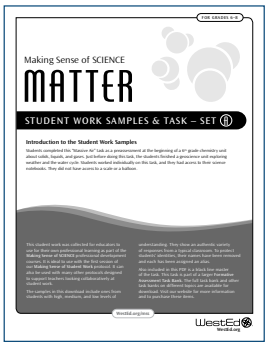

Making Sense of SCIENCE

Matter: Student Work Samples and Task A

for Grades 6–8

Kirsten R. Daehler and Jennifer Folsom

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RECOMMENDED CITATION:

Daehler, K., and Folsom, J. (2014). Making Sense of SCIENCE Matter: Student Work Samples & Task A. San Francisco: WestEd. Retrieved from: http://www.WestEd.org/mssmatterstudentsample

About WestEd

WestEd, a national nonpartisan, nonprofit research, development, and service agency, works with education and other communities to promote excellence, achieve equity, and improve learning for children, youth, and adults. WestEd has 15 offices nationwide, from Washington and Boston to Arizona and California. Its corporate headquarters are in San Francisco.

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- Early Childhood Development & Learning
- English Language Learners
- Health, Safety, & Well-Being
- Literacy
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- Science, Technology, Engineering, & Mathematics
- Special Education
- Standards, Assessment, & Accountability
- Teachers & Leaders

FOR GRADES 6–8

Making Sense of SCIENCE

MATTER

STUDENT WORK SAMPLES & TASK – SET A

Introduction to the Student Work Samples

Students completed this "Massive Air" task as a preassessment at the beginning of a 6th grade chemistry unit about solids, liquids, and gases. Just before doing this task, the students finished a geoscience unit exploring weather and the water cycle. Students worked individually on this task, and they had access to their science notebooks. They did not have access to a scale or a balloon.

This student work was collected for educators to use for their own professional learning as part of the **Making Sense of SCIENCE** professional development courses. It is ideal to use with the first session of our **Making Sense of Student Work** protocol. It can also be used with many other protocols designed to support teachers looking collaboratively at student work.

The samples in this download include ones from students with high, medium, and low levels of understanding. They show an authentic variety of responses from a typical classroom. To protect students' identities, their names have been removed and each has been assigned an alias.

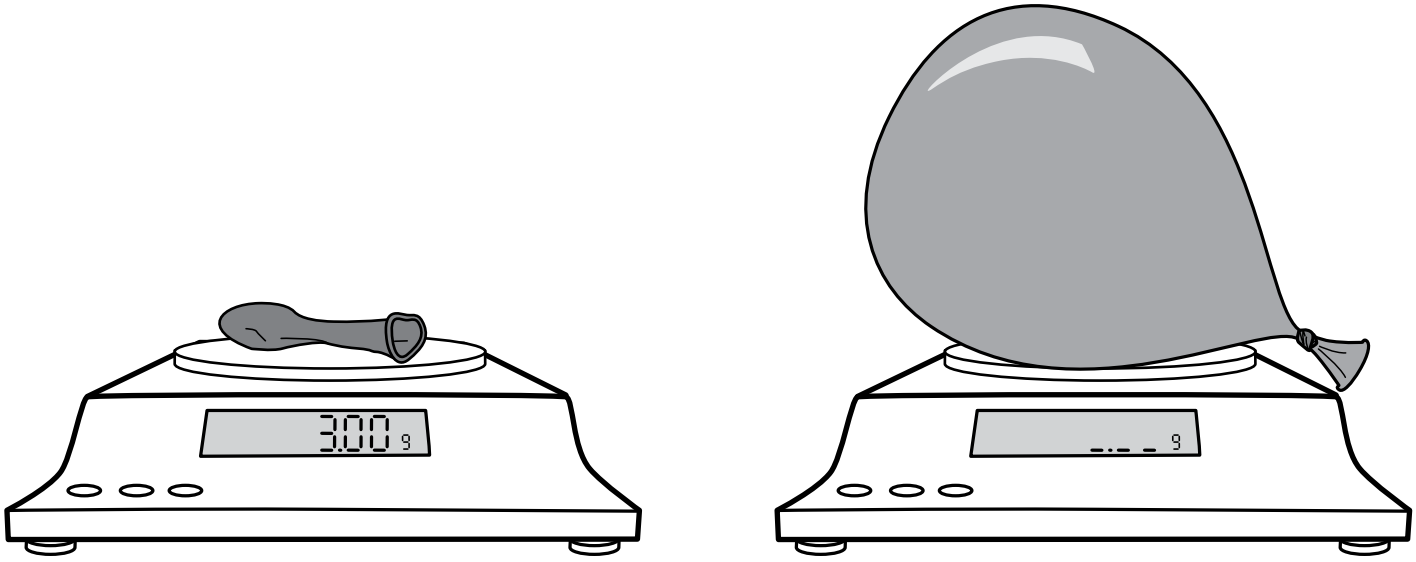
Also included in this PDF is a black line master of the task. This task is part of a larger **Formative Assessment Task Bank.** The full task bank and other task banks on different topics are available for download. Visit our website for more information and to purchase these items.

WestEd is a national nonpartisan, nonprofit research, development, and service agency that works with education and other communities to promote excellence, achieve equity, and improve learning for children, youth, and adults.

Name:

MASSIVE AIR

TASK A

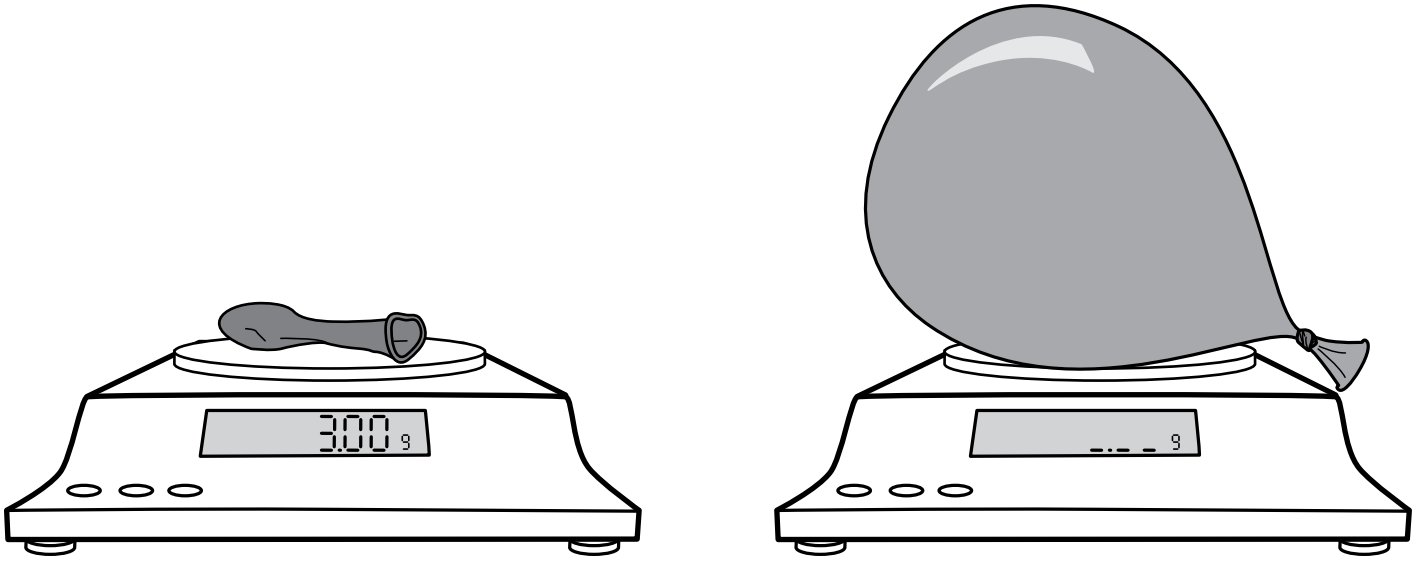


The deflated balloon has a mass of 3 grams. The inflated balloon is filled with air. Do you think the inflated balloon has more or less mass than the deflated balloon? Why or why not? Use the back if you need more space to write or draw.

Name: **Annie**

MASSIVE AIR

TASK A



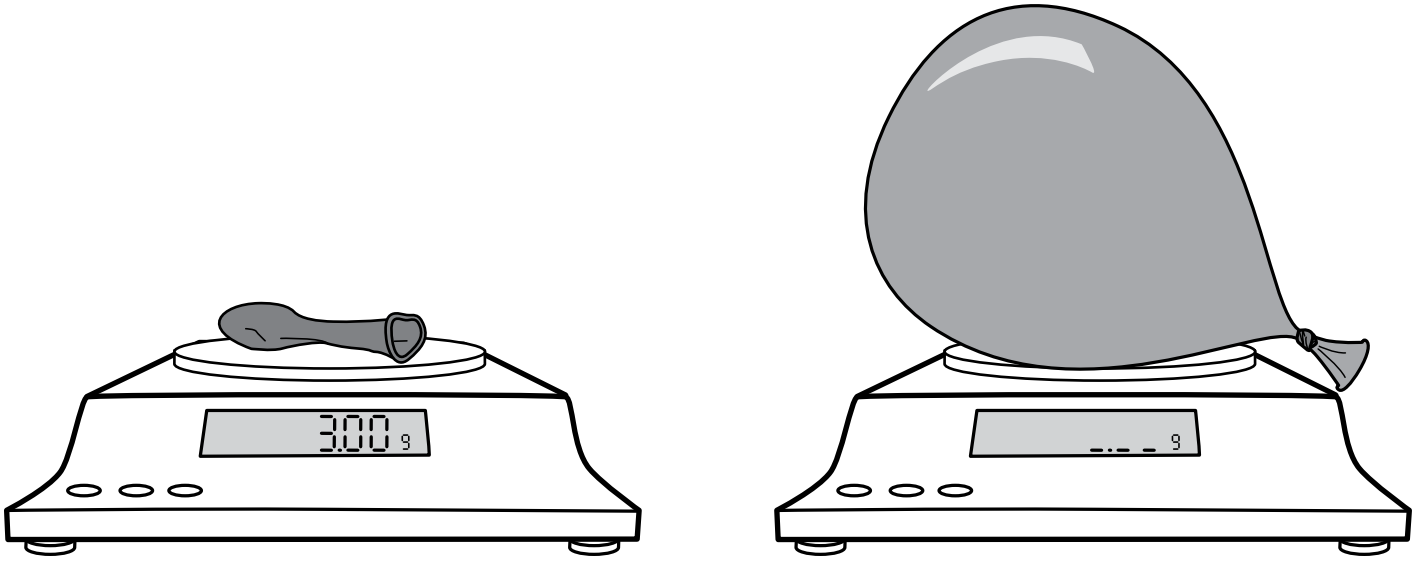
The deflated balloon has a mass of 3 grams. The inflated balloon is filled with air.
Do you think the inflated balloon has more or less mass than the deflated balloon?
Why or why not? Use the back if you need more space to write or draw.

I think that the inflated balloon weighs more than the deflated balloon. I think this because the inflated balloon weighs the same as the deflated balloon plus the weight of the air, because air has mass I think the inflated balloon weighs a minute amount more than the deflated balloon.

Name: **Brian**

MASSIVE AIR

TASK A



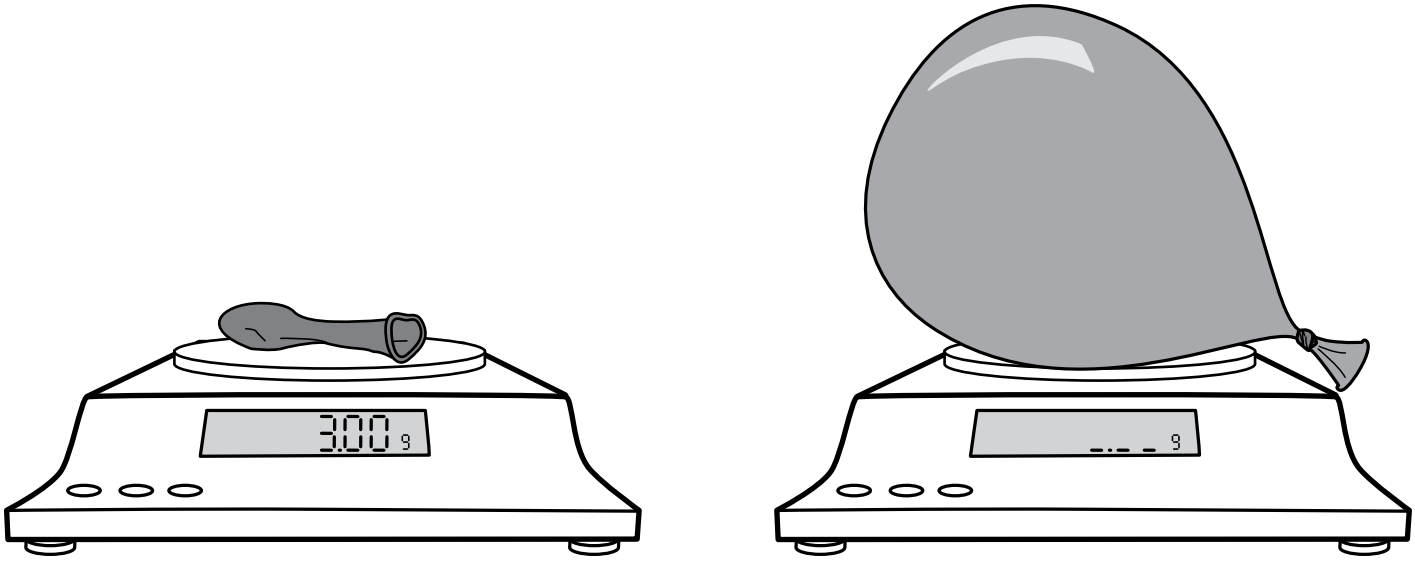
The deflated balloon has a mass of 3 grams. The inflated balloon is filled with air.
Do you think the inflated balloon has more or less mass than the deflated balloon?
Why or why not? Use the back if you need more space to write or draw.

I think the balloon with Air and the balloon without Air weigh the same. I think this because they are both the same thing one just has air in it and air doesn't weigh anything so it would be the same. But I think that the balloon without air may weigh more because the mass of it is more spaced out and not as dense. so I am going to go with the balloon with, air is lighter then the one without air is heavier

Name: **Charles**

MASSIVE AIR

TASK A



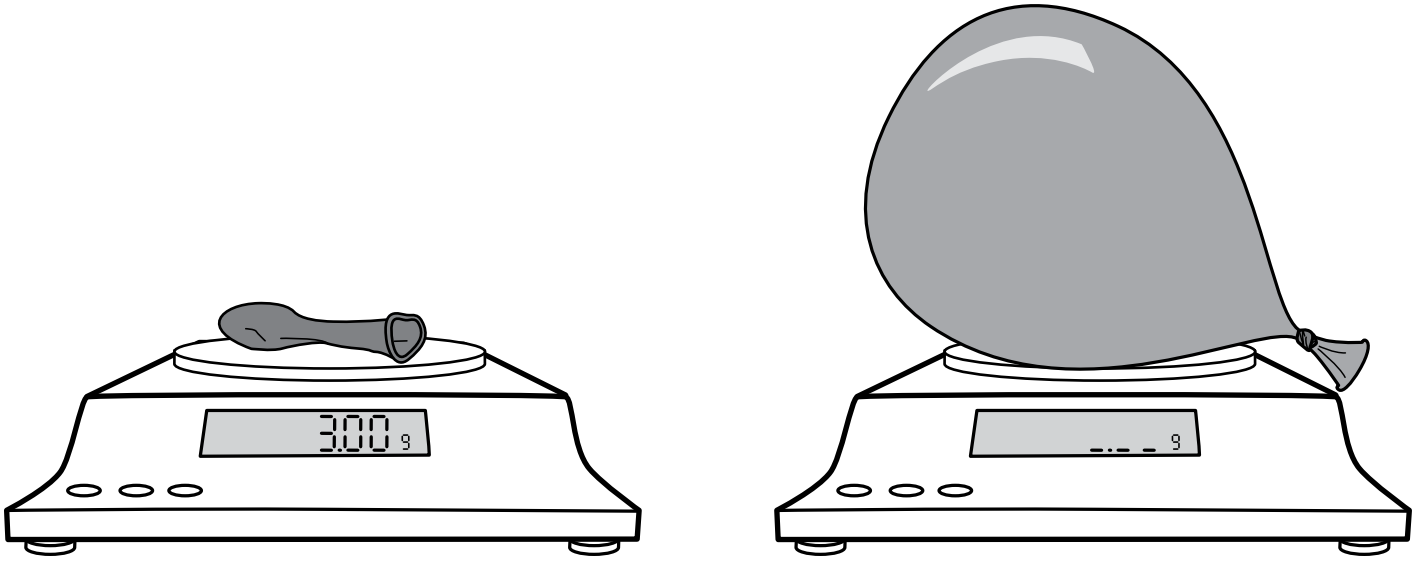
The deflated balloon has a mass of 3 grams. The inflated balloon is filled with air.
Do you think the inflated balloon has more or less mass than the deflated balloon?
Why or why not? Use the back if you need more space to write or draw.

I think that the inflated baloon will have less mass because the deflated balloon is more dense therefore it weighs more. The inflated balloon is stretched out so it is less dense

Name: **Danny**

MASSIVE AIR

TASK A



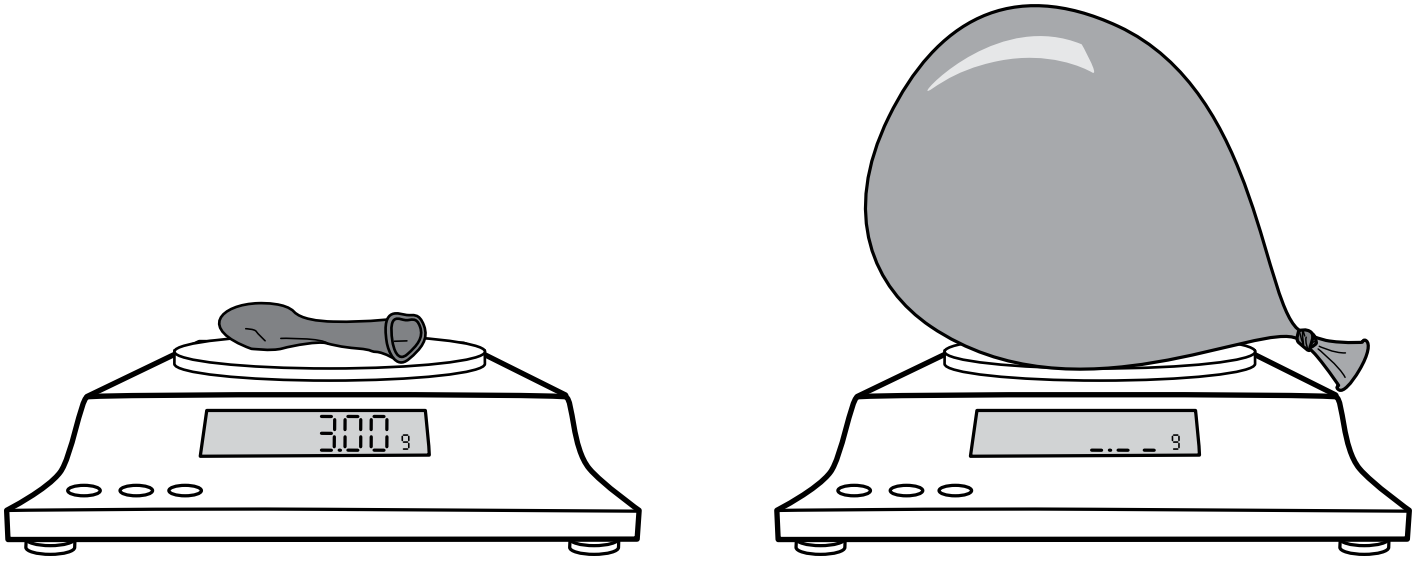
The deflated balloon has a mass of 3 grams. The inflated balloon is filled with air.
Do you think the inflated balloon has more or less mass than the deflated balloon?
Why or why not? Use the back if you need more space to write or draw.

I think the inflated ballon will weigh less then the deflated ballon because the inflated ballon has air inside making it lighter with less gravity came less weight. Also the air can be lighter by the molecules that have less affect by gravity

Name: **Elroy**

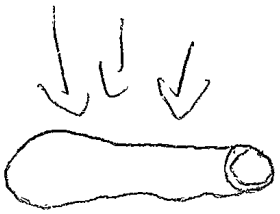
MASSIVE AIR

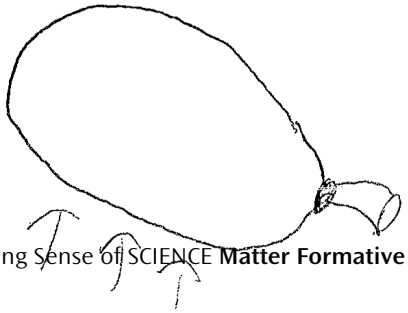
TASK A



The deflated balloon has a mass of 3 grams. The inflated balloon is filled with air.
Do you think the inflated balloon has more or less mass than the deflated balloon?
Why or why not? Use the back if you need more space to write or draw.

I think the inflated balloon will have less mass, because it is streched. If we threw the deflated ~~balloon~~ balloon into the air, it would fall right away But a lighter balloon with streched at rubber will stay afloat a little while because not much air is pushing down on it. For the deflated balloon, all that rubber is squished together, so it is heavier.

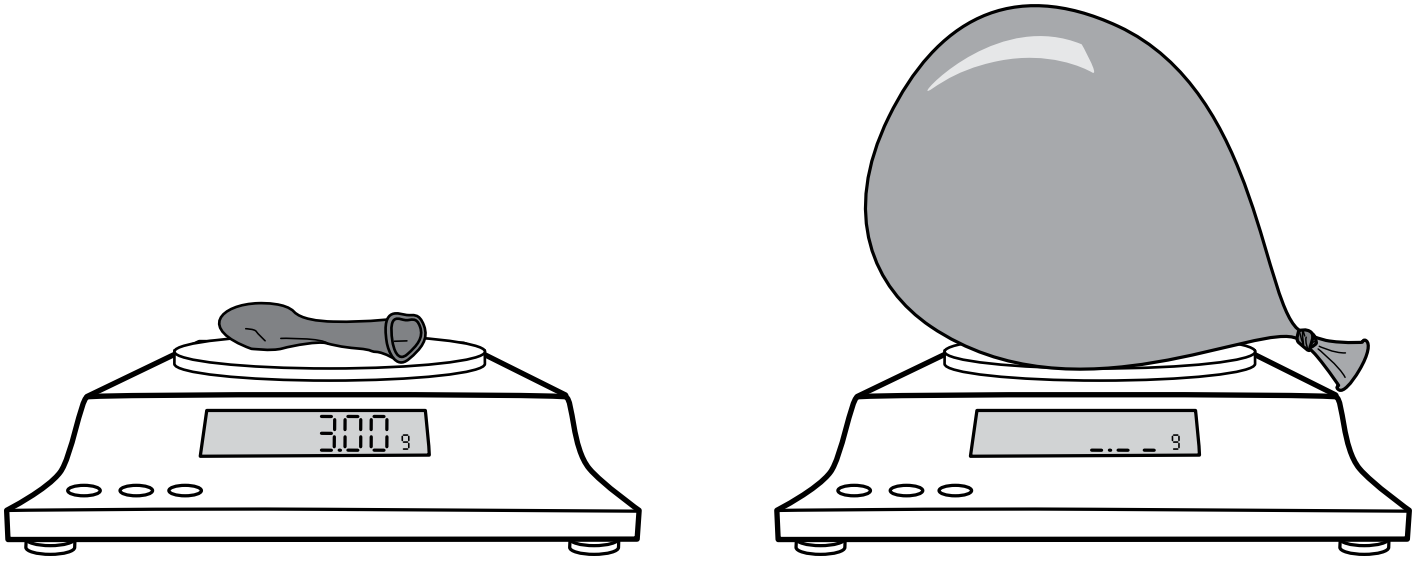




Name: **Felicity**

MASSIVE AIR

TASK A



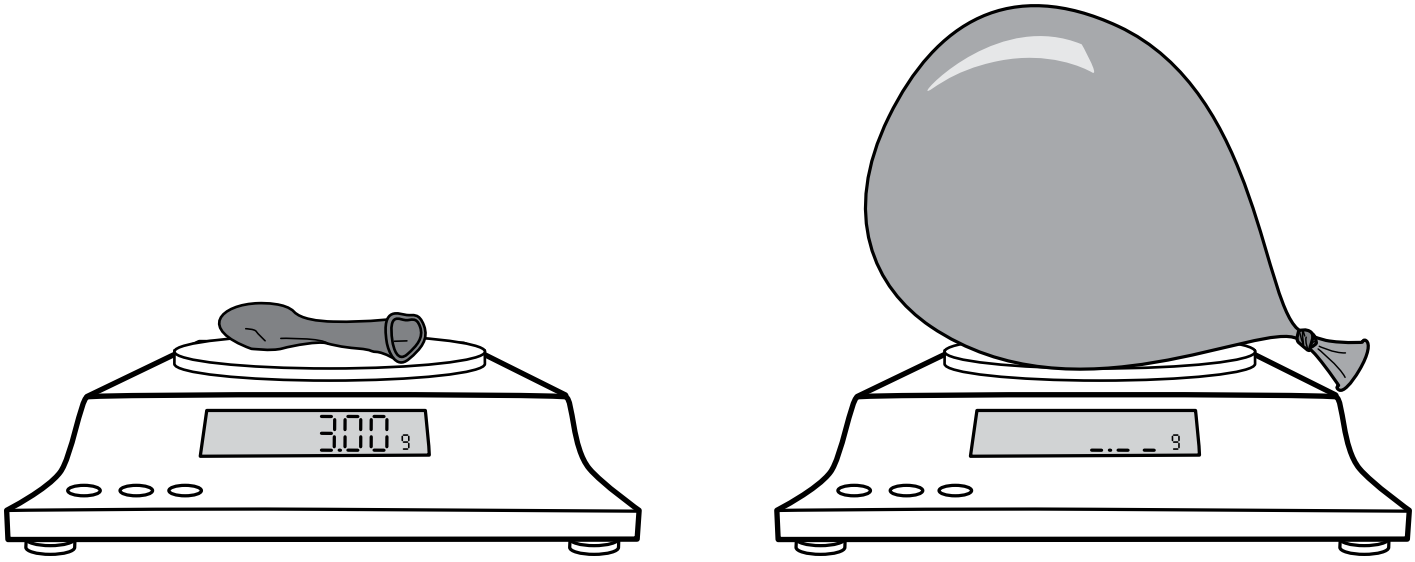
The deflated balloon has a mass of 3 grams. The inflated balloon is filled with air.
Do you think the inflated balloon has more or less mass than the deflated balloon?
Why or why not? Use the back if you need more space to write or draw.

It has less mass because the material would be expanded, thus less centered weight. Mass means how much space it takes up and although its bigger it is not heavier. Mostly it is filled ~~with~~ with hydrogen and oxygen. Also it's not focused on one area but all over the surrounding air.

Name: **Greg**

MASSIVE AIR

TASK A



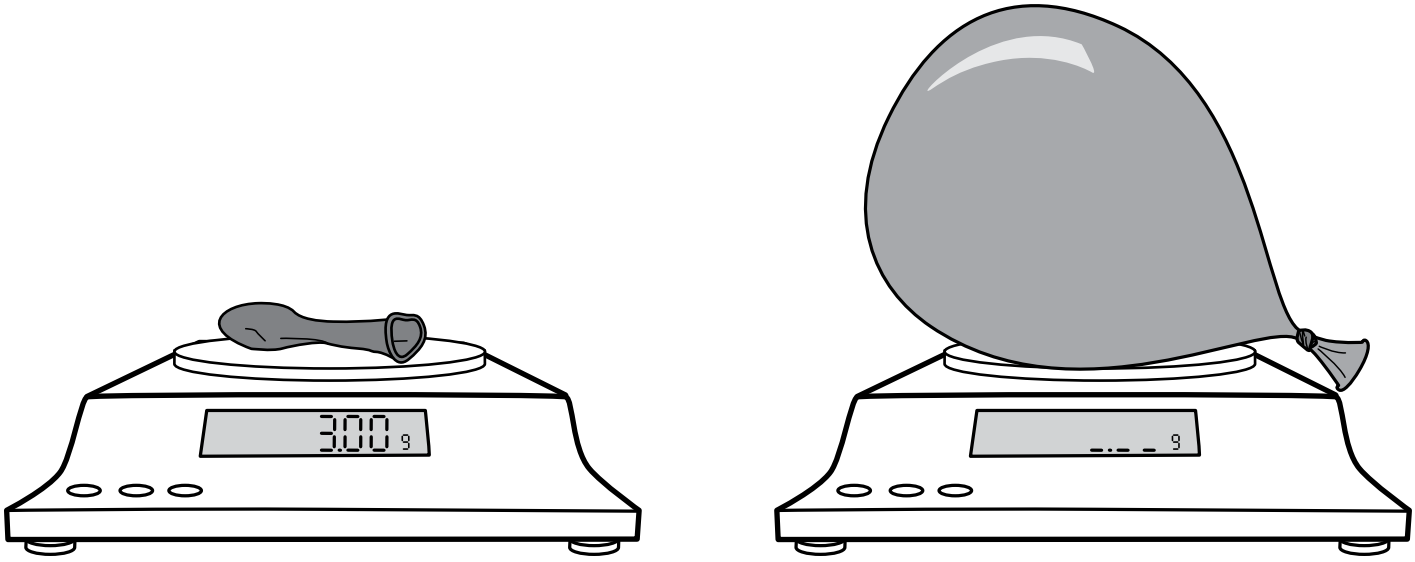
The deflated balloon has a mass of 3 grams. The inflated balloon is filled with air.
Do you think the inflated balloon has more or less mass than the deflated balloon?
Why or why not? Use the back if you need more space to write or draw.

The deflated balloon has more mass than the inflated balloon because the inflated balloon is filled with air and it can't wiegh any thing.

Name: **Harry**

MASSIVE AIR

TASK A



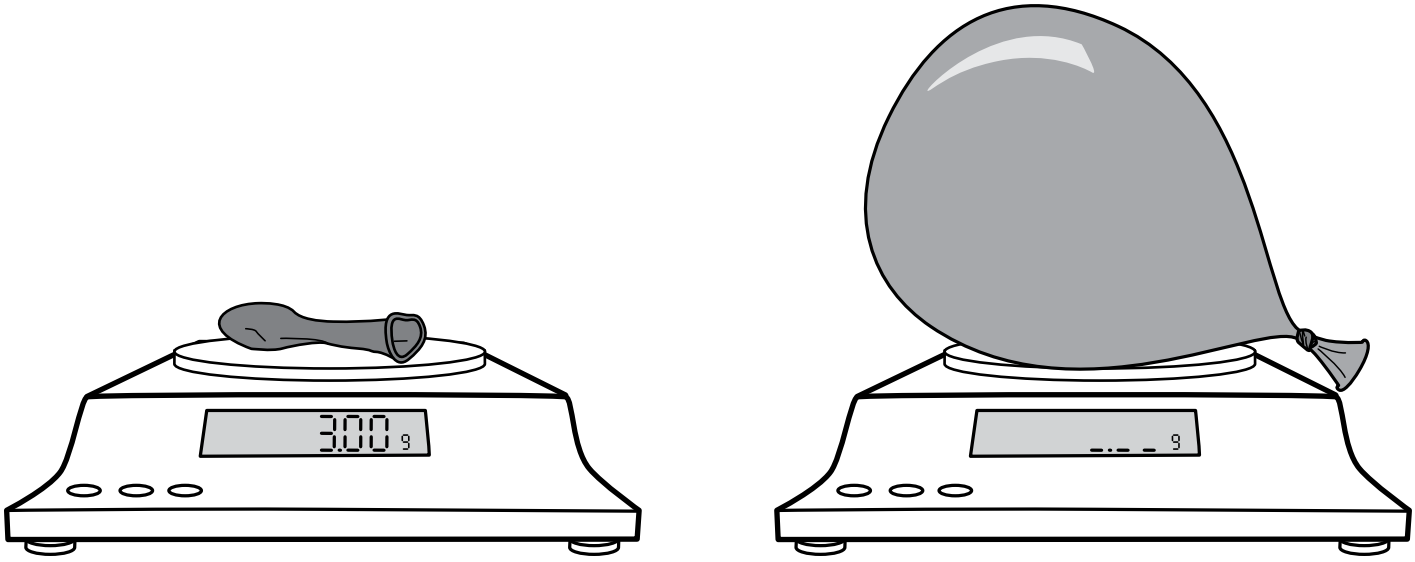
The deflated balloon has a mass of 3 grams. The inflated balloon is filled with air.
Do you think the inflated balloon has more or less mass than the deflated balloon?
Why or why not? Use the back if you need more space to write or draw.

I think that the inflated balloon weighs more than the deflated one because I know that everything, even air, has mass, and so the inflated one has to be heavier. I have also done this experiment so I know that the larger balloon is heavier.

Name: **Irene**

MASSIVE AIR

TASK A



The deflated balloon has a mass of 3 grams. The inflated balloon is filled with air.
Do you think the inflated balloon has more or less mass than the deflated balloon?
Why or why not? Use the back if you need more space to write or draw.

I think the inflated balloon will ~~weigh~~ weigh less. The reason I think so is because when air goes into the balloon, the special material of the balloon spreads out which makes it ~~weigh~~ weigh less. Also, the air makes the balloon float which makes it way even less.