

Pencil points



What do you chew on when you think? A pencil, of course. When you want draw a sketch what do you reach for — pencil again! And you are not alone... Leonardo da Vinci often sketched with a pencil and Edison kept a 3-inch-long pencil to jot down ideas. In fact, Hemmingway and John Steinbeck wrote their novels with pencils!

In a hi-tech world, pencils remain the oldest, cheapest and best-designed tools to put down our thoughts on paper.

1



Graphite and clay are ground into a fine powder in a rotating drum. Water is added. The mixture (sludge) is blended for three days.

This sludge is dried.



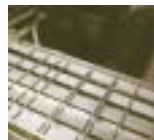
2

3



Dried sludge is ground into a powder. Water poured to make a paste. The paste is pushed through a metal tube to make thin rods.

Rods are cut into pencil lengths and dried in at 1000 degrees C.



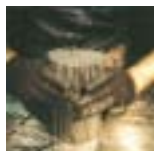
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5



Wood is cut into wide slats. 8 – 9 grooves are sawed lengthwise. Pencil lead is placed in grooves and another slat is placed above it to make a sandwich.

Slats are then cut apart into eight separate pencils.



6

7



Each pencil receives about 5 – 8 coats of paint.



How the modern pencil came about...

1564 Graphite deposit discovered in Cumbria, England. Shepherds used it to mark sheep.

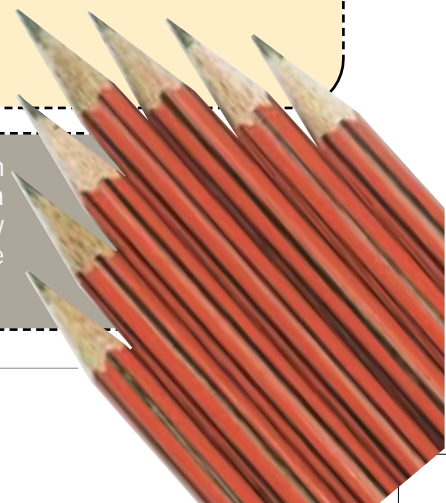
1662 Attempt to make graphite sticks from powdered graphite in Germany. Mixture of graphite, sulfur and antimony used.

1779 Swedish chemist Carl W. Scheele found that black lead is a form of carbon.

1789 Geologist Abraham G. Werner named it graphite, after Greek *graphein*, that means "to write."

1795 Nicolas-Jacques Conté (chemist) invented a process to mix graphite with clay and water that is still used.

1890 Many manufacturers painted their pencils and gave them brand names.



What do you do when your pencil gets too small to hold? Throw it away? But you can actually use a pencil to the last bit. All you have to do is to fix a rubber tube — called a pencil extender - to the pencil stub. And hey presto! There you have a fresh, new pencil, except that it has a short lead. You can use colourful pencil extenders to make your pencils look brighter.