

Sides and corners: a shape tells us its own name

CURRICULUM ALIGNMENT

SHA.SHP.2 examine, categorise and model 3-D and 2-D shapes.

INTERACTIVES Pattern Blocks · challenge, display, explore

WHAT THIS LESSON TEACHES

A flat shape tells us its own name by the number of straight sides and corners it has. Trace each straight edge one by one, count the sides, then count the corners to name it.

→ A triangle has 3 straight sides and 3 corners.

→ A square has 4 straight sides and 4 corners; a hexagon has 6 of each.

MODEL THIS ON THE BOARD

NAME THE CLASSROOM SHAPE

- 1 A shape on the classroom wall has 4 straight sides.
- 2 It has 4 pointy corners.
- 3 4 sides and 4 corners means the shape could be a square or a diamond.

LESSON ARC

Open with the feely bag: one pupil describes straight sides and pointy corners by touch only; take two or three class guesses before the reveal. On the IWB, trace Shape 1–4 slowly—sides first, then corners—holding each name until the class says it from the counts. Hold up the circle card last: no straight sides, no corners. Try It Together matches 3-, 4- and 6-count clues with class counting along. Copybook: draw a triangle and write 3 and 3. Class Challenge runs the clue bank briskly at the board.

TEACHING MOVES

1. **Getting Started.** Hold the feely bag closed. One volunteer reaches in—fingers only, no peeping. Prompt only: ‘How many pointy corners? How many straight sides?’ Take two or three guesses, then reveal quickly; careful counting waits for Watch and Notice.
2. **Watch and Notice.** Trace each on-screen shape with your finger at one side per second. Sides first, corners second, every time. Titles stay Shape 1–4 until the class names from the counts: 3 and 3 triangle; 4 and 4 square; 4 and 4 diamond—same counts, different look; 6 and 6 hexagon—slow the six. Finish with the circle card: agree no straight sides, no corners.
3. **Try It Together.** Call one clue at a time: exactly 3 corners, then exactly 4 corners, then 6 sides. Pupil at the board picks, traces sides while the class counts, then counts corners. Ask: ‘Do the two counts match?’ Short turns only—pick, trace, count, sit.
4. **Draw a triangle in your copy.** Pupils draw one triangle and write 3 for sides and 3 for corners. Walk the room glancing for both numerals—whole-class copybook practice, not marking.
5. **Class Challenge.** Brisk board turns: check each clue as you go. Clue 1 triangle; clue 2 any 4-corner shape (square, diamond, or flat-top trapezium) if corners are counted aloud; clue 3 the diamond; hexagon—slow the side count so nobody skips. Class confirms before the next clue.

6. What Did We Notice?. Ask: 'If a shape has 3 straight sides and 3 corners, what is it called?' Listen for count-to-name links. Revoice: 'So once we count, we know the name.' If someone calls every 4-sided shape a square, open it: diamond and the flat-top block have 4 corners too.

COMMON MISCONCEPTIONS

⚠ Pupils call every shape with 4 sides and 4 corners a square—including the diamond and the flat-top trapezium.

Point back at Shape 2 and Shape 3 on the board side by side. 'Same counts—4 and 4—different look. Square, diamond, and the flat-top block can all show 4 corners.'

⚠ Pupils rush the hexagon and land on 5 sides or 5 corners, then doubt the name.

Stop and retrace Shape 4 one side per second with the class counting aloud in unison. Then count corners the same way. 'Six and six—hexagon. The two counts should match.'

⚠ Pupils say the circle has sides or corners because 'the edge goes all the way round'.

Hold the circle card beside a triangle. Trace the triangle's straight edges, then run a finger round the circle. 'A side is a straight edge. This curve never stops at a corner—so zero and zero.'

DIFFERENTIATION

EMERGING

- Stay on the triangle only for the first board turns: teacher traces each side while the pupil points the corners, then they write 3 and 3 together in the copy.
- Pre-count the sides aloud yourself on the feely-bag reveal so the pupil only has to name the shape from the two numbers.

DEVELOPING

- After clue 2, ask: 'Is there another shape on the board with 4 corners too?' Accept square, diamond, or flat-top trapezium once corners are counted aloud.
- On the copybook triangle, add: write the name under the two 3s—does the count match the name?

PROFICIENT

- During Class Challenge, stretch with the board set already showing: 'Find every shape with exactly 4 corners'—square, diamond, and flat-top trapezium—counting corners aloud each time.
- Ask: 'Why can't a circle tell us its name the same way?' Pupils justify using zero straight sides and zero corners.

✂ **Cross-curricular:** On the line-up walk, spot straight sides on the classroom window, door, and clock face and say the count quietly.

ANSWER KEY

a) 3 sides, 3 corners

b) 4 sides, 4 corners

c) 6 sides, 6 corners

Q1: triangle

Q2: circle

Q3: hexagon

Q4: 3

a) **Never** : A shape with straight sides has corners where the sides meet; a circle has neither.

b) **Sometimes** : It could be a square, a diamond or a trapezium.

c) **Always** : Each corner joins two sides, so 4 corners go with 4 sides.

d) **Never** : 3 corners make a triangle, never a square.

EXTENSION SHEET · STRETCH ANSWERS

S1: 6 sides and 6 corners

S2: 4

S3: 3, it is a triangle

S4: a square, 1 more

Investigation: Count and draw — open-ended; scan pupils' working for valid solution paths rather than a single answer.