

Copper - The Vital Metal



Copper in our lives

It's hard to imagine a world without copper. We rely on copper for power, lighting, heating, communications, water, agriculture and transport. Copper makes our homes, schools and businesses functional, efficient, comfortable and decorative and gives years of reliable service. At the end of their lives, copper products can be recycled and used to make new products, making copper the 'red' metal that is 'green'.



Copper is vital for technology

Copper drives today's technology – from the fastest computer chips to the latest mobile phones. Asymmetric Digital Subscriber Line technology uses the network of copper telephone wires to carry voice and high-speed data, allowing us to 'chat and surf' at the same time. Copper's electrical conductivity makes it important for high-speed trains and the new generation of electric and hybrid cars.



Copper's key role in energy generation and conservation

Copper has a key role in the generation and distribution of electricity to power our industries, businesses and homes. Renewable energy technologies, such as wind, tidal and solar power, rely on copper. The generator in a 1.5MW wind turbine needs 3.4 tonnes of copper to convert the wind energy to electricity.



Copper is 100% recyclable, time and time again

Ever since man first used copper, over 8,000 years ago, copper has been recycled and turned into new products. The coins in your pocket may contain copper that was used by the Romans for their decorations or by the Egyptians for their water pipes. Recycling copper saves energy, helps to conserve natural resources and meets 41% of the demand for copper in Europe each year.



Copper is essential for good health

Copper, zinc and iron make up the trio of minerals essential for our wellbeing. Each day we need 1mg of copper in our diets. Chocolate, shellfish and nuts are good sources of copper. Copper is also naturally antimicrobial meaning it inactivates microbes, such as bacteria, fungi and viruses. Copper surfaces can inactivate MRSA (the hospital 'superbug') so may have a role to play in fighting the spread of infections in hospitals.



Want to know more? Look for the copper e-sources on:
www.schoolscience.co.uk