



## THE SCIENCE BEHIND ADVERTS

Eva is a chemical engineer; she also edits an engineering journal. Many researchers read journals to learn about new scientific developments. Articles submitted to a journal are often heavily scrutinised by experts in the same field before they are published (peer review). As a scientist, if you make a claim, you must provide sufficient evidence to back your claim up. In many cases, this evidence is in the form of experiment results. Advertisements also make scientific claims. But they don't get scrutinised by the scientific community and so the science can often lack credibility.

## PUPILS EVALUATE THE SCIENTIFIC CREDIBILITY OF ADVERTS

### Equipment

A range of adverts, each with a scientific slant, for example:

- "[Colour Elixir](#)"
- "[Real results, real science](#)"
- "[Dettol kills 99.9% of bacteria...55% of 143 doctors](#)"

### Method

Watch the adverts closely. Note down anything that you think seems scientific. Using the whiteboard, hold a classroom discussion on the following questions:

- What claims were made?
- How much evidence was supplied to back up the claims? How credible is the evidence?
- How credible do you think the science in the advert is? Think about other 'sciencey' aspects of the advert like the music or the images used, and what impact they have on the viewer

By a class vote, rate the scientific credibility of each advert on a scale of 1 -5: 1 being not credible at all, and 5 being entirely credible.

### Extensions

In groups, come up with an advert for a product (perhaps a cosmetic or a cleaning product) using facts only. You could write a script and act out the advert, or alternatively you could draw a printed advert.

### The research link

Researchers have been criticised in the past for not publicly communicating their work. Most research affects the public (non-scientists) in some way, and without the facts it is easy to get the wrong impression of what is going on. A plan to communicate your research to the public is now a requirement in most research funding applications.

### Additional guidance notes

A key point here is the difference between fact and opinion. You may wish to introduce this distinction at the beginning of the session, and illustrate with a few non-science examples.

