MOLE-Y CHALK ART

This activity asks you to get your creative juices going as we review what we learned about stoichiometry by finding how “mole-y” chalk art can be. In groups of 2-3, you willcreate your masterpiece and then calculate how many moles and atoms of chalk were used to create your drawing.

# Requirements

* Your drawing must be school appropriate
* You must use at least 3 different colors of chalk
* You must get the initial and final weight of each chalk used
* You must provide

1. the number of moles of chalk used from each color
2. the total number of moles of chalk used to create your drawing

**Pre-Work Questions**

Complete the following section before receiving your chalk.

|  |  |  |
| --- | --- | --- |
| 1. What is the chalk made of and where does it come from? | 1. What is the chemical nomenclature for the chalk? | 1. What is the chemical formula for the chalk? |

|  |  |
| --- | --- |
| 1. Calculate the molecular weightof chalk. (Show your work)   **Molecular weight:\_\_\_\_\_\_\_\_\_** | 1. What is the molar mass of chalk?   **Molar mass:\_\_\_\_\_\_\_\_\_** |

|  |
| --- |
| 1. How will you collect your data? Write a brief procedure in the space provided. Be sure to include:    1. Scientific vocabulary (proper equipment names, types of measurement, etc.)    2. What data will you collect?    3. How will you collect this data? |

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# Data Table

|  |  |  |  |
| --- | --- | --- | --- |
| **Color of Chalk** | **Initial Weight (g)** | **Weight after drawing (g)** | **Mass of Chalk used (g)** |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

# Data Analysis

1. Calculate the number of moles you used for each color of chalk in your masterpiece. Show your work by using the following formula:

| *grams of chalk (Used in artwork)* | *moles* | *= moles of chalk used in artwork* |
| --- | --- | --- |
|  | *grams of chalk (Calculated Molar Mass)* |

Color 1:

Color 2:

Color 3:

1. What is the total number of moles used to create your masterpiece? (Show your work)

*Stem PBL. (2018). Moley Chalk Art: A Stoichiometry Activity. http://web1.tvusd.k12.ca.us/gohs/waanestad/Moley%20Chalk%20Art%20Stoichiometry%20Activity.pdf*