***Comparing the amount of carbon dioxide***

***in the inhaled and exhaled air***

***(worksheet for students)***

**Aim of the research.**

1. Learn to measure amount of CO2 using sensor
2. To compare the results obtained of carbon dioxide in the inhaled and exhaled air.
3. To discuss how does affect climate change

**3.Measures for the research**

**4. Process of the activity**

4.1. Students measure of quantity of CO2 with a sensor in the classroom air and the results obtained convert to percent. You should split the data from 10000. Fill in the results in the table.

4.2. Share in groups.

4.3. Share balloons.

4.4. Choose in each group students who will do sport activities and students who will not do sport activities. These students have to inbreathe deeply and exhale air into the balloon. Then other students will have to do squads for one minute then breathe deeply and exhale air into the balloon.

4.5. Measure quantity of CO2 in each bottle and the results obtained fill in the table.

4.6. Convert the results obtained from the sensor of CO2 to percent and split from 10 000. Write the data in the table.

4.7. Compare the results obtained and make conclusions of the research.

Table. Quantity of carbon dioxide in the inhaled and exhaled air

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Group work  .......................... | Quantity of CO2 of the classroom air | | Quantity of CO2 in the exhaled air after physical activity | | Quantity of CO2 in the exhaled air who didn’t exercised | |
| ppm | proc. | ppm | proc. | ppm | proc. |
|  |  |  |  |  |  |  |

**5. Analysis of data.** Based on the data of the research answer the questions:

5.1. Compare the quantity of carbon dioxide of the classroom and the exhaled air which you exhaled

* after exercising
* not exercising.

5.2. Why is the quantity of carbon dioxide changing?

5.3. Compare the quantity of carbon dioxide in the exhaled air:

* When you don ‘t do any activity
* After active exercising

5.3. Compare the results of the research about quantity of carbon dioxide with the examples in the diagrams.

|  |  |
| --- | --- |
|  |  |
| 1 picture. **Structure of inhaled air** | 2 picture. **Structure of exhaled air** |

**6. Conclusions of the research**

**7. Self-assessment**