

IELTS LISTENING – CERAMICS S5T4



IELTS LISTENING

CERAMICS

Lecturer: Hi everyone today I'm going to be talking about the origins of ceramics. So, first of all, let's start off with what is ceramic well generally speaking ceramics or what you get when you apply heat to certain in organic non-metallic solids and then allow them to cool and examples of ceramics are everyday things like earthenware pots, crockery, glassware and even concrete so how did it all begin well it all started around **Q31 twenty-nine thousand years** ago when humans discovered that if you dig up some soft clay from the ground mold it into a shape and then heat it up to a very high temperature when it cools the clay has been transformed into something hard and rigid and so what did those first humans do with their discovery.



Attempt Test

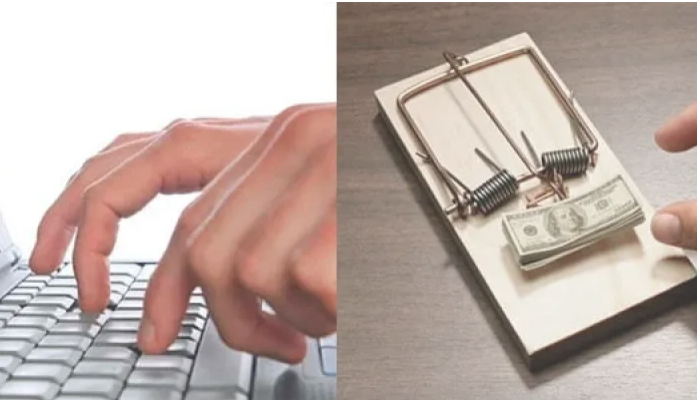
Well, they created figurines which was small statues and which depicted animals or gods or any shape that the clay could be molded into and all this activity was centered around **Q32 southern Europe** where there is also evidence of ceramics that were created much later. The early humans also found a practical use for their discovery such as storing things like grain although there were drawbacks the pots were porous so that although they could carry **Q33 water** in them it wasn't possible to store it over a long period and also they were quite brittle and shattered very easily if they were dropped but despite these problems, it was many thousands of years before there were any improvements in China at around 200 BC they discovered that by adding **Q34 minerals** to the clay they could improve both the appearance and the strength of the ceramics.

But, it took nearly a thousand years before they perfected the process to produce high-quality ceramics known as porcelain and once they had perfected the process they kept it a secret for another thousand years compared to the first ceramics porcelain was lighter, finer, harder, and whiter and became an important commodity in China's trading with the rest of the world for hundreds of years. In fact, it became so valuable that it was known as **Q35 white gold**, and spies were sent to China to discover what they did to the clay to produce such high-quality merchandise. It wasn't until the 18th century that the secret began to unravel a German alchemist called yo hand free drink vodka was asked by the King to make gold out of lead unfortunately but gear failed to achieve this and soon gave up but in order to please the king he attempted to make high-quality porcelain and after many years of experimentation he discovered that by adding coal and a material called **Q36 China stone** to very high-quality clay he managed to get the same results that the Chinese have been achieving for the last 1,000 years will now look at another ceramic which is made from mixing sand with minerals and heating to over 600 degrees Celsius when this mixture cools the result is of course glass. The main difference between ceramics made from clay and glass is that clay is made up of crystalline plates which become locked together in the **Q37 cooling** process whereas glass cools too quickly the crystals to form.

Apart from that the process of heating up naturally occurring materials to transform them is the same. The origins of glass date back to 3500 BC but it wasn't until the Roman Empire 2,000 years ago that the art of glass blowing and the practical uses of glass became more widespread one of the more innovative uses was to use it in **Q38 windows** as up until then they had just been holes in walls it must have been very drafty in those days. The Romans were also responsible for inventing concrete and although the origins are uncertain experts think that this is largely due to the high level of volcanic activity in the area the Romans observe that when **Q39 volcanic ash** mixes with water and then cools it gets extremely hard and almost impossible to break up.

The chemical reaction that follows is very complex and continues for many years and the concrete just keeps getting harder evidence of this of the numerous Roman remains that are still standing many of which are almost completely intact one of the most important facts about concrete for the Romans was that it can be created underwater as the Roman Empire grew the Romans needed to take control of the Seas and for this, they needed to build **Q40 harbours** capable of holding a fleet of ships pouring concrete mixture into the sea immediately started the hardening process and rather than just dissolving in the mass of water the substance was tough and long-lasting this strange characteristic of concrete made a significant contribution to the success of the Roman Empire.

Attempt Test



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