



## We are Star Stuff - Teacher's Notes

The quote "We are all star stuff" was made famous by the astronomer Carl Sagan although it had been used earlier. It became popular with the "Hippie" movement after Joni Mitchell wrote a song with the same title in 1969. It became a massive hit around the world.

We are star dust  
Billion year old carbon  
Caught in the Devil's bargain  
And we've got to get ourselves back to the garden.

Our bodies are the product of the food we ingest. Our food gets its nutrients from our planet's rocks. We are made of atoms sourced from the nebulaic explosion of at least one star more than 5 billion years ago. That star got its atoms after a previous star exploded ... and so on over billions of years

A short (2m 41s) clip of Carl Sagan can be viewed on You tube at:  
<https://www.youtube.com/watch?v=tLPkpBN6bEI>

Students may wish to create a poem, song or graphic using the scientific information we have on how the Solar System, Earth and ourselves are all made of the same "stuff".

Before Earth began a star exploded.  
Its debris spread out across the Universe.  
Clumped by static and pulled by gravity the fragments  
grew to form our solar system and our own planet.  
Our bodies are made from this star.  
We are all star stuff.



Santos & ESWA supporting earth science education



## We are Star Stuff - Teacher's Notes

### Some Suggestions of Books and Videos for Teachers

Great science books with humour:

1. Out of this world (All the cool bits about space)  
Buster Books ISBN:978-1-907151-94-1
2. Horrible Science  
The Horrible History Group
3. Space Stars and Slimy Aliens  
Hippo Books Scholastic ISBN 0-97866-1
4. The Journal by Anke den Duyn  
An adventure story with SKA information.

#### Videos

How to build a planet-

James May

The Wonders Collection BBC-

Brian Cox

The Universe-

Brian Cox



Santos & ESWA supporting earth science education