



Year 11 – Chemistry – Chemical Changes – Spring Term 2 – KNOWLEDGE OVERVIEW

| Year group: | Unit: | Date (from and to): | | |
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| Week beginning: | Big question / concept: | Learning intentions: | Resources | |
| | | | Offline: | Online including links on how to access these: |
| 22/02/2021 | What happens to a metal when it reacts with oxygen? | <p>State the word equation for a metal and oxygen</p> <p>Balance a symbol equation between metal and oxygen</p> <p>Identify the state symbols</p> | <p>Read through slides 3 & 4. Make notes on each slide. Once you have written the notes you can then complete the question on slide 5. Check your answers on slide 6.</p> | <p>Watch the following video https://classroom.thenational.academy/lessons/redox-6hj3gt?activity=video&step=1 make notes from the video.</p> <p>You can also access GCSEpod and there are two pods to watch, you will need your user name and password. The link to use is https://members.gcsepod.com/shared/podcasts/title/10862/66848 Pod name: oxides</p> |
| | | <p>State that metals have different reactivities</p> <p>Identify the most and least reactive metal</p> <p>State that hydrogen and carbon are often found in the reactivity series</p> <p>Explain the order of reactivity of metal</p> | <p>Read through slides 7 to 9. Make notes on each slide. Once you have written the notes you can then</p> <p>Complete the following questions;</p> <p>Describe the reaction of metals with water?</p> <p>Describe the reaction of metals with acid?</p> <p>Compare the reactions of metals with acid for Potassium, Sodium Iron and zinc?</p> | <p>Watch the following video https://classroom.thenational.academy/lessons/investigating-the-reactivity-of-metals-cmu32e make notes from the video.</p> |

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| 01/03/2021 | What does a more reactive metal do to a less reactive metal? | <p>State how we find unreactive metals on Earth</p> <p>Describe how some metals can be extracted using carbon</p> <p>Define the term reduction</p> <p>Define the term oxygen</p> | <p>Read through slides 10 to 13. Make notes on each slide. Once you have written the notes you can then complete the question on slides 14-16. Check your answers on slide 17-19.</p> | <p>Watch the following video https://classroom.thenational.academy/lessons/redox-higher-tier-75h68c Make notes from the video.</p> <p>You can also watch the following pod on GCSEpod: https://members.gcsepod.com/shared/podcasts/title/10862/66848 The pod: Displacement and redox.</p> |
| 08/03/2021 | | <p>State the names of acids found in a laboratory</p> <p>Identify the common element all acids have in common</p> | <p>Read through slide 21 to 24. Make notes on each slide. Once you have written the notes you can then complete the question on slide 25-27. Check your answers on slide 28-29.</p> | <p>Watch the following video https://classroom.thenational.academy/lessons/acid-base-reactions-cgt66t?activity=video&step=1 Make notes from the video.</p> <p>You can also watch the following pod on GCSEpod: https://members.gcsepod.com/shared/podcasts/title/10863/66844 pod: Acid metal reaction</p> |
| | What is the name of the soluble salt? | <p>Recall that soluble is can dissolve in a solvent</p> <p>Identify the products of acid with metals, metal oxides and metal carbonates</p> | <p>Read through slides 30 to 31. Make notes on each slide. Once you have written the notes you can then complete the question on slide 32. Check your answers on slide 33.</p> | <p>Watch the following video(s) Video 1: https://classroom.thenational.academy/lessons/acid-base-reactions-cgt66t Video 2: https://classroom.thenational.academy/lessons/observations-from-acid-base-reactions-68w36d Video 3: https://classroom.thenational.academy/lessons/making-salts-crw68c Make notes from the video.</p> |

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| 15/03/2021 | Are all acids the same? | <p>State what a pH is shows</p> <p>Describe how we carry a neutralization reaction</p> <p>Explain what is meant by a strong and weak acid</p> | <p>Read through slides 35-37, Make notes on each slide.</p> <p>Answer the following questions from slide 38 and check your response from slide 39</p> | <p>Watch the following video(s)</p> <p>Video 1: https://classroom.thenational.academy/lessons/acids-alkalis-and-the-ph-scale-chj38c</p> <p>Video 2: https://classroom.thenational.academy/lessons/strong-and-weak-acids-ctk34d</p> <p>Make notes from the video.</p> |
| | | | | <p>You can also watch the following pod on GCSEpod: https://members.gcsepod.com/shared/podcasts/title/10863</p> <p>name of pods: strong and weak acid, acid and base, neutralisation</p> |
| | What happens when a strong acid is mixed in with a weak acid? | <p>State the equipment needed for titration?</p> <p>Describe how to carry out a titration</p> | <p>Read through slides 40 to 43. Make notes on each slide. Once you have written the notes you can then complete the question on slides 44-45. Check your answers on slide 46. Extra challenge assessment on slide 47 to 48</p> <p>Check your response using slide 49-50.</p> | <p>Watch the following video(s)</p> <p>Video 1: https://classroom.thenational.academy/lessons/titrations-6qv3et</p> <p>Make notes from the video.</p> <p>Video 2: https://classroom.thenational.academy/lessons/processing-titration-results-6crp6e</p> <p>Make notes from the video.</p> |
| 22/03/2021 | | <p>Explain what is meant by strong acid in terms of ionising</p> <p>State the definition of a weak acid as being partially ionised</p> <p>Explain how the pH scale increased by a factor of 10</p> | <p>Read through slides 51 to 52. Make notes on each slide. Once you have written the notes you can then complete the question on slides 53. Check your answers on slide 54.</p> | <p>Watch the following video(s)</p> <p>Video 1: https://classroom.thenational.academy/lessons/strong-and-weak-acids-ctk34d</p> <p>Make notes from the video.</p> |

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| | | <p>State that most reactive metals are extracted using electrolysis</p> <p>State electrolysis</p> <p>Describe how electrolysis is carried out</p> <p>Explain the species found at each terminal</p> | <p>Read through slides 56 to 59. Make notes on each slide. Once you have written the notes you can then complete the question on slides 60-61. Check your answers on slide 62.</p> | <p>Watch the following video(s)</p> <p>Video 1: https://classroom.thenational.academy/lessons/electrolysis-of-molten-compounds-cgw66t</p> <p>Video 2: https://classroom.thenational.academy/lessons/developing-an-electrolysis-hypothesis-6rw3gd</p> <p>Video 3: https://classroom.thenational.academy/lessons/electrolysis-of-solutions-cmv3ge</p> <p>Make notes from the video.</p> <p>You can also watch the following pod on GCSEpod: https://members.gcsepod.com/shared/podcasts/title/10864/66803</p> <p>Make notes from the pod named: Electrolysis, uses of electrolysis and events at electrodes</p> |
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