

E IS FOR ENSONGLOPEDIA

My original idea was that this would be the theme song for the whole show. I'm not sure it really turned out that way, and the song I ended up writing is quite strange, really. But I still like it and enjoy performing it very much.

As I say in the first line, the genre I'm aiming for here is "easy listening electro-swing", which I've kind of made up, although both easy listening and electro-swing are genres in their own right. I also play the electric guitar, adding yet another 'E' to what is already a song of many, many, many, many, many E's. Here's a bit more about some of them:

EVERYTHING: This is a difficult word in science. What do we mean by everything? All the things in the Universe at the moment? What about all the things that *aren't* in the Universe at the moment, either because they're no longer here (for example all the people and animals that are already dead), or because they haven't appeared yet? What about people's thoughts and ideas, do they count? What if some scientists are right and this Universe isn't the only one, but we're actually in a Multiverse – do the other Universes count in 'everything' too?

ENERGY: Technically means 'the ability to do work', for example, the ability for light rays to heat things up.

ETHER: People used to believe that, since the light waves from distant stars could reach our eyes, there must be some sort of strange matter up in space through which those light waves travelled. Lots of experiments were done to try to find this matter, which was called 'the ether' (or 'the luminiferous aether'), but no-one could find any sign of it. Einstein was one of the first to figure out that the reason no-one found it was because it didn't exist, and that light can travel through empty space because it has a bizarre property called 'wave-particle duality'.

ENTROPY: This is possibly my favourite concept in science, which is why I mention it in over 10% of the songs in this show. But it's not a very happy concept. The law of entropy says that, if you leave things alone, they will always get worse. If you forget to feed your cat, your cat will die. If you don't tidy your room, it'll get messier. If you stop giving sunlight to the Earth, then all life on Earth will cease. Applied to the Universe as a whole, this is ultimately quite scary, because as far as we know, there is no way that any energy can be added to the Universe – the Universe started off with a certain amount of energy, and that amount will never change – so the law of entropy says that as time goes on, the Universe will get colder and colder, and messier and messier, and more and more boring.

ELEUTH: An absolutely tiny frog, almost the smallest frog in the world but not quite.

EPIGENETICS: This is a fascinating area of science, which has only really taken off in the last ten years or so. It is the theory that some characteristics can be inherited from a parent to their children *without* being encoded in DNA.

EXOPLANET: We know there are 8 planets going round our Sun, but only 30 years ago we weren't sure if there were any other planets anywhere else in the Universe. As telescopes and have been getting better and better, we've managed to find more and more planets around other stars in our galaxy, and as I'm writing this in October 2017, three thousand six hundred and seventy-one exoplanets have been spotted. And just four days after I performed Ensonglopedia of Science for the very first time, the most exciting exoplanet discovery was announced – seven exoplanets circling the same star, three of them in the so-called 'Goldilocks zone' (where we might survive if we went there), only 40 light years away (which is still pretty far by Earth standards).