

Hot and cold hands

Location

Ground floor, All About Us exhibition

In a nutshell

What is the temperature? Try our exhibit to demonstrate that our brains are not simple thermometers..



What to do

Students place their hands on two metal plates of varying temperature and then touch a metal bar after 30 seconds. What temperature difference do they notice?

Time Required

KS1 & KS2 2 minutes per student.

What's happening?

Temperature sensors in your hands send messages to the brain when your hands get hotter or colder. As your left hand moves from the warm plate to the medium temperature bar it sends cold messages. At the same time, when your right hand moves from the cold plate to the warmer bar it sends warm messages. Your brain gets messages about the bar being hot and cold at the same time which is quite an odd sensation!

Your body is full of sensors which tell your brain about the outside world and what's going on inside your body. Temperature sensors send information to your brain about how hot or cold something is. These sensors quickly get used to the temperature and reduce the number of signals they are sending. The sensors increase the number of signals they send when the temperature suddenly changes.

Curriculum links

KS1/2	<p>Science - Animals, including humans</p> <ul style="list-style-type: none"> - (Yr 1) identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense <p>English - Spoken language</p> <ul style="list-style-type: none"> - articulate and justify answers, arguments and opinions - maintain attention and participate actively in collaborative conversations, staying on topic and initiating and responding to comments - use spoken language to develop understanding through speculating, hypothesising, imagining and exploring ideas - consider and evaluate different viewpoints, attending to and building on the contributions of others <p>English - Reading – comprehension</p> <ul style="list-style-type: none"> - (Yr1) discussing word meanings, linking new meanings to those already known - (Yr2) discussing and clarifying the meanings of words, linking new meanings to known vocabulary <p>Mathematics - Number – number and place value</p> <ul style="list-style-type: none"> - (Yr1) count, read and write numbers to 100 in numerals; count in multiples of twos, fives and tens - (Yr2) read and write numbers to at least 100 in numerals and in words
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Relates to:

Workshops & Theme Days	Shows	Trails	Other exhibits
<ul style="list-style-type: none"> • Body basics (KS1) • Digest this! (KS2) • Brain and body theme day (KS1 & KS2 lower) 	<ul style="list-style-type: none"> • Brain works (KS1 & KS2 lower) • Boggling Brains (KS2 upper) • How my body works (KS2) 		<ul style="list-style-type: none"> • Startle • Divided self • Real brain

