

A chance to meet real live scientists

The Royal Society's Summer Science Live Exhibition deftly manages to combine fun with the opportunity to meet scientists and chat about their work



A scientist at the Summer Science Live exhibition demonstrates EEG technology that can assess hearing difficulties in children too young to talk. Photograph: Royal Society

I'm staring at the exhibit list: "Improved Pump" (boring), "Large Map" (even more boring), "Barometers" (ok, vaguely interesting). Not exactly what I was expecting from the [Royal Society's 2011 Summer Science Live Exhibition](#). Thankfully, I'm looking at the wrong poster. The no doubt thrilling "Large Map" exhibit was part of the Royal Society's 1863 Exhibition. Instead when I arrive I'm greeted, not by a large map, but by a medium-sized scientist. He's wearing a synthetic skull cap adorned with electrodes, conductive jelly oozing from his scalp.

And this is what Science Live is really about: meeting the scientists and seeing their research in action. The team from the [UCL Ear Institute](#) quickly explain how they use electroencephalography (EEG) to detect electrical activity in the brain. The EEG allows them to measure a patient's response to auditory stimuli, such as the word "dog", amid background noise.

"Live" is the name of the game and, sure enough, I look up at a real-time EEG readout. It twitches up and down as the skullcap-wearing scientist cheerfully explains the purpose of the research. By measuring responses under different conditions, the team can help

improve the positioning of cochlear implants and assess hearing difficulties in children too young to talk.

But something else has caught my eye. Across the room I can see a Scalextric track, complete with traffic lights, and can't resist. I wander over and ask the team from the University of Southampton about [their research](#). Like a schoolboy, I'm trying to be polite as they explain "one of the most interesting problems in [engineering](#)": how to control traffic lights. I just want a go on the Scalextric.

At last I've got the controller in my hand. I'm the bright orange Nissan 350Z. Dr Simon Box is the white Ford Focus (gutted). We start zipping round the track and, joy of joys, the traffic lights change from red to green as we approach the first junction. Dr Box explains how a computer controls the lights to optimise traffic flow, even dealing with conflicts such as two cars approaching from different angles. Apparently this technology is already out there (given my experience with traffic lights I'm dubious) and, in the future, they hope to implement yet more sophisticated algorithms for controlling the flow of traffic.

(heing T0researchlaD p)rch

Children in particular shouldn't be afraid to question conclusions and offer alternatives. Science Live is a great platform for the researchers of the future to learn this.