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Central School

Home School Package

**Year :11**



**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 7 of term 2 |
| G:\Home Learning Packages\Documents for SHEFA Schools Principal\title.jpg | Topic : Quantitative and Aqueous Chemistry Lesson number : 1, Term 2 |
| Learning outcomesLearning outcomes | * Describe the quanity of matter and the mole concept
* Define the molar mass, mass and Avogadro’s number
* Calculate the number of moles and particles using Avogadro’s number
 |
| TopicIntroduction | The **difference between qualitative and quantitative** analysis in **chemistry** is that the **qualitative** analysis in **chemistry** gives the presence or absence of **different chemical** components/what is reacts or is produced **in a** sample whereas **quantitative** analysis in **chemistry** gives the amount of **different chemical** components/how much react or present **in a** given sample |
| Catch | Catch phrase for the lessongcsescience Instagram posts (photos and videos) - Picuki.com |
| Learners notes 1Learners notes | SummaryQuantitative chemistry is the study of how much reacts or is produced – it deals with quantities. When large qanitites are involved, the number is never counted. Weighing is one method commonly used to specify a large number of items. For instance, in a bank, large quanitites of one dolar coins are weighed instead of being counted. A famer needing staples to wire up a fence will order a 25kg box of staples rather than specifying a particular number of staples. In chemistry the quantity chosen to describe the amount of substance is the mole (mol) when used as a unit. The amount of substance (in mol) is represented by the symbol n. For example, n(H2O) means the amount of water in moles. The mole is defined as the amount of substance which contains the same numner of particles (atoms, ions or molecules) as there are atoms in exactly 12g of carbon-12. To calculate amount of substance (mol),we use the general formula n = m/MAtomic Mass And The Mole | Quantitative Aspects Of Chemical Change ...Where m = mass, n = mole and M = molar mass of a substance.Molar mass (M) is the mass of one mole of a substance (element or compound) using unit grams per mole or g mol. The molar mass of a compound can be calculated by adding together the molar masses of all the elements in the compound. For example, the malor mass of ammonia (NH3) is :M(NH3) = M(N) + 3 x M(H) = 14.0 + 3 x 1.0 = 17.0 Therefore, M(NH3) = 17.0 g mol**Mass** is the amount of matter or substance that makes up an object. It is measured in units called kilograms ( kg). **Mass** always stays the same, while weight changes with changes in gravity.The **number** 6.02 × 1023 indicating the **number** of atoms or molecules/particle in a mole of any substance. This is called Avogadro **number**. For example, 1 mol of carbon contains 6.02 x 1023 atoms. 0.5mol of carbon dioxide contains 0.5 x 6 x 1023 = 3 x 1023 carbon dioxide molecules. |
|  |   |
|  | 1. Define the following terms
2. How many particles of magnesium in 1 mol
3. How many moles of sodium atom in 3 x 1023 atom
4. For hte compound methane, CH4, find the
5. Molar mass
6. Mass to wo moles
7. Amount of compound in 64.0g
8. Mass of 3.00 mol
9. For the ionic compound calcium carbonate, CaCO3, find the
10. Molar mass
11. Mass of 0.0500mol
12. Amount of calcium carbonate in 10.0g of calcium carbonate
 |
| Assignment |  |
| Assessment | Written test on week 9, term 2 |
| Reference ClipartReferences | Boniface, S. (2012) Level 2 Chemistry study guide – Chapter 2. ESA publication Ltd : New Zealand. <https://www.google.com/search?q=mole+calculation+in+chemistry&sxsrf=ALeKk03fpaxabadYuuRrYggnMGaUH4WzAQ:1588852930284&source=lnms&tbm=isch&sa=X&ved=2ahUKEwjb3om02qHpAhXhzjgGHcdWB1AQ_AUoAXoECAwQAw&biw=1242&bih=597><https://www.google.com/search?q=avogadro%27s+number+in+chemistry+means&oq=avogadro%27s+number+in+chemistry+means&aqs=chrome..69i57.16847j1j7&sourceid=chrome&ie=UTF-8><https://www.google.com/search?sxsrf=ALeKk03mThdOS12F0MgOY-cnSkLme7Q72w%3A1588852013783&ei=LfWzXvS8L-aortoPyvOh2AM&q=mass+in+chemistry+means&oq=mass+in+chemistry+means&gs_lcp=CgZwc3ktYWIQAzIECAAQHjIGCAAQCBAeOgQIABBHOgYIABAHEB5QoKIBWIq_AWC7xwFoAHACeACAAf4CiAG3HZIBBjItMTAuM5gBAKABAaoBB2d3cy13aXo&sclient=psy-ab&ved=0ahUKEwi0h4f_1qHpAhVmlEsFHcp5CDsQ4dUDCAw&uact=5> |



**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: …………

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **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: …………

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **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: …………

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **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: …………

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **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: …………

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **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: …………

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **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: …………

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **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** |  |  |  |  |