# Teaching Space and Geometry

## Glossary

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| **Circumscribe** | To draw a circle around a two-dimensional *shape* so that all the vertices of the *shape* are on the circumference of the circle. |
| **Construct** | To draw a geometrical figure using only the straight edge of a ruler and a compass. In a geometric construction, the ruler cannot be used in order to measure lengths. |
| **Cross-section** | The *shape* produced when a *solid* is cut through by a plane, *parallel* to the base. |
| **Disembed** | To identify a figure within a figure. |
| **Dynamic imagery** *(or flexible dynamic imagery)* | Visualisation of the movement or *transformation* of a figure. |
| **Edge** | An *interval* formed by the intersection of two *faces*. |
| **Embed** | To include figures within figures. |
| **Face** | A flat surface bound by *edges*, that is part of a *solid*. |
| **Feature** | A generally observable attribute of a *shape* or *object*, whereas *properties* require mathematical knowledge. 'A rectangle has four sides' is a *feature*. |
| **Frame** | A model of a polygon, in which discrete materials such as straws or matchsticks are used to make the sides. |
| **Horizontal** | A *line* that is at right angles to the *vertical*. |
| **Inscribe** | To draw or *construct* a figure so that it touches all of the sides of another figure. |
| **Interval** | Part of a *line*. |
| **Irregular shapes** | *Irregular shapes* do not have either all sides equal or all angles equal. |
| **Line** | The straight path extending indefinitely through two points. *Lines* are always straight, therefore it is incorrect to use the term 'curved line'. |
| **Non-example** | To illustrate and clarify a rule by deliberately showing what it does not mean. |
| **Object** | A three-dimensional figure. |

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| **Orientation** | The position of a figure in relation to its surroundings and to the person observing it. |
| **Overlap** | The shape created by the intersection of one *shape* partially or totally covering another. |
| **Parallel** | *Lines* that are contained in the same plane and do not intersect. Curves that are equidistant are *parallel* curves, not *parallel lines*. |
| **Pentomino** | A two-dimensional figure formed by joining five squares of equal size, with no *overlaps*, so that each square shares at least one complete edge with another square. There are 12 different *pentominoes*. |
| **Perpendicular** | Two *lines* that meet at right angles (90°)*. |
| **Property** | An attribute of a *shape* or *object*, the identification of which requires mathematical knowledge, whereas *features* are generally observable. 'A rectangle has two *lines* of symmetry' is a *property*. |
| **Regular shapes** | *Shapes* that have all sides equal and all angles equal. |
| **Rigid** | A figure that cannot be deformed. |
| **Section** | The flat surface obtained by cutting through a *solid* in any direction. |
| **Shape** | A two-dimensional figure. |
| **Solid** | A closed three-dimensional figure. |
| **Superimpose** | To place a *shape* on top of another one to create an *overlap*. |
| **Tessellation** | The repetition of one or more *shapes* so that they fit together without leaving gaps and without *overlaps*. |
| **Transformation** | A change in the form of a figure. This includes reflections, translations, rotations, enlargements and compressions. |
| **Vertex** | In three-dimensional space, a point formed by the intersection of three or more *faces*. In two-dimensional space, the point where the two arms of an angle meet. |
| **Vertical** | A *line* that is at right angles to the *horizontal*. |

NEALS