

If you have been listening to any of these podcasts you will know by now that I base the talk around a particular national or international Day celebration. Obviously, I do a bit of research in order to choose the topic I think lends itself to talks about English language. My curiosity was piqued when I discovered that the 23rd of October is mole day. Great, I thought, here is a chance to talk about a very curious mammal who appears in one of the greatest children's books ever written - *The Wind in the Willows*, but it's also a term for a spy, which gives me the opportunity to discuss the dark world of espionage a la John le Carré. So, imagine my surprise when I actually discovered mole day has nothing to do with blind diggers or double agents. In fact, it's a day for aficionados of chemistry. Why? Well a mole actually means the base unit or amount of pure substance in the international system of units. It's defined as 6.02 Times 10²³ indivisible units such as atoms or molecules. Those numbers are important because mole day actually runs from 6:02 am until 6:02 pm and the second number I mentioned 10²³ provides the date of Moleday, the 23rd of October. I love this nerdy stuff! As a non-chemist and I am sorry to say a fairly non-scientific person in general this frankly doesn't mean very much to me. However I thought this could be a nice opportunity to look at how language of chemistry and some related areas of knowledge has found its way into everyday idiomatic and figurative usage.

For example the word amalgam. Only yesterday I read a Guardian article about an Argentine presidential candidate describing him as 'an amalgam of Bolsenaro and Trump.' The word amalgam is very useful when we want to emphasise this kind of blending. The word goes back to 1300 at least, as an alchemists' word, and a bit later on particularly referred to a blend of mercury with another metal. It seems to come from old French with a mediaeval Latin root. However, it also could have Arabic roots, Al-malgham, a kind of cream for sores.

We often hear of things happening "by osmosis" and I think we understand from this that something happens by effortless and subconscious assimilation. Some research suggests working online interrupts the way we learn by osmosis from working with people, as we replicate their ways of doing things without being aware of it. The scientific term dates from the 1830's and the figurative use from around 1900.

Two very useful words for describing how things happen are catalyst and chain-reaction. They both carry a nuance of dynamic, irresistible action. I suppose that's a factor behind these metaphorical borrowings – they stress the power of a process that has its own coherence. Catalysts dates from 1900 and its figurative use from 1943 and chain-reaction (we're straying into physics here, I realize) from about the same time. The use of the expression certainly grew with our awareness of what happens in nuclear physics.

Effervescence – now isn't that a lovely word is from the 1650s, "the action of boiling up," built from the latin *fervere* "be hot, boil," the figurative sense of "liveliness" is from 1748. The date there is interesting – this was the Age of Reason, and a time when spontaneous displays of emotion were frowned upon, so perhaps 'effervescence' helped fill a gap by giving spontaneity a positive spin.

In fact, if you start looking, you can find many examples of this kind of usage – flash-point, barometer, and buffer.

This leaves the question of what you are supposed to do to recognize mole day. Well the national mole day foundation somewhat cryptically suggests reading some mole jokes.

I think I'll give that a miss but it's a good excuse to take down my old edition of *Wind in the Willows* and read a couple of chapters to follow mole on his adventures.