

## **The Lawn-Chair Scientist: Scene 1**

***East Decatur, 12:00 pm***

“Are you sure I’ll be safe?” asked Marcus.

“Yeah, no problem. Just make sure the rope doesn’t come loose,” said his sister Keisha.

The rope in question was holding Marcus to an old, ketchup-stained lawn chair held down by over a dozen of Keisha’s friends. Attached to the lawn chair were 80 oversize balloons left over from her uncle’s big sale at his electronics store. Their uncle had left the extra balloons and the extra helium tanks in their garage. The balloons were filled with helium, tied to the chair’s arms, and were more than enough to lift Keisha’s 39-kg brother and the 1-kg lawn chair off the ground from their small backyard in east Decatur. Keisha had even filled some of the balloons until they were about to burst.

“Remember,” said Keisha excitedly, “you have my BB gun to shoot out balloons when you want to come down.”

“Are you sure I need this many balloons?” Marcus asked.

“You’ll be fine, trust me. Do you want anything else for your little trip around the block?”

Marcus thought a second, and then said, “Actually, grab my notebook and a pen from my bag. I have to do some journal entry homework for Language Arts that’s due on Monday – this should earn me some serious points for originality.”

Keisha tied the notebook, pen and BB gun to the chair’s arms, each with a thick piece of string, smiled at Marcus, and stepped backwards. Then Keisha said to her friends, “On three, everybody let go. Ready? One...two...*three!*”

Keisha’s friends let go, and Marcus’s chair took off like a shot. Marcus screamed, but it quickly became faint as he took off into the sky. A sudden gust of wind blew Marcus and his chair southwest.

Everyone was stunned. Keisha stood in disbelief as her little brother became almost invisible against the cloudless sky. She had only expected Marcus to go up a few hundred feet and float around the neighborhood. She’d even checked her calculations three times!

Keisha looked at her friends and whispered, “What do we do now?”

### ***Keisha's Living Room, 12:30 pm***

Keisha, her parents, and her friends sat hunched over, watching the news. The police had come and gone. Keisha knew that she was in serious trouble, but for now, everyone was focused on Marcus.

“This just in,” said the news anchor. Everyone in the room leaned a little bit closer. “We have just received word from the FAA that an unauthorized aircraft is flying roughly 5 kilometers over Hartsfield-Jackson International Airport, prompting Homeland Security officials to divert all incoming flights to other cities and ground all outgoing flights. This vehicle is made of balloons attached to a lawn chair in which a 13-year old boy is seated. The boy’s condition is unknown. We’ll keep you informed as details come in.”

“Five kilometers?!” Keisha’s mom wailed. “That’s way up in the stratosphere! There’s no air up there! He must be so cold!”

“Actually, honey, it might be the thermosphere,” Keisha’s father offered. “I’m really not sure.”

Keisha’s mother looked at her and yelled, “Keisha, what were you thinking?! You put way too many balloons on that lawn chair!”

“But it was for my science fair project, and I calculated everything right!” Keisha replied. “After all, if Marcus weighs 85 kg – “

“What?!” screamed her mother, “Keisha, your *father* weighs 85 kilograms. Marcus only weighs 85 *pounds*. You must have used the wrong unit in your calculations.”

Keisha’s heart sank as she realized her mother was right. “Mom, I’m so sorry!”

Keisha’s mother shook her head. “I know, you just made a mistake. But you’re still grounded!”

Keisha sighed and went to her room to check her email. She had signed up to be emailed whenever a news article about her brother was put up on the web.

There was plenty of new mail.

## **The Lawn-Chair Scientist: Scene 2**

To: [keisha@yahoo.com](mailto:keisha@yahoo.com)  
From: information@cnn.com  
Subject: Lawn-Chair Pilot: New Details  
Received: 2:30 pm

More details have been released at the most recent press conference about the disturbance over Hartsfield-Jackson International Airport. The aircraft is apparently an aluminum lawn chair attached to 80 oversized balloons and is currently at 20,000 ft. The pilot is a 13-year old boy who is alive, but appears to be unconscious.

We'll bring you more as the situation develops.

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To: [keisha@yahoo.com](mailto:keisha@yahoo.com)  
From: updates@nytimes.com  
Subject: High Altitude Conditions: Atlanta-area  
Received: 3:15pm

Our medical correspondent, Dr. Ivan Hachitoff, believes the infamous lawn chair pilot may be suffering from an array of conditions at this point. Most important on this list is hypoxia, along with vertigo, hypothermia, dehydration, and a burst eardrum. These conditions are potentially life-threatening. We'll keep you posted as new information comes in.

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To: [keisha@yahoo.com](mailto:keisha@yahoo.com)  
From: updates@weather.com  
Subject: Severe Weather Update  
Received: 3:30pm

Warm, humid air masses from the Gulf of Mexico have run into cooler westerly air masses from the Great Plains and created large thunderstorms across Alabama and Georgia. Weather stations in these states have reported considerable lightning, high winds and rain. A severe thunderstorm warning has been issued for all of Georgia. Citizens are urged to stay inside, and avoid travel if at all possible. If you have no choice but to be on the road, look for tall, anvil-shaped clouds approaching from the south. If you see these clouds, it is important to seek shelter immediately.

### **The Lawn-Chair Scientist: Scene 3**

To: [keisha@yahoo.com](mailto:keisha@yahoo.com)  
From: information@cnn.com  
Subject: Lawn Chair Pilot Crash-lands in Macon  
Received: 5:22pm

The adventurous lawn chair pilot is safe on the ground once again, after landing in downtown Macon minutes ago. Apparently, several of the balloons popped on their own due to the much lower air pressure at 20,000 ft, and once the boy had descended to 16,000 ft, he regained consciousness long enough to shoot more balloons and slowly descend to the ground. He was immediately airlifted to Grady Hospital, where he is listed in critical condition.

In addition to the lawn chair and balloons, the boy had with him a notebook and an empty BB gun, all of which were tied to the lawn chair arms with string. The boy's 17-year old sister has admitted responsibility for her brother's adventure and has been taken into police custody. The sister has claims that she accidentally calculated the amount of helium needed to lift 85 kg off the ground, when her brother actually weighs 85 lbs. It looks like this was all simply a case of using the wrong unit. It is not known at this time if the young woman, whose name was not released, will be charged or fined.

### **The Lawn-Chair Scientist: Group Assignment**

Each group is to produce a poster that tracks Marcus's journey, mapping him in the atmosphere, across metro Atlanta and in terms of his overall health. Be sure to include your resources! Use illustrations and graphics to make your poster more visually appealing. Have fun and be creative!!

**The Lawn-Chair Scientist: Box Chart**

<p><u>Facts</u> (What we know right now)</p>	<p><u>Questions</u> (Based on current knowledge)</p>
<p><u>Hypotheses</u> (Based on facts and questions)</p>	<p><u>Learning Issues</u> (What we need to learn)</p>

## Self-Evaluation Worksheet

Date: \_\_\_\_\_

Your Name: \_\_\_\_\_ Group #: \_\_\_\_\_

**Instructions:** Please circle the response with which you agree the most. This evaluation will only be read by your teacher and will **not** be shown to other students.

1. How would you rate *your* participation in group discussion and group work?

**5 Excellent            4 Very Good            3 Good            2 Fair            1 Poor**

2. How would you rate *your* effort in completing the case?

**5 Excellent            4 Very Good            3 Good            2 Fair            1 Poor**

3. Did *you* complete the assigned homework?            **Yes**            **No**

If No, explain why:

4. How well did *you* work with everyone in your group?

**5 Excellent            4 Very Good            3 Good            2 Fair            1 Poor**

5. Overall, how would you rate *your* performance in this case?

**5 Excellent            4 Very Good            3 Good            2 Fair            1 Poor**

6. What praise or criticism do you have for other group members? What are your thoughts about the case?

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