

Angles: an angle is an amount of turn

CURRICULUM ALIGNMENT

SHA.SAL.3b

compare and classify angles, recognising them as a property of a shape and as a description of a turn.

WHAT THIS LESSON TEACHES

An angle measures how far something turns around a fixed point. A quarter turn, a half turn, a three-quarter turn and a full turn are the amounts we use.

- Turning to face the wall on your right from the front is a quarter turn.
- Turning to face the back of the room is a half turn.
- Spinning right around once is a full turn, and you face the front again.

MODEL THIS ON THE BOARD

QUARTER TURN FROM TWELVE

- 1 Start with the clock hand pointing straight up at **12**.
- 2 A quarter turn moves the hand one quarter of the way around the clock.
- 3 The hand now points at **3**.



DISCUSSION STARTER

REFLECT

Where in your day do you make a quarter turn, a half turn or a full turn?

LESSON ARC

Stand at the front and turn your own body — full, half, quarter — pausing so pupils name where you face. Move to a card pointer pinned at one end so it only swings round a fixed point, then repeat on the classroom door. Pupils work four turns on their own split-pin arms alongside a board pupil, draw quarter and half turns on clock faces in their copy, then slot pattern blocks into turned paper outlines in the Class Challenge.

TEACHING MOVES

1. **Getting Started.** Turn your whole body slowly — full, then half, then quarter — pausing after each so pupils name where you now face. Take two or three hands-up, not call-outs. Draw out the word 'turn': an angle is how far you turn, not how far you walk.
2. **Watch and Notice.** Swing the pinned card pointer slowly and narrate each turn ('a full turn brings you back to where you began'). Then open and close the classroom door — same idea, turning round one fixed point, the hinge. Hold out until a pupil notices the pointer only ever swings round the pin, it never slides.
3. **Try It Together.** Call the four turns in the on-screen order — quarter, half, full, three-quarter. A board pupil shows each on the IWB arm while the class makes the same turn on their own split-pin arm and

checks against the board. At the half turn ask what's the same as two quarter turns; revoice: 'so a half turn is two quarter turns joined together.' Give five seconds' think-time before the three-quarter turn.

4. **Draw the Turns in Your Copy.** Pupils draw two clock faces and arrow where the hand lands after a quarter turn (the three) and a half turn (the six) from twelve. Walk the room glancing at where arrows land — this is copybook practice, not marking.
5. **Class Challenge.** Brisk board turns — a pupil turns a real pattern block to fit each paper outline while the class predicts the amount of turn. Before each block slots in, take two hands-up on 'how much of a turn?', then let the board pupil check. Hold out for pupils naming the turn ('a quarter turn') rather than just showing it; the mixed frame lands the whole lesson.
6. **What Did We Notice?.** Ask where four quarter turns in a row leave you. Listen for 'right back at the start — same as one full turn' and revoice: 'four quarters make a whole, just like four quarters of a pizza.' Head off the idea you end up somewhere new.

COMMON MISCONCEPTIONS

⚠ Pupils slide the pointer or block sideways to make it 'turn' rather than swinging it round the fixed point — they confuse turning with moving along.

Go back to the pinned pointer and hold the pin down hard. 'It can only swing round this one spot — watch, it never slides.' Have the pupil trace the arc the tip makes with a finger so the fixed centre is obvious.

⚠ Pupils over-swing the quarter turn, ending up somewhere between a quarter and a half and still calling it a quarter.

On the split-pin arm, mark the quarter-turn stopping point against the clock face — a quarter from twelve lands on the three. Line their arm up with the three and let them feel where it should stop.

⚠ For a three-quarter turn pupils count only 'three quarters' as three little turns and land at the wrong corner.

Walk it a quarter at a time on the arm, counting one-two-three quarter turns aloud, so they see three joined quarter turns arrive at the last corner before full.

DIFFERENTIATION

EMERGING

- Stay with only quarter and half turns on the split-pin arm while the rest of the class adds three-quarter; the clock face gives them the three and the six as fixed targets.
- Let these pupils physically stand and turn their own body a quarter and a half turn before working the arm — the whole-body version from Getting Started makes the amount concrete.

DEVELOPING

- After the copybook clocks, ask them to add a third clock showing a three-quarter turn and name which number the hand points to (the nine).
- In the Class Challenge, ask them to describe a block's turn two ways — 'a three-quarter turn one way is the same as a quarter turn the other way' — and check it on their arm.

PROFICIENT

- Pose: if you make a quarter turn then a half turn, how much of a full turn have you made altogether, and where do you face? Let them work it silently on the arm before answering — pull them into the mixed frame early with this as a running total.

✂ **Cross-curricular:** Tie to PE — call quarter, half and full turns during warm-up and have pupils turn on the spot to match.

ANSWER KEY

Scaffold: visual check on the page

Q1: 4

Q2: the back

Q3: 1 full turn; same way she started

EXTENSION SHEET · STRETCH ANSWERS

S1: 43° is acute

S2: 161° is obtuse

S3: 71° is acute

S4: 126° is obtuse

S5: 133° is obtuse