

How Many Particles of Chalk?

Background: Chalk is a compound called calcium carbonate. You are going to determine how many particles of chalk you use when you write your names on the sidewalk. **You MUST show ALL your work!**

1	Write a pathway for converting from grams all the way to particles. Label each arrow of your pathway with which conversion factor you will have to use.	
2	Calculate the molar mass of chalk – CaCO_3	
3	What data will you need in order to calculate the amount of calcium carbonate used when you write your name? Think about what you will need to MEASURE. Hint...think "before and after"	
4	Use this space to collect your data. Make sure draw a data table and include titles for each column, units for your data, etc.	
5	Calculate the number of molecules of chalk you used to write your name.	
6	Calculate how many PROTONS are in the chalk drawing of your name. (<i>Hint – Convert all the way from grams to protons. One molecule of calcium carbonate has 50 protons. You should have three conversion factors in your set up if you do it correctly!</i>)	