Chemistry, environment, & water

**Activity 2.** Simulation of an environmental problem II.

Do the following dilutions on some beakers:

|  |  |  |  |
| --- | --- | --- | --- |
|  | 1st column | 2nd column | 3rd column |
| 1st line | 50 ml of water | 10 ml of water + 40 ml of vinegar | 50 ml of water |
| 2nd line | 40 ml of water + 10 ml of Coca-Cola | 20 ml of water + 30 ml of vinegar | 40 ml of water + 10 ml of bleach |
| 3rd line | 30 ml of water + 20 ml of Coca-cola | 30 ml of water + 20 ml of vinegar | 30 ml of water + 20 ml of bleach |
| 4th line | 20 ml of water + 30 ml of Coca-cola | 40 ml of water + 10 ml of vinegar | 20 ml of water + 30 ml of bleach |
| 5th line | 10 ml of water + 40 ml of Coca-Cola | 50 ml of water | 10 ml of water + 40 ml of bleach |

The teacher is going to weigh a stick of chalk, which actually is obtained from gypsum, a kind of rock that you can find in nature.

Each of you is going to take a stick of chalk and put it on your beaker and wait 5 minutes.

After that, get the stick of chalk and dry it with some paper. We are going to weigh it again. Fill the weight of your stick on this table.

|  |  |  |  |
| --- | --- | --- | --- |
|  | 1st column | 2nd column | 3rd column |
| 1st line |  |  |  |
| 2nd line |  |  |  |
| 3rd line |  |  |  |
| 4th line |  |  |  |
| 5th line |  |  |  |

1. Which one of the mixtures you think is the most acid?
2. Can you state the relationship between the acidity and the amount of the chalk that has disappeared?
3. What do you think that has happened to the chalk?
4. Do you know any method we can use to know the acidity of our mixtures?

Now we are going to take indicator paper and we are going to use it on the different mixtures. Fill the table with the values.

|  |  |  |  |
| --- | --- | --- | --- |
|  | 1st column | 2nd column | 3rd column |
| 1st line |  |  |  |
| 2nd line |  |  |  |
| 3rd line |  |  |  |
| 4th line |  |  |  |
| 5th line |  |  |  |

Were your predictions right about which mixtures are more acid?