Strengthen Activities

MISCONCEPTION

Children may confuse the order of coordinates when reading and writing them.

STRENGTHENING UNDERSTANDING

1. Look at the coordinate grid in Lesson 3, Q1 on Textbook p182. Ask children to identify the horizontal and vertical axes and identify what is the same and different about the axes. Encourage children to use the analogy of 'walking into the building before taking the lift up and down' – so the horizontal value comes before the vertical value.
2. Explore the consequence of reading and writing coordinates incorrectly by plotting coordinates the right way round and the wrong way, for example (3,4), (5,1). Ask: *Is the position the same whichever way we plot them? Why not? What would happen if this rule did not exist? What happens if both coordinates have the same value, for example (4,4).*
3. Let children give coordinates and someone else in the group plots them. Is this where the first child had expected the point to be plotted? If not, why not? Give further opportunities to read and write coordinates on the coordinate grid.

ASSESSMENT CHECKPOINT

Can children accurately plot the points (2,3), (3,2) and (5,5) on a grid?

RESOURCES

Textbook, whiteboard and pens

MISCONCEPTION

Children may translate a point and then draw the rest of the shape in the wrong place as they have not been careful with looking at the corresponding point in the new shape.

STRENGTHENING UNDERSTANDING

1. Show children an incorrect translation of a basic shape, for example, a square, where one point is translated correctly, but the other points incorrectly. (I.e. the shape is correct, but the mistake lies where the translated point is not the corresponding point on the new shape.)
2. Ask children to identify what the mistake is and how it could have happened. Challenge children to come up with a method that ensures that all points are translated correctly (translate each point separately, before joining the points into the shape).
3. Give children opportunities to translate other shapes.

ASSESSMENT CHECKPOINT

Can children translate a shape 5 right and 6 up?

RESOURCES

Prepared incorrect translation, whiteboards and pens

MISCONCEPTION

When translating, some children may count the grid lines instead of the number of squares moved.

STRENGTHENING UNDERSTANDING

1. Ask children to walk and count 3 steps. Encourage children to notice when they start to count. Ask: *Is it before you've moved or after you take first step?* Link this back to translation on the coordinate grid – when translating a point, or working out a translation. You start counting as you move, you don't count the starting grid line as 1, but count each square you have moved instead.
2. Give children a square to translate by (3,2). Now show children two points that have been translated, and ask them what the translation is.

ASSESSMENT CHECKPOINT

Can children accurately record the translations A to E and C to E in Q2 on Practice book p142?

RESOURCES

Prepared translation activities, Practice book