Properties & Uses of Metals Need to Know

I can:

- Describe properties of metals using the words strength, malleability, density and ductility.
- Discuss what conductivity is and how it changes between different metals.
- Relate the properties of metals to their uses.
- Evaluate experimental data to rank metals by conductivity.
- Show my understanding of metallic bonding and relate this to the properties of metals.
- Perform an investigation to explain how cooling a material affects its grain size and therefore its strength.
- Write chemical formulae for compounds using roman numerals and group ions, both separately and together.
- Complete percentage mass calculations to show how much of an element is present in a compound.
- Show experimentally that metals have different densities and use this to justify the uses of some metals.
- Explain what an alloy is, and why they are used.
- Give examples of different alloys and their uses in everyday life.
- State what a Smart Material is, and why some materials are described as 'Smart.'
- Provide examples of Smart Materials as well as their properties and uses.
- Use the internet to expand my existing knowledge on a subject.
- Design, test and carry out an experiment to investigate the tensile strength of different metals, taking into account planning and safety.
- Draw graphs based on experimental data.
- Draw conclusions from experimental data, relating my conclusion to my aim.
- Evaluate experiments and suggest improvements.

Properties & Uses of Metals Need to Know

I can:

- Describe properties of metals using the words strength, malleability, density and ductility.
- Discuss what conductivity is and how it changes between different metals.
- Relate the properties of metals to their uses.
- Evaluate experimental data to rank metals by conductivity.
- Show my understanding of metallic bonding and relate this to the properties of metals.
- Perform an investigation to explain how cooling a material affects its grain size and therefore its strength.
- Write chemical formulae for compounds using roman numerals and group ions, both separately and together.
- Complete percentage mass calculations to show how much of an element is present in a compound.
- Show experimentally that metals have different densities and use this to justify the uses of some metals.
- Explain what an alloy is, and why they are used.
- Give examples of different alloys and their uses in everyday life.
- State what a Smart Material is, and why some materials are described as 'Smart.'
- Provide examples of Smart Materials as well as their properties and uses.
- Use the internet to expand my existing knowledge on a subject.
- Design, test and carry out an experiment to investigate the tensile strength of different metals, taking into account planning and safety.
- Draw graphs based on experimental data.
- Draw conclusions from experimental data, relating my conclusion to my aim.
- Evaluate experiments and suggest improvements.