HOW DID ROMAN GLASS CHANGE COLOUR LIKE MAGIC?

WHAT'S HAPPENING?

Scientists in Sheffield have recreated the strange colour-changing effect of a Roman glass cup made about 1,600 years ago. The Lycurgus Cup looks green when light shines onto it, but turns ruby red when light passes through it from behind. The cup shows a scene from Greek mythology, in which the god Dionysus defeats King Lycurgus. Researchers believe Roman glassmakers created the effect by mixing tiny particles of gold and silver into the molten glass. These particles are far smaller than a grain of sand. They change how light is absorbed and reflected, producing the two different colours. The scientists had to experiment with very high temperatures and carefully controlled conditions. Their work suggests that the Roman makers may have discovered an extremely difficult technique through skill, luck or both. The original cup is held by the British Museum, while a modern version will go on display in Sheffield.

WHY IS THIS INTERESTING?

The Lycurgus Cup challenges the idea that ancient technology was simple. Roman craftspeople could create objects using advanced knowledge of materials and heat, even though they did not understand atoms or light in the modern scientific sense. It also shows how historians can learn about the past by combining archaeology, science and practical experiments.

THINK LIKE A HISTORIAN

“What does the Lycurgus Cup show about Roman skill and technology?”

Source: The Guardian

https://www.theguardian.com/science/2026/oct/25/scientists-rediscover-ancient-roman-colour-changing-glass