

Pentagons, hexagons and octagons

WHAT THIS LESSON TEACHES

A pentagon is a flat shape with five straight sides and five corners. A hexagon has six straight sides and an octagon has eight straight sides.

- A simple house drawing has five straight sides so it is a pentagon.
- The cells in a honeycomb are hexagons.

MODEL THIS ON THE BOARD

COUNTING THE STOP-SIGN SIDES

- 1 Look at the flat stop-sign shape from the road.
- 2 Tap each straight side one by one all the way round.
- 3 Count **1 2 3 4 5 6 7 8**.
- 4 Eight sides means the shape is an octagon.

DISCUSSION STARTER

REFLECT How does a shape's name help you remember how many sides it has?

ANSWER KEY

Scaffold: visual check on the page

Q1: 5

Q2: 6

Q3: hexagon

a) Always — By the rule a pentagon always has exactly five straight sides.

b) Never — A hexagon always has six sides, never eight.

c) Never — The side count stays the same no matter how the shape is turned.

d) Always — Every stop sign has eight equal straight sides so it is always an octagon.

EXTENSION SHEET · STRETCH ANSWERS

Investigation: How many sides can you find? — open-ended; scan pupils' working for valid solution paths rather than a single answer.