

How GIFs are changing the way we talk science

February 11 2014, by Brigitte Nerlich



A 19th Century proto-gif.

The use of "GIFs" has exploded in recent years. They are used for news, views and entertainment but are most commonly seen as a light-hearted medium. Now scientists are beginning to see how GIFs can be used in public engagement with science and in [science communication](#).

GIF stands for Graphics Interchange Format and these are small moving

pictures or animated computer images inserted into web-chats and discussions. They've been around since [1987](#), but there are actually examples of [protogifs](#) that date back to the 19th century.

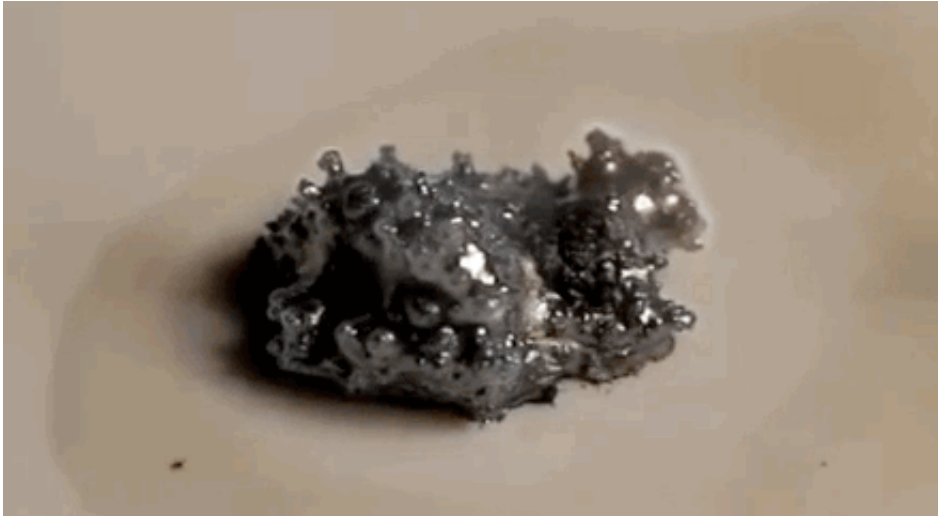
Most people who spend time online will have come across a GIF at some point, even if we struggle to agree on how the word is [pronounced](#).

There seems to be a spectrum of GIFs. They are used as a kind of extended emoticon to emphasise a point and even as [artforms](#). And whole sites like [Vine](#) have sprung up dedicated to GIFs.

Capturing the imagination

But aside from the thousands of GIFs that circulate of people falling down stairs or of cats behaving badly, their use as a way of getting complex scientific information across to a general audience appears to be a growing trend.

In one blog on [awesome science GIFs](#), Amy Robinson calls [chemical reaction GIFs](#), "one of mankind's finest internet creations" and the Smithsonian elected to chart what it saw as the [coolest science of 2013](#) in GIF form.



Setting fire to lithium. Credit: Nick Moore.

Many scientific disciplines are also now developing their own GIFs to encapsulate scientific methods, discoveries, objects and so on in succinct and relatively simple and enjoyable ways. They cover topics such as [metagenomics](#) or [bodies in orbit](#) in a way that is both useful and informative.

A large selection of [science](#) GIFs can be found on GIF search engine [giphy](#), and you can also now source them directly from Google images, which has added a subsection on animated images.

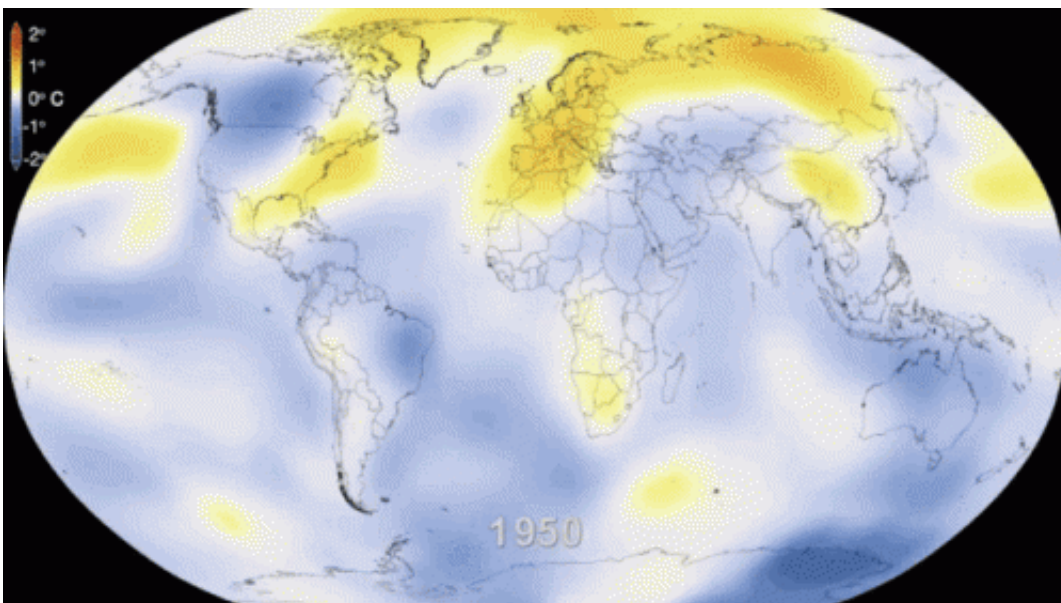
These images then find their way into science, technology and art communication videos, such as those produced by the [PBS Idea Channel](#), which explores the connections between pop culture, technology and art, and also [explains](#) how it sources the GIFs in the first place. Some science communicators, such as Hank Green, also host their own [GIF blogs](#). Two beautiful examples of GIFs for science communication were recently posted on twitter. One showed [birds in motion](#) and the other a series of different types of [engine](#).

GIFs have been particularly embraced in [climate change communication](#), such as to show [how climate change will affect the earth](#), or [major cities](#), or to illustrate how certain [graphs](#) can be interpreted by various people.

Keeping it friendly

GIFs and short videos that appear to have nothing to do with science also crop up in the discussion or comments sections of online articles. One example is a recent discussion on the website [andthenthereisphysics](#), where the comment section was punctuated, so to speak, with very short videos of sketches from Monty Python, among others.

These were used almost as impromptu humorous interjections, apparently to keep the conversation in the comment stream relatively light-hearted. The use and abuse of comments left after online articles and blogs is an interesting [subject in itself](#) so their use in science discussions may serve a bigger purpose than simply humour.



A NASA climate change video in GIF form. Credit: BGR.com.

These short movies don't make statements about a certain scientific issue. They might instead be called "performative" or interactional. They are tools of conversation and perhaps tools of comment moderation. They are used more like elaborate emoticons and may make online [communication](#) more effective, enjoyable and less prone to misunderstandings and misinterpretations. These are all important in exchanges about [climate change](#), where tensions can run high.

Of course, like emoticons, GIFs and other animated and moving images should not be overused, but they can change the tone of a conversation. They may contribute to making online debates less adversarial, as many of them are ironic and self-deprecatory. They are frequently used, it seems, to undermine authority and undercut tradition.

GIFs can both bring science to life for the uninitiated and help those talking about science keep it light-hearted and friendly or avoid crossed wires. I expect we'll see a lot more GIFs on science sites in the future, doing different sorts of work in and for [science communication](#) and [public engagement](#) with science.

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