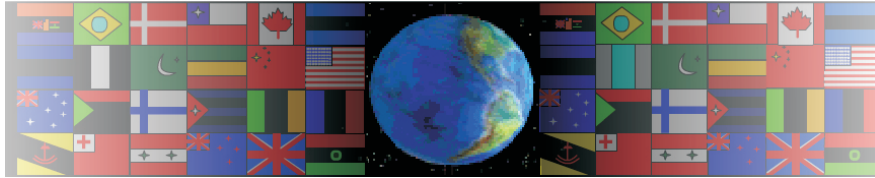


MATERIALS

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On behalf of The World Association of Technology Teachers

W.A.T.T.



World Association of Technology Teachers

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FERROUS METALS

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Complete the 'USES' section of the two tables below.

NAME	ALLOY OF	PROPERTIES	USES
Mild Steel	Carbon 0.1 - 0.3% Iron 99.9 - 99.7%	Tough. High tensile strength. Can be case hardened. Rusts very easily.	
Carbon Steel	Carbon 0.6 - 1.4% Iron 99.4 - 98.6%	Tough. Can be hardened and tempered.	
Stainless steel	Iron, nickel and chromium.	Tough, resistant to rust and stains.	
Cast iron	Carbon 2 - 6% Iron 98 - 94%	Strong but brittle. Compressive strength very high.	
Wrought iron	Almost 100% iron	Fibrous, tough, ductile, resistant to rusting.	

NON-FERROUS METALS

NAME	COLOUR	ALLOY OF;	PROPERTIES	USES
Aluminium	Light grey	Aluminium 95% Copper 4% Manganese 1%	Ductile, soft, malleable, machines well. Very light.	
Copper	Reddish brown	Not an alloy	Ductile, can be beaten into shape. Conducts electricity and heat.	
Brass	Yellow	Mixture of copper and zinc 65% - 35% most common ratio.	Hard. Casts and machines well. Surface tarnishes. Conducts electricity.	
Silver	Whitish grey	Mainly silver but alloyed with copper to give sterling silver.	Ductile, Malleable, solders, resists corrosion.	
Lead	Bluish grey	Not an alloy.	Soft, heavy, ductile, loses its shape under pressure.	