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| **Core Knowledge Map** | | | |
| Subject: Chemistry  Acids and metals | Year: 8 | | Term: 1 |
| What are we learning? | | | |
| How to identify if a substance is an acid or an alkali  How to use acids to make new substances  What is made when metals react with air, water and acids  Where metals come from  What new materials are there? | | | |
| How will I be assessed | | | |
| In class by your teacher  Mid topic long answer questions  End of topic tests | | | |
| Big questions: | | | |
| What is an acid?  How do acids react?  What can I make with acids?  How do metals react?  Where do metals come from?  Are there other materials that can be used like metals? | | | |
| How does this build on previous learning? | | How will this link to my future learning? | |
| In Y5 students learnt that some changes result in the formation of new materials, and that this kind of change is not usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda | | At GCSE the students will develop their understanding of metals and acids in greater depth. | |
| Core knowledge: | | Key vocabulary: | |
| Be able to define acids and alkalis in terms of neutralisation reactions  Use the pH scale for measuring acidity/alkalinity; and use indicators  Understand the reactions of acids with metals to produce a salt plus hydrogen  Understand the reactions of acids with alkalis to produce a salt plus water  Understand how we obtain metals from metal oxides  Know the properties of ceramics, polymers and composites | | **Acid** - An acid is a solution with a pH value less than 7.  **Alkali** - An alkali is a soluble base.  **Base** - A base is a substance that neutralises an acid.  **Displace** - A more reactive metal displaces (or pushes out) a less reactive metal from its compound.  **Indicator** - A substance that changes colour to show whether a solution is acidic or alkaline.  **Metal** - Elements on the left of the stepped line of the Periodic Table. Most elements are metals. They are good conductors of energy and electricity.  **Neutral** - A solution that is neither alkaline nor acidic. Its pH is 7.  **pH scale** - The pH scale shows whether a substance is acidic, alkaline, or neutral. An acid has a pH below 7. An alkaline solution has a pH above 7. A solution of pH 7 is neutral. | |
| Need more help? | | | |
| BBC Bitesize (acids) - <https://www.bbc.co.uk/bitesize/topics/zn6hvcw>  BBC Bitesize (displacement) - <https://www.bbc.co.uk/bitesize/topics/z3ksp4j>  You Tube Revision Monkey KS3 playlist (scroll through the play list to get to the videos on this topic) - <https://bit.ly/3qYA1PB> | | | |