

ELA: Grade 3, Lesson 9, Liftoff to Dreams

**Lesson Focus:** Making connections and understanding relationships between main events people's feelings and actions

**Practice Focus:** Students will engage in the content of the text to identify main events and use those to summarize the day's learning.

**Objective:** Students will use the memoir *Rise to the Challenge* with a focus on Tier 2 vocabulary and main events and how people feel and act in response to those events.

**Academic Vocabulary:** mission control, satellite, boosters, retrieve, makeshift; review of shuttle and voyage from lesson 8

**TN Standards:** 3.FL.VA.7a, 3.RI.KID.1, 3.RI.KID.2, 3.RI.KID.3, 4.RI.CS.4, 3.SL.CC.1, 3.SL.CC.2, 3.W.RBPK.9

**Teacher Materials:**

- The Teacher Packet for ELA, Grade 3, Lesson 9

**Student Materials:**

- Two sheets of paper, a pencil, and a surface to write on
- The Student Packet for ELA, Grade 3, Lesson 9 which can be found at [www.tn.gov/education](http://www.tn.gov/education)

Teacher Do	Students Do
<p><b>Opening</b> (1 min)</p> <p><b>Hello! Welcome to Tennessee's At Home Learning Series for literacy! Today's lesson is for all our third graders out there, though everyone is welcome to tune in. This lesson is the fourth in this week's series.</b></p> <p><b>My name is ____ and I'm a ____ grade teacher in Tennessee schools. I'm so excited to be your teacher for this lesson! Welcome to my virtual classroom!</b></p> <p><b>If you didn't see our previous lesson, you can find it on <a href="http://www.tn.gov/education">www.tn.gov/education</a>. You can still tune in to today's lesson if you haven't seen any of our others. It might be more fun if you first go back and watch our other lessons, since today we'll be talking about topics we learned previously.</b></p> <p><b>Today we will continue learning about how Dr. Rhea Seddon "lifted off" to realize her dreams. We will add the main events we read about today to the key details chart from the previous lesson! Before we get started, to participate fully in our lesson today, you will need:</b></p> <ul style="list-style-type: none"><li>• Two sheets of paper, a pencil, and a surface to write on</li><li>• The Student Packet for ELA, Grade 3, Lesson 9 which can be found at <a href="http://www.tn.gov/education">www.tn.gov/education</a></li></ul> <p><b>Ok, let's begin!</b></p>	<p>Students gather materials for the lesson and prepare to engage with the lesson's content.</p>

**Intro** (2 min)

**I'm excited to continue with our text about Dr. Rhea Seddon and how she stepped up to the challenges of her dreams. Before we move forward, let's take a moment to remember what we learned and review the independent practice summary you were asked to complete at the end of the last lesson.**

[Write this on chart paper so that students can follow along visually with your speaking points].

**Here are a few items that are worthy of touching on:**

- **A memoir is a narrative written in first person;**
- **Dr. Seddon had a dream to be a doctor on the space shuttle for NASA;**
- **A shuttle is a piece of equipment used in space travel;**
- **In 1978 she was offered a job as an astronaut for NASA. First she had to go to training school to prepare to be an astronaut and take a voyage into space;**
- **Dr. Seddon responded to the challenges by engaging in training without complaint and celebrated her colleagues for their accomplishments;**
- **A voyage is a long trip, and the trip from Earth to space is a long one!**

**Thank you for completing the summary of the main events and including how our Tennessee astronaut, Dr. Seddon, responded to those events.**

**You may have used our chart to write a summary that is similar to this:**

**Dr. Seddon had a dream to be a doctor on the space shuttle for NASA. She got her medical degree when she was thirty years old. She was preparing for her dream to be a doctor on the space shuttle. Then in 1978 she was offered a job as an astronaut for NASA. First she had to go to training school to prepare to be an astronaut and take a voyage into space. Dr. Seddon responded to the challenges by engaging in training without complaint and celebrated her colleagues for their accomplishments.**

**Good writers include key details and main events to summarize their learning. Also, placing those events in a chronological order supports the reader along with the use of time-order words.**

**Today our goal is to add to our Key Details chart and understand how Dr. Seddon responds to the main events.**

The student will connect with the previous lesson's key concepts, vocabulary, and information from lesson 8. They will reflect on their independent work they completed after the lesson.

<p>We will begin with me reading our text and asking you to participate with me. Next, there will be time for you to practice on your own with my support. Finally, I will assign you independent work that you can complete after the video ends.</p>	
<p><b>Teacher Model/Read-Aloud</b> (15 min)  <b>Back to our story! As I read, listen for the words mission control and boosters. After I read, I'll come back and ask you to tell me what they mean and ask how you figured out the definition.</b></p> <p>[Show Slide 1.] <b>Part Two: Liftoff</b></p> <p><b>My wait ended at last on April 12, 1985. I boarded the shuttle <i>Discovery</i> on a cloudy morning with six crewmates. None of us had packed much for our trip. NASA gave us our clothes and food.</b></p> <p><b>If you ever go to a shuttle liftoff, I hope you remember you earplugs! The roar of the engines and rockets can be heard from miles away. To protect their ears, astronauts wear helmets. The helmets also have headsets, which are used to keep in touch with mission control in Houston. Mission control plays a major role during every spaceflight by tracking the shuttle as it moves.</b></p> <p><b>Reaching space takes only about eight and half minutes. When the shuttle's two boosters fire and the three main engines light up, it is one amazing ride! After two minutes and thirty seconds, the <i>Discovery's</i> boosters popped off with a bang. During that time, I listened closely to mission control.</b></p> <p>[Read the captions of the pictures on Slide 1.] <b>This first picture says blastoff! This second picture says we were allowed to bring only two of our own things on the spaceflight. I brought along a photo of my family and a Tennessee bumper sticker to remind me of home. [Pause.]</b></p> <p><b>Now let me focus on mission control. I'll read again. Be a detective and be ready to tell me what mission control is. [Pause.] The helmets also have headsets, which are used to keep in touch with mission control in Houston. Mission control plays a major role during every spaceflight by tracking the shuttle as it moves.</b></p> <p><b>From the last paragraph, I add to my understanding from this sentence: During that time, I listened closely to mission</b></p>	<p>Students will engage in the text through oral comprehension while increasing background knowledge and engaging in vocabulary instruction.</p> <p>Main events and how the author responds will be highlighted to support the guided and independent practice sections.</p> <p>Student will use textual and picture clues to solidify their understanding of a shuttle.</p> <p>Student will use textual and picture clues to solidify their understanding of a booster.</p>

control. Using text evidence and clues, what is mission control? Write the definition of mission control on your paper. [Pause for 5 sec] Now you really are detectives. Dr. Seddon didn't give us the exact definition, but she gave us clues. Excellent sleuth work. That means you are a detective! Mission control is a group of people that work for NASA. Their job is to communicate instructions to the astronauts and track all the machines and computers of the shuttle while they are on a mission. The text said mission control plays a major role during a spaceflight and tracks its movement. Another clue at tells me mission control people talk to the astronauts from far away is the sentence, "The helmets also have headsets, which are used to keep in touch with mission control in Houston." Keep in touch means to talk with or communicate with. That's one way I can create meaning of words that I don't know and the author doesn't tell me exactly what it is.

Remember talking about the shuttle in the last lesson? What is a shuttle? You can use your notes from the lesson before this one if you would like. [Pause.] You remember well! Excellent! I heard you say a shuttle is a machine used in space travel. When we learn new words, we remember them best by continuing to read, think about, talk about, and write with those words!

There was another word we need to examine a little further. Understanding what a booster is and its purpose will help you comprehend the text. [Show Slide 2 and point to the rocket booster.] Look and listen to figure out what a booster is. Reaching space takes only about eight and a half minutes. When the shuttle's two boosters fire and the three main engines light up, it is one amazing ride! After two minutes and thirty seconds, the Discovery's boosters popped off with a bang. What is a booster and how did you know? [Pause.] Write the definition on your paper as a note to yourself. Good readers annotate or make notes to themselves as they read. [Pause for 5 sec] Aren't you smart! Good answer! A booster is the part of a rocket that provides force for launch on the first part of the journey. I bet you used clues about how fast the shuttle flew into space. The author said the boosters fired, meaning ignited, and told us the engines lit up after the boosters lit. Those must be very powerful pieces of equipment to send the shuttle soaring into space!

Now we know what a booster is, let's have you act like a booster in your home. Be careful not to hit anyone or anything! How fun to turn your body into a booster! Are you

The student will add a kinesthetic motion to solidify their understanding of a rocket booster.

The student will use oral comprehension skills to make a relationship between a major event and the biographer's feelings.

Student will use textual and picture clues to solidify their understanding of a satellite. They will identify similarities and differences between satellites and shuttles.

a powerful booster like the booster that helped the space shuttle? [Pause for 2 sec] I wish I could see you act like rocket boosters! I know you are powerful!

Now Dr. Seddon is in space. I wonder how Dr. Seddon reacted and felt as she finally headed into outer space after years of training. Listen for clues that tell us about her feelings as I read.

If you ever go to a shuttle liftoff, I hope you remember you earplugs! The roar of the engines and rockets can be heard from miles away. To protect their ears, astronauts wear helmets. The helmets also have headsets, which are used to keep in touch with mission control in Houston. Mission control plays a major role during every spaceflight by tracking the shuttle as it moves.

Reaching space takes only about eight and half minutes. When the shuttle's two boosters fire and the three main engines light up, it is one amazing ride! After two minutes and thirty seconds, the *Discovery's* boosters popped off with a bang. During that time, I listened closely to mission control.

What did Dr. Seddon tell you to let you know how she felt and responded to her first flight in space? [Pause.] Don't forget to use text evidence. [Pause for 5 sec] She was excited, right? You did it again! When the young woman astronaut said, "I had faith that the engines would hold together and work correctly," it told you she was confident in herself and all the people from NASA that helped send her to space. Dr. Seddon also said she was most fearful of letting NASA down. This told me she wanted to do her very best and do a good job for all her teammates. I heard you say the crew was excited to feel weightlessness. That's what happens in space when you leave Earth's gravity. You float! This tells me the Tennessee astronaut was brave to fly into space, trust the equipment, and perform a job performed by very few women. Stop and take a moment to write some of Dr. Seddon's character traits in your notes. [Pause for 5 sec]

The story will tell us about astronauts working on satellites. Listen to understand what satellites are as I read. Let's read on to see what happens next!

I had faith that the engines would hold together and work correctly. My biggest fear was failing in my work and letting NASA down.

The student will identify the problem which will support understanding of how the character, based on previously identified traits responded to the problem (main event.)

The student will summarize the solution and identify the relationship between the character's traits in response to the problem.

Six minutes later, at 200 miles above Earth and going 17,500 miles per hour, the engines cut off. Our crew waited excitedly to feel weightlessness and hear our commander say, “Welcome to space!” [Read the caption of the picture next to the rocket booster.] This picture shows the Nile River in Africa at night.

**Part Three: The Mission.** Our main job on this mission would be to launch two satellites. Satellites are machines that share information over thousands—even millions—of miles. They allow people on Earth to have television, radio, and the internet. Like most machines, satellites have “on” and “off” switches. Can you imagine seeing a satellite out of the window like Dr. Seddon did on her spaceflight? Add the definition of satellite to your notes.[Pause for 10 sec] I think I heard you make a connection between a satellite and the shuttle. Correct! A satellite is a machine that is released in outer space. Its job is to allow people on Earth to have technology like television, radio, and the internet. While both the satellite and the shuttles are machines used by astronauts, a shuttle gets astronauts from Earth to space and back, but the satellite stays in space to help our technology on Earth.

As we read Part Three: The Mission, Dr. Seddon first told us her main job for the mission. Next, she told us the problem with the mission. What was the problem on the mission? How did the doctor react to the problem? [Pause for 5 sec] Hmmmm.....I noticed another reference to our astronaut’s career as a doctor. Once again, excellent answers! Yes, the problem was that one of the two satellites wouldn’t turn on. Their mission was to launch the satellites so they could work. When one wouldn’t turn on, Dr. Seddon didn’t give up! Instead, she chose to think like a doctor, her former career, and treat the satellite like one of her surgery patients. Thank you for making that connection back to our previous lesson where this brave astronaut referred to the shuttle as her patient. I heard you say Dr. Seddon and her crewmates, refused to give up. Way to persevere crew!

Our astronaut, the biographer in our memoir, told us a major problem on her first mission. Now as I continue to read, I know the author will very likely tell me the solution. After reading, I’ll ask you to summarize how the crew solved this crisis, or urgent problem. Also, notice what the Dr. used to solve the problem. [Point to picture and read caption.] This picture says my view from the shuttle.

The student will identify and summarize the conclusion while adding the character’s response to this event.

The student will use context clues to learn the tier 2 word retrieve.

[Show Slide 3.] To move the “on” switch on the side of the satellite, we would need a hand. This wouldn’t be a human hand, but a set of tools. First these tools would be attached to a long, robotic arm. I could control the arm from inside the shuttle and use the hand to knock the switch into the “on” position. In the 1980s, mission control was not yet able to send videos and pictures to astronauts. They could only send words through a special printer on the shuttle. Using the letters of the alphabet to create shapes, they drew a rough picture of the tools we needed. One piece looked like a stick with a pouch. The other was kind of like a flyswatter. We already had the first pieces, but it was up to us to put together the space flyswatter. Time for a scavenger hunt. [Point to picture and read caption.] This picture says me with my fellow astronauts and the flyswatter.

In the front of the shuttle, we kept a thin, metal tube, useful for pressing switches when we were in our seats. It might work as the flyswatter’s handle. What about the “swatting” piece? Plastic book covers had the right shape. I started sewing the covers together, using the needle that we kept to fix space suits. I’d stitched up plenty of patients after surgery. How much harder could this sewing job be?

[Point to picture and read caption.] This picture says my early training in sewing came in handy in my careers as doctor and astronaut.

How did the shuttle crew solve the problem of the satellite not turning on? Quite a solution, right? Again, thank you for correctly answering that the shuttle crew with mission control’s help from Earth, designed and built tools out of parts they found in their shuttle home. They used their knowledge from tools they had used back on Earth, such as a flyswatter. I also heard you say that Dr. Seddon used her sewing skills from her childhood and her experience as a doctor, to sew parts together for this necessary tool. As I read these pages, I was thinking how smart the crew was to use skills they knew from their life to solve this problem. When the author said, “How much harder could this sewing job be?” I was reminded of the character trait we mentioned shortly ago. This lady would not give up!

Now let’s see if the crew’s hard work pays off! You gave excellent answers that the crew had to design tools to try to turn on the satellite using their background skills. Moving

The student will use context clues to learn the tier 2 word makeshift.

The student will add a kinesthetic motion to solidify their understanding of a rocket booster.

forward, a good reader will listen for the answer of “did the tools work” and “will the satellite turn on.” Let’s listen. .

[Show Slide 4.] 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.

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.

[Point to picture and read caption.] This picture shows my makeshift arm with the flyswatter attached. Based on our text, what did the crew do and did it work? [Pause for 5 sec] You listened closely! Yes, two of the crew went outside of the shuttle and attached their “made-up” tool to the robotic arm. The robotic arm is a tool that is designed to look and act like your arm. It even has a hand! Good! You said the tool worked to flip on the satellite’s power switch, but sadly it didn’t work. How did the crew feel about the broken satellite, and what did they do? [Pause for 5 sec] You are great at this! The crew didn’t want to give up, but they realized they had more jobs to do so they had to accept it and move on to the other jobs. This helps me understand the crew wanted to persevere and not give up, but they were acting responsibly to perform their other jobs.

The last sentence said, “On a later shuttle trip, the satellite would be retrieved by another crew, rewired, and sent on its way.” Based in the information in the sentence, what does retrieve mean? [Pause for 5 sec] The sentence doesn’t give us the exact definition, but YOU DID IT! Yes, retrieve means something was taken back. I heard you understand the satellite was taken back to Earth and then returned to space after it was repaired. Take a moment and write the definition of retrieve on your paper. [Pause for 5 sec]



<p>I noticed another word that gives us a clue about the tools the crew made. [Show Slide 9.] The caption, or words that tell me about the picture, says, “my makeshift arm with the ‘flyswatter’ attached.” Using your knowledge about the tools used on the space shuttle, tell me what “makeshift” means. [Pause 5 sec] You are excellent at sharing your thinking of how you understood the meaning of “makeshift.” I heard you correctly say you had read how the astronaut crew had to design and create the tools. They also had to figure out how to attach the tool to the arm of the outside robotic arm. So “makeshift” means the astronaut tool was a used in the place of a “real” tool to do the job. They had to “make do” with the tools they had. It was a shift or substitute for the real tool. Good thing those astronauts were not willing to give up! Thank you for using the captions to add information as you read. Don’t forget to add the definition of makeshift. Let’s go big here! Write one sentence that uses the word makeshift correctly. [pause for 20 sec]</p> <p>Do you remember what a booster is? Without hitting anything or anyone, show me one more time what a booster would look like as it takes off! [Pause for 5 sec] It’s fun being a booster, isn’t it?</p>	
<p><b>Guided Practice</b> (10 min)</p> <p>Thank you for engaging in the text with me. Let’s put the key details together to make sure we keep them in mind. Today, we will only be adding a few more key details to our key details chart.</p> <p>Please take out your key details chart from our previous lesson. If you weren’t with us yesterday, take out one sheet of your paper along with your pencil. Ready to go? Do you have space to write?</p> <ul style="list-style-type: none"> <li>• Please make a chart on your paper like mine. [Show Slide 5.]</li> <li>• We are going to write the key details or main events in chronological order. That means in the order they happened. As we write the key details of our story, we will use time-order words like then, next, lastly, or first. These words help us with the sequence, or order of the events. Make sure to use the vocabulary words mission control, satellite, booster, retrieve, and makeshift as you write.</li> <li>• Write the first detail from Part Two: The Liftoff. [Pause for 20 sec] <b>You did it!</b> [Show Slide 6.] <b>Thank</b></li> </ul>	<p>Students follow along and think and act as instructed, gradually gaining confidence and competence.</p> <p>Students will duplicate the chart and fill it in. They will use this guided practice to write a summary as independent practice.</p> <p>Student will use their chart and complete the details to synthesize the main idea and create a summary as the independent practice.</p>

<p>you for correctly saying, after training for one year, she was given several projects to help other astronauts. Then, in 1985, she went on her first mission into space on the shuttle Discovery with help from mission control. Good job for using shuttle and mission control in your writing.</p> <ul style="list-style-type: none"> <li>• Write the second detail for today from the section of our text [Pause for 20 sec] <b>You did it!</b> [Show Slide 7.] You may have written something like, “With the help of boosters, the shuttle took off and reached 200 miles above Earth in eight and a half minutes.” Thank you for including the vocabulary word “shuttle” and “booster”.</li> <li>• Let’s keep going. After Dr. Seddon reached space, tell me the next key detail using vocabulary words. [Pause for 20 sec] <b>That’s it!</b> [Show Slide 8.] <b>Seddon and the astronauts’ main job on the mission was to launch two satellites that would turn on once in space.</b></li> <li>• Our reading today had several main events. What was the next main event? [Pause for 20 sec] <b>I think you can do this without help! Excellent!</b> [Show Slide 9.] You may have said something like, “Lastly, the first satellite worked, but the second one would not turn on. Dr. Seddon and the astronauts made makeshift tools to turn on the switch, but it did not work, so NASA retrieved the broken satellite later.</li> </ul>	
<p><b>Independent Work</b> (2 min)</p> <p>Now, we have come to the independent section of this lesson. You will be asked to complete this assignment after we finish together today. Please get out you’re a clean sheet of paper. [Pause for 5 sec]</p> <p><b>I will give you the prompt.</b></p> <p>[Write this assignment on chart paper so that students can follow along visually with your speaking points].</p> <p><b>You may want to write down the directions at the top of your paper. [Pause 2 sec]</b></p> <p>Using your Key Details Chart, write a summary of the main events in our story about Dr. Rhea Seddon. Please add the vocabulary words mission control, shuttle, satellite, retrieve, and makeshift as you write. Also, add how our memoir author responded to the main events.</p> <p><b>Thank you! Good writers and readers use key details to understand the text and make connections between ideas.</b></p>	<p>Identify here what students will accomplish during independent work.</p>
<p><b>Closing</b> (1 min)</p>	

I enjoyed working on new vocabulary, key details, and how people respond to main events with you today! Thank you for inviting me into your home. I look forward to seeing you in our next lesson in Tennessee's At Home Learning Series!  
Bye!



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