

Answer #56

The answer is (b): the weight side goes down, which can not be seen in the photograph below, but will be seen shortly.



The reason for this is that when the balloon expands, it displaces some air, creating a buoyant force on the balloon and making the balloon lighter.

So here is the corollary question, for extra credit or a gold star in the middle of your forehead. Suppose that the balloon expands from effectively zero volume to a diameter of about 17 cm. How much less would the beaker with the balloon attached weigh if it were put onto a precision balance? When you have done the calculations and answered that question click [here](#).

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