

## Act it Out

# Boris Versus Freddie

Boris the spider has noticed Freddy the Fly stuck on the opposite side of his web. (the four by Four grid)

Boris has to move along the lines of his web and cannot travel across the gaps.

What is the shortest route Boris must take to reach Freddy Fly.

How many different ways can he get there?

What would be the longest route?

<b>B</b>			
			<b>F</b>

When children meet this type of problem they need to have time to visualise it for themselves.

To develop their understanding and to enable them to solve the problem one approach is to physically act out the situation so that they can see the problem from their perspective.

This problem could be set up on a large grid on the playground or in the hall with children taking the roles of the spider and the fly.

The remainder of the class sit around the grid and are encouraged to be active problem solvers, giving instructions and counting the steps. (a step being one line of the square)

Why does Boris want to reach Freddy?

Establishes that there is a purpose for solving problems. .  
Keeps the interest of the rest of the class.  
Provides motivation

Where do you want to go Boris?

Identifies the problem.  
Ensures that the children understand what problem they are trying to solve

Where can't Boris step and why?

Establishes the rules of the problem: in this problem this is spatial awareness.

How can we count the steps that Boris takes?

Gives the children ownership of the problem. Allows them to establish their own rules, to discuss the problem and to define their success

## **Possible extensions**

Discuss with the children what they could change.

- Starting positions
- Size of step
- Size and shape of grid
- Let Freddy move
- Maurice the moth has eaten a hole in the grid!

Encouraging the children to find a way of keeping track of what they have done lays the foundations for systematic recording.