Copper in the Home

11 - 14 YEARS

14 - 16 YEARS

Copper is essential to modern living. Brass (an alloy of copper and zinc) is also important. There are many uses of copper and brass in the home. The picture below shows 18 of these uses. Try to find all of them (some of them appear more than once). Don't forget that most of the copper in a house is hidden.

Properties that make copper useful in the home

- good electrical conductivity
- good thermal conductivity
- corrosion resistance
- antimicrobial
- ease of jointing
- ductility
- toughness
- · attractive colour
- recyclability

You can match these properties with some of copper's applications in a typical home. Take a look at the picture below. How many applications of copper can you spot? In the questions below, you can download a spreadsheet highlighting some key uses of copper and choose, from a range of properties, the ones you think are most useful for each application. Ease of jointing has been excluded because it is necessary for every application!



Did You Know?

30% of copper is used in nonconductive applications, such as the delivery of safe and clean drinking water.



Brass is a decorative metal. What is engraved on this famous letter box? (Courtesy of the BBC.)



Copper pipe joints can be soldered or brazed. This finalist in the SkillPLUMB competition shows how it is done.

Questions

Click here to download an editable Excel spreadsheet on which you can do the tasks below. Note you will need to click 'Enable Editing'

- 1. Tick boxes in the table to show which properties of copper make it so useful for each application.
- 2. One of the columns will be correct for every application in the house. Which one is it?



Printing of copper circuit tracks directly onto thin flexible plastic is making small, lightweight and very low cost electronics possible. Copper is only deposited on the tracks. This minimises waste. (Courtesy of Conductiveinkject.)

	Good Electrical Conductor	Good Thermal Conductor	Good Corrosion Resistance	Antimicrobial	Ductile	Tough	Attractive Colour	Recyclable
Bedstead								
Copper Saucepan								
Door Handle								
Electrical Flex								
Electrical Plugs								
Hot Water Tank								
Kitchen Work Top								
Letter Box								
Light Fittings								
Phone								
Taps								
TV								
Water Pipes								

Click here for answers

Copper Development Association is a non-profit organisation that provides information on copper's properties and applications, its essentiality for health, quality of life and its role in technology. It supports education through a collection of resources spanning biology, chemistry and physics. These materials have been developed in conjunction with the Association for Science Education, and reviewed by teachers.

For more resources, visit www.copperalliance.org.uk/education.





