

## WORKSHEET 4

### structure and composition of the atmosphere

1. We suppose to ascending from the surface to the top of the atmosphere. Which device would me most useful for determining the layer of the atmosphere where are you?

- a) Thermometer
- b) Barometer
- c) Hygrometer

Explain your answer!

2. In a sunny day, the thermometer shows  $27^{\circ}\text{C}$ . What is the equivalent expressed in Fahrenheit degree and in Kelvin. Has any physical meaning the ration 9/5 in the Fahrenheit degree conversion?
3. What is ozone? Why is ozone important to life on our planet? Can be harmful to life? Explain!
4. The very low concentration are often expressed in parts per million (ppm). Example: carbon dioxide amounts in atmosphere is 0.0407 percent and is expressed as 407 parts per million [ppm]. Considering this units, express in ppm vary components of atomosphere

Gas	%	ppm
O <sub>2</sub>	2,946	
He	0,000524	
Ar	0,934	
N <sub>2</sub>	78,048	
Ne		18.18 ppm

5. The pressure can be expressed in **millimeter of mercury** (mmHg). Why is used mercury? Knowing that 1 Pascal = 0.0075 mmHg, calculate how many millimeter of water should represents 1 Pa?