

ALLOYS

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On behalf of The World Association of Technology Teachers

W.A.T.T.



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ALLOYS

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1. Write the definition of an alloy.

2. Name the parent metal and alloying elements of a common alloy.

NAME OF ALLOY:

ALLOYING ELEMENTS:

3. Describe / explain the improved physical properties of the alloy you named in question two.

4. With the aid of a diagram(s) and notes, describe a practical application of the alloy you named in question two. You should explain why the improved properties of the alloy are vital for the practical application you have selected.

DIAGRAM(S)

NOTES

5. The table below lists three alloying elements that can be added to iron and carbon, producing steel alloys. Complete the table by adding the missing properties and uses of the steel alloys.

ALLOYING AGENT	PROPERTIES	USES
CHROMIUM	Resists wear and increases corrosion resistance. Increases hardness and toughness	
VANADIUM		Crank shafts, some hand tools. surgical instruments.
NICKEL	increased strength and hardness, resistance to corrosion.	