapshot: finger along the rows for the ten single days, and pause at the end of a row before you turn the corner. Second: hold on the week-jump straight down — same weekday, one row. Third: switch the move — count the jumps from the 3rd to the 17th so the answer is 14, not 15; let someone spot that fourteen days is also two rows down.
3. **Try It Together.** Pupils take turns at the board; the class agrees or corrects out loud. On 12th-plus-6, freeze at the end of the row and ask what happens next before turning the corner. On the 6th-to-20th gap, revoice: two weeks and a fortnight are the same 14-day jump.
4. **Count on Your Own Calendar.** Walk the room. Glance for pupils still ticking single squares on the two-weeks-after-the-9th question and nudge them toward two rows straight down. Questions 2 and 3 depend on each pupil's own month, so answers will differ from the board grid — that is expected.
5. **Class Challenge.** Keep board turns brisk: answer, Check, class confirms, move on. On 14th-to-21st, stress jumps not dates — 7, not 8 — and tie it back to the same weekday. For day-counts past a row end, remind them to turn the corner and keep going square by square.

6. What Did We Notice?. Ask why a fortnight from today is always the same weekday. Listen for seven-day week and seven squares in a row. Revoice: jumping down one row is exactly seven days, so the weekday returns. Head off anyone who thinks the date number stays the same.

COMMON MISCONCEPTIONS

⚠ Pupils count the dates themselves for a gap — from the 14th to the 21st they say 8 because they include both end dates.

Stop and point: we count the jumps between the two dates, not the numbered squares. Trace seven hops from the 14th and land on the 21st — the answer is 7.

⚠ When counting days past the end of a row, pupils stop or skip the first square of the next row and lose the count.

Freeze the finger at the last square of the row. Ask what day comes next, then turn the corner onto the first square of the row below and keep the count going one square at a time.

⚠ Pupils say a week later the date stays the same, mixing up the repeating weekday with the date number.

Point at the 5th and the 12th on the grid: same column, same weekday, different numbers. Revoice — the weekday repeats every seven days; the date number moves on.

DIFFERENTIATION

EMERGING

- On day-count questions, stay inside a single row so they do not yet have to turn the corner; mark the start square for them on their printed calendar.
- For gap questions, place a finger on the start date and let them only count the hops while you keep the end date covered until they finish.

DEVELOPING

- After they clear a week-jump, ask: three weeks after the same start date — still the same weekday? How many rows down?
- Give a gap that is not a whole number of weeks (e.g. 6th to 17th) and ask them to say both the day-count and whether the weekday matches.

PROFICIENT

- Narrate a harder board variant: 10 days after a date near the end of the month — they must turn the corner and say the new month's date if the grid runs out.
- Ask: if the 9th is a Wednesday, what weekday is the 30th, using only week-jumps and a short day-count leftover — justify without tapping every square.

➤ **Cross-curricular:** Tie to library routines — a book due one week or a fortnight from today's stamped date, read straight off the class calendar.

ANSWER KEY

Scaffold: visual check on the page

Q1: 13th

Q2: 15th

Q3: 11th

Q4: 22nd

Q5: 17 days

a) Always : A straight-down jump of one square is 7 days and keeps the same weekday.

b) Always : Count forward 7 from the 12th: $12 + 7 = 19$.

c) Always : The 8th is one week after the 1st, so same weekday.

d) Never : One week is +7, so $6 + 7 = 13$, not 12.

EXTENSION SHEET · STRETCH ANSWERS

S1: 06:38

S2: 13:10

S3: 5 h 52 min

S4: 6 h 57 min

S5: 3 h 41 min