

Unproven theories have value

November 30 2007 5:45PM

Children should be taught not only about the known knowns in science but also about the known unknowns

Sir, While [Sian Griffiths's](#) article on climate change in the Science Museum (Nov 25) is excellent, I am somewhat astonished to learn of complaints about exposing children to “a theory that is not proven in all its details”. Newton’s Laws are not “proven”; in fact we know that they are wrong. Nevertheless, they are extremely useful for day-to-day technology and making trips to the Moon and back.

Weather models are far from perfect, yet modern forecasts are useful enough to draw significant investment in both the public and the private sector. Climate models are harder to interpret, as we cannot see their faults as clearly as those of weather models and Newton’s Laws, yet they still contain important information which should neither be undervalued nor oversold.

Science never “proves” its theories in the way mathematics does, and anyone who argues seriously that we should only teach theories proven in all their details either does not understand science, or intentionally misrepresents it for some other purpose.

A science museum is the perfect place to clarify the way science works. If Chris Rapley can help to inform children of the known knowns and the known unknowns of climate science, while including historical illustrations of how we discovered what were unknown unknowns, he will not only have taught our children what science is, but will also raise the standard of the climate policy debate in the next generation.

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