**Peer Review: How scientists get their homework marked KS2  
Fact sheet**

**Science publisher Wiley**

Peer review is designed to assess the validity, quality and often the originality of articles for publication. Its ultimate purpose is to maintain the integrity of science by filtering out invalid or poor quality articles.

From a publisher’s perspective, peer review functions as a filter for content, directing better quality articles to better quality journals and so creating journal brands. Running articles through the process of peer review adds value to them. For this reason publishers need to make sure that peer review is robust.

<https://authorservices.wiley.com/Reviewers/journal-reviewers/what-is-peer-review/index.html>

**Science publisher Elsevier**

Reviewers play a central role in scholarly publishing. Peer review helps validate research, establish a method by which it can be evaluated, and increase networking possibilities within research communities. Despite criticisms, peer review is still the only widely accepted method for research validation.

Elsevier relies on the peer review process to uphold the quality and validity of individual articles and the journals that publish them. Peer review has been a formal part of scientific communication since the first scientific journals appeared more than 300 years ago. The Philosophical Transactions of the Royal Society is thought to be the first journal to formalise the peer review process.

In September 2009, Elsevier partnered with Sense About Science, an independent NGO working to promote the public's understanding of 'sound science', to launch the 2009 Peer Review Study – the largest survey ever international survey of authors and reviewers.

<https://www.elsevier.com/en-gb/reviewers/what-is-peer-review>

### ***Nature's* peer review debate** Peer review is commonly accepted as an essential part of scientific publication. But the ways peer review is put into practice vary across journals and disciplines. What is the best method of peer review? Is it truly a value-adding process? What are the ethical concerns? And how can new technology be used to improve traditional models?

This *Nature* web debate consists of 22 articles of analyses and perspectives from leading scientists, publishers and other stakeholders to address these questions. Key links and relevant articles from our archive are listed below, with further resources available through [Connotea](http://www.connotea.org/user/Maxine/tag/peer%20review%20debate). Visit the [Peer-to-Peer blog](http://blogs.nature.com/peer-to-peer)to join the debate.  
<https://www.nature.com/nature/peerreview/debate/index.html>