Reflection Symmetries - Starter Activity:

1. How many planes of symmetry does a cube have? Draw each plane of symmetry that you find – one on each of your cube copies. (The number of cubes shown is not the number of planes of symmetry that exist.) How do you know you found them all?
Reflection Symmetries - Extension Activity:

2. How many planes of symmetry does an octahedron have? Draw each plane of symmetry that you find – one on each of your octahedron copies. (The number of octahedrons shown is not the number of planes of symmetry that exist.) How do you know you found them all?
Reflection Symmetries - Explorer Activity:

3. Group the planes of symmetry of a cube and then classify them.
4. Group the planes of symmetry of an octahedron and then classify them.
5. Can you make a connection between the planes of symmetry for the cube and those of the octahedron?
Planes that cut the cube into …

FRONT – BACK
LEFT – RIGHT
TOP - BOTTOM

Planes that contain pairs of opposite edges and the opposite diagonals on the faces connected to the endpoints of these edges, where the faces are …

FRONT – BACK
LEFT – RIGHT
TOP - BOTTOM
FRONT – BACK
LEFT – RIGHT
TOP - BOTTOM
Planes that cut the octahedron into …

Planes that contain pairs of opposite vertices and the opposite midpoints on edges not connected to these vertices, where the vertices are …