

PART C: EXTENSION LEVEL

INTRODUCTION:

The minerals we have studied in class are different (in some ways) from the minerals that you find within your body. Our body requires many different minerals in order to properly function and to maintain a healthy state. And we consume foods and drinks that provide us all of the needed minerals each and every day!

Using online and available resources, examine the elements or minerals found within the human body. There are a lot to choose from, so the list has been narrowed for you. From the list provided you will select **SEVEN** of the listed elements or minerals and provide details on its function in the human body and how we get more of these minerals into the body. You will also examine how deficiencies in these minerals affects the body (what happens when you don't get enough of certain minerals). The minerals you can choose from are:

<i>Calcium</i>	<i>Sodium</i>	<i>Zinc</i>	<i>Iron</i>	<i>Chlorine</i>
<i>Potassium</i>	<i>Sulfur</i>	<i>Chromium</i>	<i>Silicon</i>	<i>Magnesium</i>
<i>Copper</i>	<i>Phosphorus</i>	<i>Iodine</i>		

When you have completed the chart, you will then calculate the following:

- Your approximate percent of mineral composition
- The approximate “mining value” of the minerals within your own body (how much you are “worth”)



MINERAL MAYHEM

MINERALS IN THE BODY

MINERAL NAME	CHEMICAL NAME / SYMBOL	SOURCE OF THE MINERAL	BENEFITS TO THE HUMAN BODY	SIGNS OF MINERAL DEFFICIENCY

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MINERAL MAYHEM

Obviously, you're priceless...but if you could break your body down into the elements that compose it, and then sell those elements, how much money would you make?

Write your prediction here: _____ . Then, using the following data, calculate your worth.

1. Find the mass of your body in **grams**. (note: 1 lb = 0.454 kg and 1000 g = 1 kg). If you don't want to use your own weight, make up one, or use a friend's.
2. Using the following table, calculate how many grams of each element are in your body. Then calculate the cost of each element in your body. **Please show all of your work on a separate sheet of paper.** Don't forget to tell your total worth at the end of your calculations!

Element	Percent in Body by Mass	Cost per gram
Oxygen	61%	\$1.62
Carbon	23%	\$0.09
Hydrogen	10%	\$26.25
Nitrogen	2.6%	\$1.87
Calcium	1.4%	\$0.18
Sulfur	0.20%	\$0.015
Phosphorus	1.1%	\$0.19
Potassium	0.20%	\$2.56
Sodium	0.14%	\$0.42
Chlorine	0.12%	\$0.02
Silicon	0.026%	\$0.067
Magnesium	0.027%	\$0.13
Zinc	0.0033%	\$0.08
Fluorine	0.0037%	\$1.90
Iron	0.006%	\$0.14
Chromium	0.006%	\$0.20

Adapted from:

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