

Square and rectangle: the four-corner cousins

CURRICULUM ALIGNMENT

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

INTERACTIVES Drag Sort · challenge, display, explore

WHAT THIS LESSON TEACHES

A square is a flat shape with four straight sides that are all the same length, and four corners. A rectangle also has four corners and four straight sides, but it has two long sides and two short sides.

→ A floor tile is a square. Every side matches.

→ The classroom door is a rectangle: two long sides and two short sides.

MODEL THIS ON THE BOARD

TILE OR DOOR?

- 1 Look at the floor tile. It has four corners and four straight sides.
- 2 Check each side: all four sides match in length, so the tile is a **square**.
- 3 Look at the classroom door. It has four corners and four straight sides too.
- 4 Check the sides: two are long and two are short, so the door is a **rectangle**.

LESSON ARC

Open with the floor-tile and classroom-door pictures side by side and take two or three answers on what matches and what differs, steering toward sides before any names. Work live sorts by freehand-drawing each shape large on the IWB (or holding up the object), pointing at the edges, then dragging the name-tag into SQUARE or RECTANGLE. Pupils draw both shapes in their copy and finger-trace the square's four equal sides. Class Challenge keeps the same draw-then-drag routine through three core sets, ending on the almost-square lunchbox lid.

TEACHING MOVES

1. **Getting Started.** Show the floor tile beside the classroom door and ask what is the same and what is different. Take two or three answers; nudge toward the sides without saying square or rectangle yet.
2. **Watch and Notice.** For every card, freehand-draw the shape LARGE beside it (sides clearly all equal, or clearly two long and two short) or hold up the matching object, point at those edges, then ask the check question and drag the name-tag. After the first pair, hold up a sticky note or exercise-book cover: stand up if all sides match, stay seated if two long and two short.
3. **Try It Together.** Talk each sort through together. Before anyone drags, draw the shape large (or hold the object) so equal versus long-and-short sides are visible, then ask: all sides the same, or two long and two short? Rotate four pupils through the board; watch the tile on its corner — some will want to rename it.
4. **Draw both in your copy.** Cue one quiet class finger-trace of a square's four sides — same, same, same, same — then pupils draw a square and a rectangle side by side, label both, and tick the square. Walk the room glancing that the square's sides look equal. About four minutes; no marking.
5. **Class Challenge.** Keep the draw-then-drag routine brisk across the three core sets only. Before the almost-square set, pause and draw one true square beside one almost-square (two sides a little longer),

or hold both paper shapes up: which one has every side the same? On that set ask how they can tell. If time is short, drop the middle set — keep the almost-square catch last.

6. **What Did We Notice?** Ask what is different about the tile's sides compared with the door. Re-voice: both have four corners and four straight sides; the square is the one where every side matches. Stay with that difference — do not call the square a special rectangle today.

COMMON MISCONCEPTIONS

⚠ Pupils see the floor tile drawn on its corner and want to rename it — 'it's a diamond now.'
Redraw the same four equal sides on a tilt and point along each edge. Turning does not change the side lengths, so the name stays square.

⚠ Pupils sort the almost-square lunchbox lid into SQUARE because it 'looks close enough'.
Hold a true paper square against the almost-square lid (or draw both large). Trace the slightly longer pair out loud, then drag the name into RECTANGLE only after the class names the longer sides.

⚠ Pupils decide from the overall look — 'it's tall so it must be a rectangle' — without checking opposite sides.
Slow the routine: point top, bottom, left, right before any drag. Force the side check every card so the name follows the edges, not the silhouette.

DIFFERENTIATION

EMERGING

- Use only the clearest contrasts first — sticky-note square and long bookmark — and keep the almost-square lid teacher-led until those feel secure.
- On the copy page, lightly dot four equal side-ends for the square so pupils join dots rather than invent lengths freehand.

DEVELOPING

- After a clean sort, ask them to point to the two long sides and the two short sides on the rectangle before the name-tag moves.
- On the tilted tile, ask: what would have to change for this to stop being a square?

PROFICIENT

- On the almost-square catch, press: name which pair is longer and how you spotted it without a ruler.
- If the three core sets finish early, keep them at the IWB with a teacher-drawn 'nearly square' variant and ask the class to defend RECTANGLE in one sentence.

✂ **Cross-curricular:** Visual Arts — pupils design a simple floor-tile pattern of squares and check with a ruler that every side matches.

ANSWER KEY

Q1: square

Q2: rectangle

Q3: square

Q4: rectangle

Q5: rectangle

Q6: square

a) **Always** : That equal-side rule is exactly what makes a shape a square.

b) **Always** : Every rectangle has four corners, just like a square.

c) **Never** : Unequal side pairs mean the shape is a rectangle, not a square.

d) **Never** : A classroom door has two long sides and two short sides, so it is a rectangle.

EXTENSION SHEET · STRETCH ANSWERS

S1: square

S2: rectangle

S3: rectangle

S4: 4 each

Investigation: Square or rectangle? — open-ended; scan pupils' working for valid solution paths rather than a single answer.