

3-D Shapes: Definitions

Congruent: Describes two or more figures that are identical in size and shape.

Edge: A straight line where 2 faces of a polyhedron meet.

Face: A flat surface on the outside of a polyhedron. In this definition a face is a polygon.

Net: A surface that can be folded to enclose a solid.

Octahedron: A polyhedron that has eight faces.

Polygon: A plane figure bounded by a number of straight sides. In a **regular polygon** all the sides are equal and all the angles are equal.

Polyhedron: A three-dimensional shape bounded by plane polygon-shaped surfaces. The plural is **polyhedral** or **polyhedrons**.

Plane: A flat surface, either real or imaginary, in which any two points are joined by a straight line lying entirely on the surface.

Prism: A polyhedron with two parallel opposite faces, called bases that are congruent polygons. All the other faces, called lateral faces, are rectangles formed by the straight parallel lines between corresponding vertices on the bases. A prism is usually known by the shape of the bases (e.g. triangular prism, rectangular prism, pentagonal prism, hexagonal prism etc.). When a prism is sliced through parallel to the bases, each face is congruent. (Definition applies to right prisms which is what you're most likely to meet in primary school).

Pyramid: A polyhedron in which one of the faces, the base, is a polygon and the others are triangles with the same vertex. Common examples are square pyramids and triangular pyramids.

Rectangular prism: See prism. Has rectangular bases and four lateral faces. Called a **cuboid** in the Primary Mathematics Curriculum.

Similar: Describes two or more figures that differ in scale but not in shape.

Sphere: A 3-D shape with one curved surface where every point on that surface is the same distance from the shape's centre.

Tetrahedron: See pyramid. Another name for a triangular pyramid.

Triangular prism: See prism. Has triangular bases and three lateral faces.

Vertex: A point at which lines or planes meet in a figure; for example, the top point of a cone or pyramid or a corner of a polygon or polyhedron.

Definitions taken and adapted from the following sources:

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