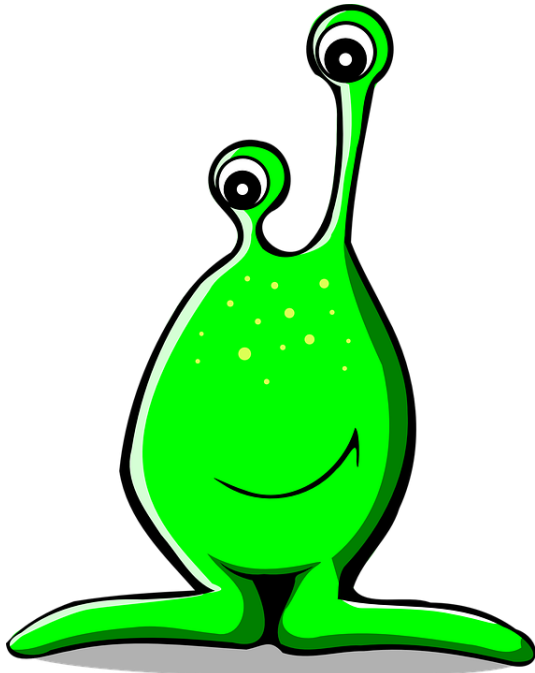


## Scheda 9



### Can you help me?

“Hello guys!!

How are you? Thank you for the rice! Now I know that here on the Earth I need 4,5 grams of rice to be happy!!

I have enjoyed experimenting so much with grams, tonnes and kilos that I have started to weigh everything!

And now, here on Earth, I’m thinking about the air you have all around and I wonder: “Is it heavy or light? How much does it weigh?”

**Help Maggie find out how much the air weighs.**



## Do you know?

### How to measure the mass of the air.

On the Earth, when you look at an “empty” bottle, or at an “empty” glass, you have to think that it is not really “empty” but that it is “full” of air.

*If you are not sure, just try to watch air when it comes out from a bottle opened under water.*

**And now:**

#### 1) How much does the air in our science lab weigh?

Try to guess.

.....

Now **check** your assumptions:

##### a) How much does the air in a bottle weigh?

what is the volume of your bottle?.....

what is the weight of the bottle full of air?.....

what is the weight of the bottle without air inside?.....

so what is the weight of the air contained in the bottle?.....

and the weight of 1 dm<sup>3</sup> of air?.....

and the weight of 1m<sup>3</sup> of air?.....

**Do you know? Scientists discovered that 1m<sup>3</sup> of air weighs 1,3kg!**

##### b) What is the volume of the science lab?

**Imagine the science lab as an empty parallelepiped:**

draw it in scale (1m=1cm).

##### c) what is the weight of the air?

##### d) Do you weigh more or less than the air that is in the science lab?