

Metals, non-metals and their properties (Chemistry)

Year 7, Autumn Term

<i>You will be taught</i>	<i>You should know</i>
how elements vary widely in their physical properties, including appearance, state at room temperature, magnetic properties and thermal and electrical conductivity, and to use these properties to classify elements as metals or non-metals	that there are more metals than non-metals
	that metals conduct electricity and heat, are shiny, malleable and give basic oxides
	that sulphur, carbon, oxygen, nitrogen are non-metals
	that non-metals do not conduct heat or electricity (although carbon, as graphite, does conduct electricity), non-metals are not shiny, are often brittle and give acidic oxides
	that carbon is black , copper is brown , iron, zinc and magnesium are both silvery , sulphur is yellow .
	that calcium, sodium and potassium are very reactive .
how metals react with oxygen, water and acids and oxides of other metals, and what the products of these reactions are	how to test for hydrogen using a lighted splint
	that oxygen in the air is involved in the rusting process.
about the displacement reactions that take place between metals and solutions of salts of other metals	that a more reactive metal will displace a less reactive metal from its compound, e.g. iron + copper sulphate → iron sulphate + copper
how a reactivity series of metals can be determined by considering these reactions, and used to make predictions about other reactions	Know the order of reactivity of metals , including which metals in the reactivity series burn more vigorously in air, react faster with water and dilute acids, and replace a lower metal from its oxide;
	about the uses of metals low down the series, such as lead and copper, for roofing and piping;
	that the exceptional lack of reactivity of silver and gold makes them useful for jewellery and electrical contacts

http://www.bbc.co.uk/schools/ks3bitesize/science/chemistry/m_m_physical_props_intro.shtml

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