



Year 5 position and direction

Prior Knowledge

- Links to geography
- EGPS links (prepositions)
- Real life application – Forest School
- Use mathematical vocabulary to describe position, direction and movement including movement in a straight line and distinguishing between rotation as a turn and in terms of right angles for quarter, half and three-quarter turns (clockwise and anti-clockwise) (Y2)
- Telling the time
- Year 4 Juniper Hall
- Describe positions on a 2-D grid as coordinates in the first quadrant (Y4)
- Describe movements between positions as translations of a given unit to the left/right and up/down (Y4)
- Plot specified points and draw sides to complete a given polygon (Y4)

position and direction

Working
Towards

Within

Expected

Above



Identify, describe and represent the position of a shape following a reflection or translation, using the appropriate language, and know that the shape has not changed

Highlights:



Glossary

Axis / Axes

A coordinate grid has axes.

The x axis is horizontal.

The y axis is vertical.



left



right



up

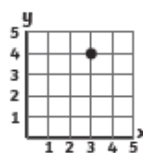


down

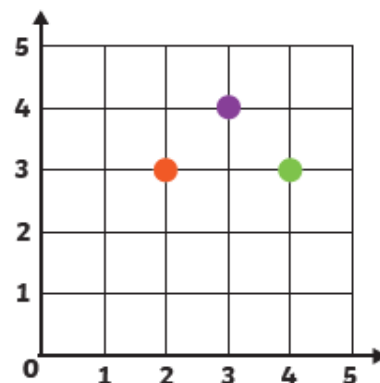
Coordinates

Coordinates mark the location of a point on a coordinate grid.

The coordinates are written in brackets in the format (x,y) where x is how far along and y is how far up.



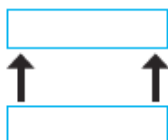
visit [twinkl.com](https://www.twinkl.com)



Translate / Translation

A shape is translated when it is moved without rotating or resizing.

Every point of the shape moves the same distance in the same direction.



Reflect / Reflection

A shape is reflected about a line when it is flipped over a mirror line.



Every point of the shape is the same distance from the mirror line as the same point on the reflected shape.

Parallel

Parallel lines are always the same distance apart and never touching.



Vertex / Vertices

The corner of a shape is called a vertex.

The plural is vertices. A triangle has 3 vertices.

vertex



Point

A point is an exact location.

It has no size, only position. They are shown by dots or parts of a line, but they have no size.

point



Perpendicular

Perpendicular lines meet at a right angle.





Resources

beebots, grids, outside learning, chrome books, ruler, mirror, square paper and lego



Future Learning

Year 6

- Describe positions on the full coordinate grid (all 4 quadrants)
- Draw and translate simple shapes on the coordinate plane, and reflect them in the axes