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Central School

Home School Package

**Year :12**



**HOME SCHOOL PACKAGE CONTENT**



**LESSON Plan**

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| G:\Home Learning Packages\Documents for SHEFA Schools Principal\teacher-computer-icons-school-test-education-teaching.jpg Teacher | Name :Judy W VireSubject : Chemistry  |
| G:\Home Learning Packages\Documents for SHEFA Schools Principal\download.jpg Date | Week 8 of term 2 |
| G:\Home Learning Packages\Documents for SHEFA Schools Principal\title.jpg | Topic : Chemistry of Aqueous solutionLesson number : 4 |
| Learning outcomesLearning outcomes | * Use pH + pOH = 14 to deduce pOH or pH
* Determine suitable indicator for certain acid-base reactions
* Use the pH scale to differentiate acidic, neutral and basic pH ranges and report on process and results
 |
| TopicIntroduction | The color of hydrangea flowers can vary depending on the pH of the soil. Blue flowers usually come from acidic soil with a pH less than 6, and pink flowers come from soil with a pH above 6.  |
| Catch | Catch phrase for the lesson |
| Learners notes 1Learners notes | Summary**pH** and **pOH** denote the negative log of the concentration of hydrogen or hydroxide ions. High **pH** means that a solution is basic while high **pOH** means that a solution is acidic. Neutral solutions have **pH** and **pOH** of 7.**pH** and **pOH** are the log concentrations of protons and hydroxide ions, respectively. The sum of **pH** and **pOH** is always **14**. This is because the product of proton concentration and hydroxide concentration must always **equal** the equilibrium constant for the ionization of water, which is **equal** to. So **pH** is the measure of hydrogen ion concentration, [H+], while **pOH** is a measure of the hydroxide ion concentration, [OH-]. The scales for both are 1-14. So remember that **pH**+**pOH**=14.For example, Given pH =4.42, Find pOH. Need to use the expression pOH = 14 – pH. Now substitute the known quantity into the equation and solve. pOH=14−4.42=9.58. The pH is that of an acidic solution, and the resulting pOH is the difference after subtracting from 14. Below are the list of suitable indicators used in acid-base reaction :pH ranges  |
|  | * Introduction to pH, pOH and pKW by Khan Academy <https://www.youtube.com/watch?v=2q4vSKwaBtw>
* Difference between pH, pOH and pKw by Shawn Shields <https://www.youtube.com/watch?v=d_12-95d0GE>

  |
|  | 1. What is the pH of a 0.0235 M HCl solution ?
2. What is the pOH of a 0.0235M HCl solution ?
3. What is the pH of a 6.2 x 10-5 M NaOH solution ?
4. List four common indicators suitable for certain acid-base reactions
5. Draw pH scale locating acid, base, neutral, strong and weak acid, strong and weak base.
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| Assignment |  |
| Assessment | Written test on week 9 of term 2 |
| Reference ClipartReferences | * <https://sciencing.com/how-to-calculate-ph-and-poh-13710435.html>
* <https://vlab.amrita.edu/?sub=2&brch=193&sim=352&cnt=1>
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**WEEKLY CHECKLIST For Parents**:

Term: 2 Week number 1 Date…… to…… Month: …………

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Subject** |  **Number of lessons** | **Days**  | **Tick when activity is complete** | **Parents comment**  | **Signature** |
|  | **1** |  |  |  |  |
|  | **2** |  |  |  |  |
|  | **3** |  |  |  |  |
|  | **4** |  |  |  |  |
|  | **5** |  |  |  |  |
|  | **6** |  |  |  |  |

Term: 2 Week number 2 Date…… to…… Month: …………

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| --- | --- | --- | --- | --- | --- |
| **Subject** |  **Number of lessons** | **Days**  | **Tick when activity is complete** | **Parents comment**  | **Signature** |
|  | **1** |  |  |  |  |
|  | **2** |  |  |  |  |
|  | **3** |  |  |  |  |
|  | **4** |  |  |  |  |
|  | **5** |  |  |  |  |
|  | **6** |  |  |  |  |

Term: 2 Week number 3 Date…… to…… Month: …………

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Subject** |  **Number of lessons** | **Days**  | **Tick when activity is complete** | **Parents comment**  | **Signature** |
|  | **1** |  |  |  |  |
|  | **2** |  |  |  |  |
|  | **3** |  |  |  |  |
|  | **4** |  |  |  |  |
|  | **5** |  |  |  |  |
|  | **6** |  |  |  |  |

Term: 2 Week number 4 Date…… to…… Month: …………

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Subject** |  **Number of lessons** | **Days**  | **Tick when activity is complete** | **Parents comment**  | **Signature** |
|  | **1** |  |  |  |  |
|  | **2** |  |  |  |  |
|  | **3** |  |  |  |  |
|  | **4** |  |  |  |  |
|  | **5** |  |  |  |  |
|  | **6** |  |  |  |  |

Term: 2 Week number 5 Date…… to…… Month: …………

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Subject** |  **Number of lessons** | **Days**  | **Tick when activity is complete** | **Parents comment**  | **Signature** |
|  | **1** |  |  |  |  |
|  | **2** |  |  |  |  |
|  | **3** |  |  |  |  |
|  | **4** |  |  |  |  |
|  | **5** |  |  |  |  |
|  | **6** |  |  |  |  |

Term: 2 Week number 6 Date…… to…… Month: …………

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Subject** |  **Number of lessons** | **Days**  | **Tick when activity is complete** | **Parents comment**  | **Signature** |
|  | **1** |  |  |  |  |
|  | **2** |  |  |  |  |
|  | **3** |  |  |  |  |
|  | **4** |  |  |  |  |
|  | **5** |  |  |  |  |
|  | **6** |  |  |  |  |

Term: 2 Week number 7 Date…… to…… Month: …………

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| **Subject** |  **Number of lessons** | **Days**  | **Tick when activity is complete** | **Parents comment**  | **Signature** |
|  | **1** |  |  |  |  |
|  | **2** |  |  |  |  |
|  | **3** |  |  |  |  |
|  | **4** |  |  |  |  |
|  | **5** |  |  |  |  |
|  | **6** |  |  |  |  |

Term: 2 Week number 8 Date…… to…… Month: …………

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| **Subject** |  **Number of lessons** | **Days**  | **Tick when activity is complete** | **Parents comment**  | **Signature** |
|  | **1** |  |  |  |  |
|  | **2** |  |  |  |  |
|  | **3** |  |  |  |  |
|  | **4** |  |  |  |  |
|  | **5** |  |  |  |  |
|  | **6** |  |  |  |  |

Term: 2 Week number 9 Date…… to…… Month: …………

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| **Subject** |  **Number of lessons** | **Days**  | **Tick when activity is complete** | **Parents comment**  | **Signature** |
|  | **1** |  |  |  |  |
|  | **2** |  |  |  |  |
|  | **3** |  |  |  |  |
|  | **4** |  |  |  |  |
|  | **5** |  |  |  |  |
|  | **6** |  |  |  |  |

Term: 2 Week number 10 Date…… to…… Month: …………

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| --- | --- | --- | --- | --- | --- |
| **Subject** |  **Number of lessons** | **Days**  | **Tick when activity is complete** | **Parents comment**  | **Signature** |
|  | **1** |  |  |  |  |
|  | **2** |  |  |  |  |
|  | **3** |  |  |  |  |
|  | **4** |  |  |  |  |
|  | **5** |  |  |  |  |
|  | **6** |  |  |  |  |

Term: 2 Week number 11 Date…… to…… Month: …………

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| **Subject** |  **Number of lessons** | **Days**  | **Tick when activity is complete** | **Parents comment**  | **Signature** |
|  | **1** |  |  |  |  |
|  | **2** |  |  |  |  |
|  | **3** |  |  |  |  |
|  | **4** |  |  |  |  |
|  | **5** |  |  |  |  |
|  | **6** |  |  |  |  |

Term: 2 Week number 12 Date…… to…… Month: …………

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| --- | --- | --- | --- | --- | --- |
| **Subject** |  **Number of lessons** | **Days**  | **Tick when activity is complete** | **Parents comment**  | **Signature** |
|  | **1** |  |  |  |  |
|  | **2** |  |  |  |  |
|  | **3** |  |  |  |  |
|  | **4** |  |  |  |  |
|  | **5** |  |  |  |  |
|  | **6** |  |  |  |  |

Term: 2 Week number 13 Date…… to…… Month: …………

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Subject** |  **Number of lessons** | **Days**  | **Tick when activity is complete** | **Parents comment**  | **Signature** |
|  | **1** |  |  |  |  |
|  | **2** |  |  |  |  |
|  | **3** |  |  |  |  |
|  | **4** |  |  |  |  |
|  | **5** |  |  |  |  |
|  | **6** |  |  |  |  |