

Student Packet

Grade 3, Lesson 10

Rise to the Challenge: Memoir of an Astronaut

Vocabulary

1. _____ -

2. _____ -

3. _____ -

4. _____ -

- Narrative non-fiction

- tell about the author's real-life experience
- tell a story about events the author witnessed
- share things the author saw, did, thought, or felt
- sometimes have a conflict, or, problem, and a resolution
- may include photographs, captions, illustrations, and graphic aids to communicate information.

- Memoir

- written in the first person (“I”)
- focuses on a short period of time or several related events in a person's life
- relates events as the author remembers them
- includes thoughts and feelings that explain why those particular events are important to the author
- includes story elements such as setting, plot, character development, conflict, and dialogue
- ending is often intended to get the reader thinking

Making our flyswatter was the first part of the puzzle. Next we needed to fasten our tools to the end of the arm. It had not been NASA's plan for anyone to go outside of the shuttle on this trip, but we didn't have much choice. My crewmates David Griggs and Jeff Hoffman, who had trained a great deal for space walks, went out into the darkness. Carefully, they strapped the hand to the end of the arm. Once they had safely returned, I began operating the arm.



my makeshift arm with the "flyswatter" attached

Bo Bobko, our commander, and pilot Don Williams flew close to the broken satellite. After a few heavy swats, we could see that the switch was in the "on" position. Success! We waited for the machine to buzz into action, but . . . nothing happened. Nobody wanted to give up. Yet we knew we had other important jobs to do. Mission control said we had to move on. On a later shuttle trip, the satellite would be **retrieved** by another crew, rewired, and sent on its way.

16

<https://becreader-production.benchmarkuniverse.com/#cfg-teacher-shelf/ref-create/asset-ebook/prod-X06841/9>

Other experiments were on the more serious side. Using a machine like an X-ray, we took pictures of our hearts. From these images, we could see how blood pumps in space. My crewmate Senator Jake Garn, the first politician in space, did tests to help understand why space travelers sometimes get motion sickness. Charlie Walker, an engineer, looked at how some chemicals act differently than others in weightlessness.



Senator Jake Garn



I am doing an experiment with astronaut William McArthur. He is sitting on what we called the disorientation sled. (This photo is from another mission I went on in 1993.)

18

<https://becreader-production.benchmarkuniverse.com/#cfg-teacher-shelf/ref-create/asset-ebook/prod-X06841/10>

Working in the shuttle's space lab



With our satellite work over, we could start playing around with the many experiments we'd brought on board.

I do mean "playing"! A museum in Houston

had given us a bunch of toys to bring along so we could see how they acted in space. Each crew member got to test a couple of toys. I picked a metal spring toy and jacks. On Earth, a metal spring toy will arch when it's stretched. In space, it stayed perfectly straight. Without gravity's help, the metal spring toy couldn't "spring." The jacks didn't behave normally either. When I opened my hand to drop them, they flew everywhere!



toys in space

17

The *Discovery's* trip was supposed to last only five days, but NASA gave us a full week to finish our experiments and relax a little. On a typical morning, we all awoke from our sleeping bags, which were tied to the walls of the shuttle. Sleeping was never too difficult, since I was usually worn out by the end of the day. Our biggest **obstacle** to a good night's sleep was the noisy space toilet! Next came breakfast. Eating was always an adventure. Often we had mealtime perched on the ceiling instead of the floor. When you're floating, who's to say what's "up" or "down"? I liked to toss chocolate candies across the shuttle and gobble them up in a row. Once we had

eaten, we began our work for the day.



This is what a nap in space looks like.

19

Part Four: Landing



On April 19, our commander and pilot fired our onboard engines, and we headed back to Earth. As we sped back into the **atmosphere**, the rush of air against the shuttle created enormous heat. Through the window, I could see giant flashes of light. No Fourth of July fireworks show could possibly match this display. In total **awe**, I watched for as long as I could. Finally our commander asked everyone to strap into his or her seat.



re-entering
Earth's
atmosphere

During re-entry,
the shuttle's
heat shields
glow red-hot.



20

We flew halfway around the world before we touched down in Florida. As the *Discovery's* tires hit the runway, we all heard a loud bang. "What was that?" we asked one another. Was it just the sound of the brakes releasing? Had something broken? Any small error could send us splashing into the water surrounding the runway. We found that the shuttle had blown a tire, but we were not in any danger. I had made it home, where my family was waiting to greet me.

Back at Johnson Space Center, other astronauts asked if my crewmates and I were upset about the broken satellite. I told them no—I was already counting the days until my next flight.



21

My Memoir

By: _____

Date: _____

This image shows a blank sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

