



## Time Travellers Club

December-17

Dear Club Member,

There is something of a paper theme going on with the club at the moment. Last month was, of course, all about the technical innovations for making multiple copies of a document. This month is going back to basics and we're using a pencil.

Despite being called lead, the grey stuff up the middle of a pencil is definitely not lead. Instead it's the far less harmful Graphite. Graphite is a form of the element Carbon, but the confusion arose because it used to be called plumbago or blacklead.

The original use for graphite wasn't as a drawing material. Graphite makes an excellent lubricant, hold on to a chunk of it and it's like holding a bar of soap. It was essential for making canon balls, and just when England was in urgent need of a huge number of canon balls to defeat the Spanish Armada, one of the best sources of it was discovered in the Lake District (there is a delightful pencil museum in Kewstich, on the site of the first pencil factory). The graphite was so valuable that shipments were guarded by armed militia, and the miners were strip searched.

Once the demand for canonballs dropped then some graphite creeps out in to more "frivolous" uses, and was used by artists. It was ideal for their purposes, it made a nice dark mark, but most importantly mistakes could be erased by rubbing with stale breadcrumbs.

We now make 15 billion pencils a year, 2 for every living person. During the Napoleonic Wars the lack of access to good pencils was something of a crisis. A pencil will work when pen and ink just run, so is pretty essential in times of war. The officer in charge of solving the problems was Nicolas-Jacques Conté. He invented a way to mix clay and low-grade graphite in differing proportions, to produce pencils with a range of softness and hardness. The 9B- 9H scale was born, and the classic, multi-use HB pencil. Most of the cheap pencils still use the method of production.

The best graphite in use today comes from mines in Siberia. For many years supplies were transported across the tundra on the backs of Reindeer to make pencils for the company A.W. Faber. Soviet Writer and political prisoner Varlam Shalamov had a great deal of time to think about the material he was being forced to mine.

"Graphite is carbon that has been subject to enormous pressure for millions of years. It might have become coal or diamonds. Instead it has become something far more precious, a pencil that can record all it has seen."

Happy Spinning,

Katie