

# Push over

## Location

Ground floor, All About Us exhibition

## In a nutshell

Visual cues in the surrounding world help us to keep our balance

## What to do

Stand on one leg in front of the striped board. Start the board swinging and try to stay balanced. This exhibit works best if working in pairs or groups.

## Time Required

KS3 & KS4 2 minutes per student.

## What's happening?

Your brain is constantly processing information from your eyes, ears and muscles about the position of your body in relation to the world around you. It uses this to plan your movements and keep you balanced.

Our swinging wall is unusual. Normally if it looks as if a wall is starting to move, the logical conclusion is that it is actually you yourself who is moving.

When your eyes see the striped panel move your brain decides that you must be moving, even though both the fluid in your ears and you yourself are still. To try and stay upright your muscles compensate for the perceived motion. This means you actually throw yourself off balance.

You may have experienced something similar when sitting on a stationary train. As the train next to you pulls away it can feel as if your train is moving. Your brain processes the view out of your window as the background. When backgrounds move it assumes that you are moving.



### Curriculum links

<b>KS3</b>	<b>English - Reading</b> <ul style="list-style-type: none"><li>- learning new vocabulary, relating it explicitly to known vocabulary and understanding it with the help of context and dictionaries</li></ul> <b>English - Spoken</b> <ul style="list-style-type: none"><li>- using Standard English confidently in a range of formal and informal contexts, including classroom discussion</li></ul>
<b>KS4</b>	<b>Science - Coordination and control</b> <ul style="list-style-type: none"><li>- explain how the structure of the nervous system (including CNS, sensory and motor neurones and sensory receptors) is adapted to its functions</li></ul> <b>Psychology - The Brain and Neuropsychology</b> <ul style="list-style-type: none"><li>- the basic actions of the brain and the nervous system, what neurons and synapses are, and how they interact</li></ul> <b>Psychology - Perception</b> <ul style="list-style-type: none"><li>- explanations of sensation and perception, including the Direct Theory of Perception (Gibson) and the Constructivist Theory of Perception (Gregory)</li></ul> <b>English - Spoken</b> <ul style="list-style-type: none"><li>- listening to and building on the contributions of others, asking questions to clarify and inform, and challenging courteously when necessary</li></ul>

## Relates to:

Workshops & Theme Days	Shows	Trails	Other exhibits
<ul style="list-style-type: none"><li>• Experience psychology (KS4)</li></ul>	<ul style="list-style-type: none"><li>• Boggling Brains (KS3 &amp; KS4)</li><li>• How my body works (KS3)</li></ul>		<ul style="list-style-type: none"><li>• Eye witness</li><li>• Motion disabled</li><li>• Richard's study</li><li>• Funny faces</li><li>• In a spin</li></ul>

