

THE SASSAFRAS SCIENCE ADVENTURES

VOLUME 1: ZOOLOGY



JOHNNY CONGO &
PAIGE HUDSON

THE SASSAFRAS SCIENCE ADVENTURES

VOLUME 1: ZOOLOGY {SAMPLE}

Third Printining 2015

(First Printing 2012)

Copyright @ Elemental Science, Inc.

Email: support@elementalscience.com

Cover Design by Paige Hudson & Eunike Nugroho

Illustrations by Eunike Nugroho (be.net/inikeke)

Phone Pictures by Paige Hudson & Erin Simons (One Line Design)

Printed In USA For World Wide Distribution

No part of this book may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying, recording, or by means of any information storage and retrieval system, without permission in writing from the authors. The only exception is brief quotations in printed reviews.

For copies write to :

Elemental Science

PO Box 79

Niceville, FL 32588

support@elementalscience.com

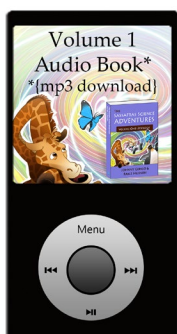
LEARN MORE AT [**SASSAFRASSCIENCE.COM**](http://SASSAFRASSCIENCE.COM).

TOPICS COVERED IN THIS VOLUME

The Sassafras Science Adventures Volume 1: Zoology covers a variety of biological topics by looking at the following animals:

- Lion
- Cheetah
- Elephant
- Giraffe
- Camel
- Cobra
- Spiny-tailed Lizard
- Fennec Fox
- Cow
- Bee
- Chicken
- Spider
- Sloth
- Toucan
- Poison Dart Frog
- Blue Morpho Butterfly
- Koala
- Rabbit
- Panda
- Golden Eagle
- Powerful Owl
- Samba Deer
- Golden-haired Monkey
- Mice
- Musk Ox
- Snow Goose
- Polar Bear
- Mountain Goat
- Penguin
- Codfish
- Blue Whale
- Squid

DON'T WANT TO DO ALL THE READING?



Check out *The Sassafras Science Adventures Volume 1: Zoology* audiobook! Listen to the talented Christine Myrick take you on a journey to the African Grasslands, the Amazon Rainforest, and the Alaskan Tundra with the Sassafras Twins as they learn about different animals.

CHAPTER 1: THE ADVENTURE BEGINS

Crazy Uncle Cecil

Twelve-year-old twins, Blaine and Tracey Sassafra, sat in sulking silence on the very back row of the bouncy bus. It was the first day of summer break. Instead of being on their way to Camp Zip-Fire with all of their friends, they were on this bus headed to their crazy Uncle Cecil's house for the entire summer. Blaine and Tracey had done pretty well in school, especially the last semester. They had good grades in every subject, except for one. Blaine and Tracey had both failed science.

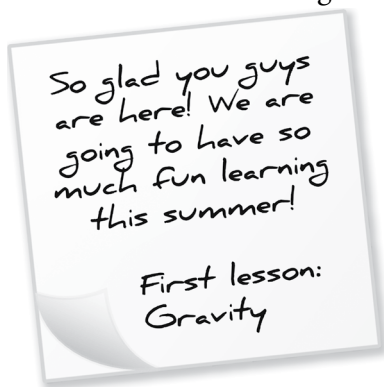
Their parents had warned them in the middle of the semester about their grades. They could still hear their father's loving but stern voice saying, "You two had better get those science grades up by semester's end or you will be sorry." As the two sat there, bouncing around on the hot and shaky bus, they were definitely sorry they hadn't worked harder in science class. All they knew was that their Uncle Cecil was some sort of scientist. Since Blaine and Tracey had failed the subject, their parents had thought it would be a good idea for them to spend the summer with him, improving their science skills instead of going to their favorite place in the entire world.

After several miserable hours on the rattling bus, Blaine and Tracey were finally at their stop. They found themselves at 1104 North Pecan Street standing on the front porch of their Uncle Cecil's house. It was an old two-story house covered in plain brown siding with a steeply pitched roof. There were a few bushes attempting to decorate the front porch, but they were mostly dead. By the looks of the cobwebs hanging in the top corners of the front porch windows, Uncle Cecil wasn't much for housekeeping.

The twins had only met Uncle Cecil one time, and that had been at a Sassafra family reunion when they were only eight-

years-old. The only thing they remembered about Cecil, other than his crazy red hair, was that he had called them “Train and Blaisey” and that he had spilled fruit salad all over himself. Now they were supposed to spend the summer with him.

Blaine, who acted very much like an older brother even though he was only older by five minutes and fourteen seconds, spotted the handwritten note attached to the front door first. It was Tracey who stepped forward to read it though.



The last sentence caught Blaine by surprise, who was now stepping up to look over his sister's shoulder. "First lesson is gravity? What is that supposed to mean?" Suddenly, a section of the porch dropped away and Blaine and Tracey found themselves falling through a trap door. Almost immediately, they landed on a smooth, wide metal slide, which carried them briskly down a dark tunnel. As they flew quickly through the tunnel toward a growing light, they braced themselves for impact. Slick metal gave way to soft cushions as they landed with a quiet thud on a pile of old pillows.

Blaine and Tracey, somewhat dazed, looked around at their surroundings. They were now in what looked like a basement. The room was filled with all kinds of interesting looking things. There were beakers full of different colored fluids, taxidermy animals of all sorts, bugs pinned to corkboards, a wide variety of plants sitting under lights, and a jumble of electrical wires, magnets, mirrors, and lots of other stuff that just looked like plain junk. And there,

in the far corner at a cluttered desk, they saw Uncle Cecil's head of red hair. He was wearing a white lab coat and had headphones on. Whatever he was listening to, he must have the volume turned up very loud because he was unaware that they had arrived. Blaine and Tracey picked themselves up off the mound of pillows and approached their uncle. From behind, Blaine gently tapped Cecil on the shoulder. Caught off guard by the presence of someone in his basement, Uncle Cecil jumped out of his chair a few feet into the air and landed on his desk, smashing the uneaten portion of spaghetti. The surprise on his face turned to happiness as he recognized his nephew and niece. He pulled off his headphones and slid off the top of his desk. "Train! Blaisey! You guys are finally here! Welcome!" He then gave Blaine and Tracey a big bear hug, getting spaghetti all over them.

Uncle Cecil proceeded to give the twins a spirited tour of his house; their residence for the summer. Though they were still bummed about being there, it was hard not to get caught up in his excitement. He talked a mile a minute as he showed them their rooms, the kitchen, the bathroom and the living room.

"Oh, I almost forgot to ask. How did you guys like the slide down into the basement?" Uncle Cecil asked, laughing.

"Well, it certainly caught us by surprise!" Tracey answered.

"Yeah, a really nice lesson in gravity," Blaine added.

"Oh I thought you guys would like that," Cecil said, wringing his hands in delight. "That was President Lincoln's idea!"

"President Lincoln?" the twins asked in unison. "You mean the sixteenth president of the United States?"

"No, not that President Lincoln," Cecil informed as he pointed to a hole in the wall. "President Lincoln is my lab assistant. He's a very good one even though he happens to be a *Cynomys ludovicianus*."

"What's a cyno . . . ludo . . . cianus?" asked Blaine.

“*Cynomys ludovicianus* is Latin for ‘Prairie Dog,’ but he never answers to that. He much prefers being called ‘President Lincoln.’” A prairie dog gingerly poked his head out of the hole.

Blaine whispered under his breath to Tracey, “Uncle Cecil really is crazy!”

The twins followed Uncle Cecil back down to the basement (using the stairs this time instead of the slide) for an introduction of what they would be learning over the summer.

“Are we really going to spend our entire summer cooped up in this basement?” Tracey asked.

“Not just cooped up, but cooped up doing science. It is the most boring subject in the whole world,” Blaine added.

Completely unaffected by the children’s pessimism, Uncle Cecil continued. “Now, when I last talked to your father, he told me about your disposition toward science and your none-too-stellar grades in science. He also told me all the things you needed to learn about by summer’s end. And golly, golly goodness, I think we can have you two loving science by the time you head back home!”

Somehow the twins didn’t think so. Suddenly, the prairie dog they had seen upstairs poked his head out a hole in the wall. “Where did he . . . how did he . . .” Blaine mumbled.

“Oh, there is a network of tunnels throughout the house that President Lincoln uses to get around,” Uncle Cecil responded, as if it was totally normal. Blaine, on the other hand, was still wondering why the prairie dog was called President Lincoln.

Uncle Cecil made big motions with his hands as he began to cover all that they were going to learn. “We are going to learn about the five kingdoms of living things: that is, bacteria, single-cell organisms, fungi, plants, and animals. Oh yes! We are going to cover migration, which is animals making their annual journeys over land, air, or water to find better living conditions. We are going to study defense methods and food webs! We are going—”

“I don’t mean to interrupt you Uncle Cecil,” Blaine apologized, “but why... I mean, how, are we going to do all of this?” The twins’ heads were spinning at the thought of all the science they were about to get blasted with.

“Oh, I thought you would never ask!” Cecil exclaimed, as he bounded over to a table and scooped up what looked like two rock climbing harnesses. “You see these harnesses? President Lincoln and I are excited about these! Using these harnesses and special carabiners, the two of you will be able to travel all over the planet this summer and encounter science face to face.”

Blaine and Tracey just looked at him dumbfounded.

“Now, I’m a scientist, but President Lincoln fancies himself as more of an inventor. We did work together on this, but it was more his idea than mine.” The prairie dog clambered up on a table. “We invented invisible lines that can go anywhere on the planet. Africa, South America, Asia, you name it, and these lines can take you there! You simply get cinched up in your harness, attach it to your correctly calibrated carabineer, clip onto one of the lines, and zip bang--at the speed of light you arrive at your destination!”

Now the twins’ mouths hung open in disbelief. Invisible lines? Special carabiners? A prairie dog inventor? Speed of light? Science face to face? Were Blaine and Tracey really supposed to believe this? It was Blaine who first managed to say something, but all he could sputter out was, “What?”

“Oh, yes! It works like a charm,” answered Uncle Cecil, laughing giddily. “We tested it on several of President Lincoln’s relatives.”

The twins looked at the prairie dog, who was sitting quietly on the table, sniffing an apple core. Why hadn’t they tried harder in science class?

“Now I know the two of you were originally hoping to go to camp Zip-Fire again this summer, and I know they have all kinds

of fun activities there including zip lines. But you two have already gone to that camp three summers in a row. These invisible lines that President Lincoln and I have invented for you are not too different than Camp Zip-Fire. Ours, however, travel at the speed of light,” Uncle Cecil said.

The first glimmers of interest flashed through the twins’ eyes. Sure, all their friends were at Camp Zip-Fire, while they were stuck here with their uncle. However, if they could return to school after summer break with stories of world travel, that would still be cool, wouldn’t it? But was all of this possible, or was Uncle Cecil just plain crazy?

With a sudden surge of adventure pulsing through his veins and a definite readiness to call Uncle Cecil’s bluff, Blaine stepped up and grabbed one of the harnesses out of his uncle’s hand. “Let’s try this out, right now!” Blaine declared. Uncle Cecil leapt for joy, while President Lincoln just continued sniffing the apple core.

Zip Lines and Smartphones

A few minutes later, Blaine had his harness on, as did Tracey. She had decided she couldn’t let her twin brother take off on this adventure on his own. She still seriously doubted that any of this invisible line travel stuff was even possible.

Uncle Cecil handed them the special carabiners, “Each carabineer has three rings. Always screw the locking ring shut first, you know, for safety sake. Then, turn the longitude ring and the latitude ring to the correct coordinates for your target’s location.”

As Blaine and Tracey attached their carabiners to their harnesses they gave each other a glance with raised eyebrows. They were definitely convinced that their uncle was crazy, but they would continue to play along, for now.

“President Lincoln and I will be able to follow your progress on the special tracking screen that we designed just for this summer!” Cecil said as he skipped over to the wall where a large flat screen TV

displayed a map of the world. On the map were two small green dots in America.

“These two green dots are where you are,” Cecil pointed. “When you zip from here to there, we will be able to track you on this screen.”

Cecil bent over and tapped a button on his keyboard, changing the screen from a world map to an empty document page. “And this screen is where we can view all the information that you will be sending us, along with the pictures you will be sending in. Speaking of which, I almost forgot! You guys will need your smartphones!” Uncle Cecil rushed off to the cluttered desk in the corner to look for the phones.

Standing there in their harnesses, Blaine looked at Tracey and smiled, “At least we may get free smartphones this summer.”

“Blaine, this is crazy!” Tracey exclaimed, not thinking about the phones. “Uncle Cecil really is insane. How are we going to make it through this summer?”

“I don’t know Tracey, but we might as well try and have some fun.”

Uncle Cecil returned and handed sleek looking smartphones to each child, saying, “The two of you can use these phones to communicate with President Lincoln and I no matter where you are on the planet.” Uncle Cecil began talking faster and faster as he got more excited. “We have designed two applications for these phones that will be very important for your journey. First, you have an application called LINLOC, which is short for ‘line locations.’ It lists every topic you will be studying and the locations you need to travel to, along with the exact carabineer coordinates and names of the local experts who you should contact upon arrival. The second application on your phones here is called SCIDAT, which is short for ‘scientific data.’ It enables you to enter all the scientific data you will be gathering on the topics listed in the LINLOC application. You will need to take and send pictures for each topic.”



Blaine and Tracey rolled their eyes at the thought of gathering scientific data. Even so, Cecil continued, “We are experiencing a little bit of a problem with this second application. If the information is not entered, or if it is entered incorrectly at one location, you won’t be able to move on to the next one. If you don’t progress through the locations correctly, you won’t be able to make it back here to the basement. So, it is very important that all of your scientific data is entered correctly. Not ideal, I know. It is a little glitch that President Lincoln is working on.” President Lincoln made a hiccup noise from his spot on the table.

“Oh! I am so excited for you two! You will be traveling all over the planet learning about all kinds of things! I know science has been like rocks in your socks thus far in your lives. But after this summer—ooh golly, golly, goodness, you are going to love it! I just know it!” More and more curious, but still not convinced, the twins smiled and nodded as if they agreed.

“So, where in the world are we going first?” Blaine asked.

“Try out that LINLOC application on your smartphone,” Cecil said, gleaming. Blaine used the touch screen to open the

LINLOC application. The first location listed was Kenya.

“Kenya is a country in Africa, right?” Blaine asked.

“Yes it is” answered Tracey as she maneuvered through to the LINLOC application herself on her smartphone.

“The contact person’s name is Nicholas Mzuri, and the coordinates listed are latitude $-2^{\circ} 42' 9.08''$ and longitude $38^{\circ} 10' 35.6''$. The app says it will put us in the African grasslands.”

“The topics we need to cover are lions, cheetahs, elephants, and giraffes,” Blaine added, as the twins continued to read through the information they were finding on their phones. Whether or not all this planet-traveling science recording stuff was possible or not, these smartphones sure were cool. Plus, the prospect of going to a place like the African grasslands was pretty exciting.

“So are we going on a safari?” Blaine asked.

“Persactly!” Uncle Cecil shouted in joy. “Africa is just the first of many stops you will be making this summer for the sake of science. Train and Blaisey—you are going to experience and learn so much that it is going to be simply fantabulous!” Blaine and Tracey weren’t fans of science, but they were fans of fun. It was



only because of a failing grade in science that they were even here in their uncle’s basement. They had to admit they were already having a little fun.

“Okay, are you guys ready?”

Uncle Cecil asked, his face barely able to hold his smile. Blaine and Tracey looked at each other, at their harnesses and carabiners, and at their uncle’s smiling and anticipatory face.

“Let’s do it!” they declared in unison.

“Ok!” Uncle Cecil stated,

looking over the harnesses, making sure they were snug and secure. “First things first—close that locking ring tight, and then turn your latitude ring to $-2^{\circ} 42' 9.08''$ and your longitude ring to $38^{\circ} 10' 35.6''$. Then, zip, bang, boom, you are ready to go to the African grasslands!” The twins locked their carabiners tight and got their coordinates set correctly.

“President Lincoln wanted me to assure you that these invisible lines and coordinates are designed to get you as close to your professional contact person as possible without your arrival being detected by anyone.” The twins nodded, showing they understood.

Uncle Cecil then reached under the table and grabbed two backpacks. He handed one to each twin. “Use these nifty backpacks to store your harnesses and helmets once you arrive at your locations.”

The twins again nodded.

“Since you will be traveling at the speed of light, it will feel more like riding a lightning bolt than a traditional zip line. For the most part, your landings will be as smooth as butter.” Uncle Cecil scooped the prairie dog up off the table, held him in his arms and continued on, “These travels will take you two a while, so it will be more than a few moons until President Lincoln and I see you again. Take care of each other. Don’t let anyone else know about these invisible zip lines! Remember, you can contact us anytime and anywhere. Use those smartphones to their full capacity. LINLOC will give you your guiding information. Be absolutely sure to enter the correct data into SCIDAT so you can progress through your destinations.”

Blaine and Tracey took deep breaths knowing this was the moment of truth. Either Uncle Cecil was as crazy as they suspected, or they were about to start off on the greatest adventure of their lives.

“Well, go ahead! Clip your carabiners onto the line!” Uncle Cecil cheered.

Feeling a little silly, the children opened the clips of their carabiners, pretended to hook them to a line, and then let them snap closed.

Suddenly, the twins' feet lifted a few feet up in the air. Their bodies were secure in their harnesses and attached to their carabiners, which were somehow clipped into a taut invisible line. The twins' faces were covered with an odd mixture of awe and fear.

"Isn't it amazing?" Uncle Cecil exclaimed, clapping. "As soon as you are correctly calibrated, the carabiners snap shut. They automatically connect to the correct line. And now," he said looking at his watch, "you have approximately seven seconds until you will slide off at the speed of light, zip lining to the African grasslands!"

The twins could feel their rapidly accelerating heartbeats pounding in their chests. Could this really be happening? Then, with a magnificent sonic burst of light, twelve-year-old twins Blaine and Tracey Sassafra shot off at the speed of light.

CHAPTER 2: THE AFRICAN GRASSLANDS

Look! A Lion!

It was simply exhilarating. The Sassafras twins could not believe this was actually happening. They were zipping on an invisible line at the speed of light, flying, soaring, gliding, and shooting through space like sunbeams. Uncle Cecil wasn't so crazy after all.

Then, with a sudden jerk, they came to a stop and a tingling sensation flushed through their bodies. Blinking their eyes, they couldn't see anything but white at first. Slowly, the white light began to fade, colors came, and they were able to make out shapes. They found themselves standing, but their wobbly legs could not hold them. The twins involuntarily fell to the ground, their carabiners automatically unclipped from the lines. Blaine and Tracey just looked at each other, mouths open in disbelief.

As usual, Blaine managed to say something first. "That . . . was . . . unbelievable!" he claimed enthusiastically but out of breath.

All Tracey could do was nod in agreement. Camp Zip-Fire's zip lines had nothing on Uncle Cecil's and President Lincoln's invention. So, it really was possible—they were traveling over invisible zip lines to different places on the planet. Though they had just experienced it, they still couldn't really believe it. But they were here, weren't they? But . . . where was here?

Seeing clearly now and with their legs strong again, the twins stood up, took off their harnesses, put them in their backpacks, and scoped out their new surroundings. They were in a large room that was rustically decorated. It was full of big leather couches, furry rugs, and ornate lamps. Rough wooden beams ran across the ceiling, supporting the thick thatched roof. The wooden floorboards creaked under their feet as Blaine and Tracey walked around the room,

looking at all of the beautiful artwork on the walls. Most of the paintings and photographs were of animals.

A side door swung open and a lady with braided hair and beautiful brown skin walked in. “Children, children, what are you doing in here?” she asked kindly. “Everybody is supposed to be in the jeep. Come now, come now, or you two are going to miss the safari.”

Assuming they should cooperate, Blaine and Tracey looked at each other, shrugged their shoulders, and followed the woman. She led them through a side door out onto a big wooden porch. The twins looked out into the sunshiny day and saw the African grasslands right there in front of them. The view from the porch was breathtaking. They really had traveled across the planet!

The woman pointed and said, “Okay, children, the jeep is right over there. Go on now, before Nicholas takes off without you.” Blaine and Tracey spotted the white jeep and made their way towards it.



“You two are welcome back to Jambo Safari Lodge anytime,” the nice woman assured, as she waved goodbye. The twins waved back.

“So, we landed in a safari lodge.” Tracey stated.

“Yeah, pretty cool.” Blaine replied.

As they approached the jeep, a big, strongly built black man wearing a wide-brimmed leather hat, a sleeveless T-shirt, cargo pants, and worn hiking boots, slid the jeep door open and greeted them with a smile.

“Welcome, children, to Mzuri tours. My name is Nicholas Mzuri and I will be your safari guide today,” the man boomed, with his baritone voice.

“Nicholas Mzuri, just like the LINLOC application said,” thought the twins to themselves as Nicholas helped them into the jeep. It was a big four-by-four jeep with a wide wheelbase and sliding doors on both sides. It had two bucket seats in the front and two wide bench seats for passengers in the back. Nicholas closed the door behind them and then walked around the van and climbed into the driver’s seat.

There were four other people already seated in the van. On the front bench there was a man with long hair and a long beard. His eyes were shut and he was either asleep or bored—the twins couldn’t tell. On the back bench, there was a rather plump couple that looked to be husband and wife. They were decked out to the max with the latest tourist apparel and accessories. Their rosy cheeks and sweaty foreheads showed that they were nervous but excited. The man sitting next to them was dressed in plain clothes and had no outstanding features other than the fact that he didn’t have any eyebrows. Blaine and Tracey smiled at the four passengers sheepishly as they took their seats on the front bench.

“Children, what are your names?” Nicholas asked from the front.

“We are Blaine and Tracey,” Blaine answered. “Blaine and Tracey Sassafras.”

“Well, Blaine and Tracey Sassafras, we are so glad to have you with us today. Is this your first safari?”

“Yes, sir.” The twins answered.

“Well then, get ready for the adventure of your lives!” Nicholas said, as he put the jeep in gear and applied his right foot to the gas pedal. Off they went, a plume of dust trailing behind them.

As they drove down the jostling dirt road, Nicholas Mzuri used his loud voice to describe their surroundings.

“There are two main types of grasslands. Temperate grasslands have cold winters and warm summers, like the grasslands found in middle and western North America. And then there are tropical grasslands, which we are driving through right now. Here, in Kenya, we have warm winters and burning hot summers. We get about ten to thirty inches of rain each year on our vast grassy fields. If you look out your windows now, you are guaranteed to see dozens of beautiful acacia and other trees dotting the rolling grassy hills.”

Tracey’s eyes wandered in amazement across the landscape. What a beautiful place! Blaine wanted to look but was busy trying to figure out how to separate himself from the long haired man who had laid his sleeping head on Blaine’s shoulder. Nicholas looked in his rear view mirror back at Blaine and laughed.

“Oh, don’t worry, my friend. Hank has narcolepsy. But he always wakes up once we get to the animals. He travels to Kenya every year for a safari. This is his eleventh trip to date.” Blaine smiled and laughed a nervous laugh.

“When do we get to see the animals?” asked the plump lady from the back.

“Very soon ma’am,” Nicholas said with a smile. “We should be driving up on some lions within a few minutes.” The lady shrieked in delight. Nicholas continued giving information.

“Lions are a part of the cat family, found only in Africa, though they once roamed throughout Asia and Europe as well. They are the grassland’s largest predator.”

“P-p-p-predator?” asked the plump man. “That means hunter right?”

“That is correct,” answered Nicholas. “But don’t worry, sir, I will keep everyone safe. Lions are carnivores. They hunt anything that they can kill, but their favorites are zebra and wildebeest. Lions usually hunt at night and rest during the day. And as you can see, it is daytime, so don’t worry my friend.”

Hank jolted awake, pulling his head off of Blaine’s shoulder.

“Carnivores are meat-eaters,” He added, as he blinked his eyes and wiped away a small stream of slobber from the corner of his mouth.

“Hank, my friend! Welcome back to the safari,” Nicholas laughed.

Nicholas began to slow the jeep down as he looked out into the grasslands intently.

“Okay my friends, I have spotted one,” He declared, as he brought the jeep to a complete stop. He turned the engine off, put on the parking brake, then pushed a button on the dashboard. With a creak of fiberglass and metal, the entire roof of the jeep opened up. All six passengers gasped in awe.

“Now you can feel free to stand up and look out,” Nicholas said. “The lion I have spotted is about one hundred yards out, standing at the crest of a small hill. He is a male lion—you can tell by the thick mane around his neck.”

Blaine and Tracey joined the other four, as all stood up to try and spot the lion.

“C’mon, Fred, get your binoculars out,” the plump lady barked to her husband.

“Patience, Pam, patience! I can’t find them in my fanny pack,” Fred responded, as he rummaged through the biggest fanny pack either of the Sassafras twins had ever seen.

“Let’s see—lip balm, whistles, sunscreen, fans, sunglasses . . . Oh, good heavens! There they are, at the very bottom,” he said, exasperated, as he pulled out a pair of binoculars and handed them to his wife.

Pam grabbed the binoculars out of his hand and stuck them on her face. She looked out into the grasslands, albeit in the wrong direction.

Hank was the first of the six passengers to spot the lion. “Oh, there he is! I can see him now.” He pointed.

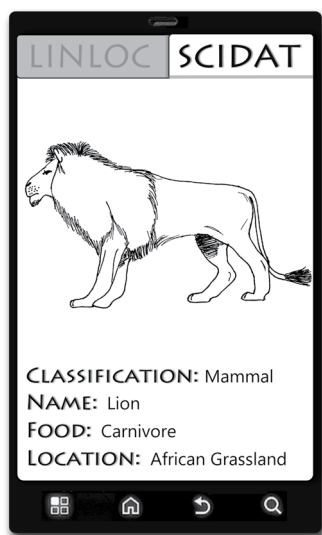
Blaine and Tracey followed Hank’s finger. At first all they could see was gently swaying grass, but then, just as Nicholas had said, they spotted the lion at the crest of a hill.

“Wow!” Tracey exclaimed, pausing to take a picture with her smartphone, “What a magnificent animal!”

Blaine also quickly snapped a photo, as he nodded in agreement.

“Pam, for Pete’s sake, you are looking out of the wrong side of the jeep. Give me those things so I can try,” Fred chided, grabbing the binoculars.

As Fred and Pam continued to fumble around with the binoculars, Nicholas began to give some more information about lions. “Lions are social animals that live in groups called prides. Prides are made up of several females and their cubs, along with a few males—one of which is dominant.”



As if on cue, the lion on the crest opened his mouth wide and let out a huge roar. The sound sent shivers down the twins' spines.

"I happen to know," Nicholas started again, "that the pride of lions this male lion belongs to has some new cubs. Does anyone want to drive in for a closer look?"

"Is it safe to get closer than this?" asked Pam, in alarm.

"No worries, ma'am," answered Nicholas with a smile. "We have never had any injuries or casualties with Mzuri tours."

Not waiting for any other responses, Nicholas started the Jeep back up and began to drive slowly toward the crest where the lion was. Blaine and Tracey were fans of fun, but this was the most intense thing they had ever done. They had definitely never been this close to a wild, uncaged lion before. Soon, they were close enough to see the other lions in the pride on the crest. They were resting in the shade of some acacia trees. There sat about a dozen more lions.

"If you look near the base of the tallest tree, you can see three cubs. They have spots when they are first born," informed Nicholas.

Blaine and Tracey immediately spotted the three cubs. They were quite adorable.

"These lions are resting right now," Nicholas continued. "When they are sitting, they usually have their paws out in front." Blaine noticed that the lion on the crest was making his way closer to the Jeep. He also noticed that the roof of the Jeep was still open. He wondered if the lion could jump up into the vehicle and the thought made him shudder.

Evidently, Pam noticed too. "Mr. Mzuri, that big male lion is coming this way," she squeaked, her eyes as big as saucers.

"P-p-predator," Fred added.

Nicholas, with no fear in his voice, responded, "Ok, friends, time to move on and see the next animal." He skillfully turned the

Jeep around, and headed slowly away from the pride.

Blaine looked back to see if the big male lion was following them. He was not, and Blaine released a little sigh of relief.

“Not scared, are you?” Tracey whispered.

Blaine shook his head no, which, of course, wasn’t a completely accurate response.

“Lions are mammals,” continued Nicholas, as they drove away. “The four basic characteristics of mammals are that they are covered with fur, they are warm blooded, they give birth to live young, and they feed their young with milk from the mother. All the animals you see on this safari will be mammals. But I thought it would be best to start at the top of the food chain. Hank, do you remember what a food chain is?”

“Sure do,” Hank responded. “It’s a chain of living things that eat each other.”

“That is correct,” Nicholas smiled. “Next, I hope we can see a cheetah, another carnivorous cat at the top of the food chain.”



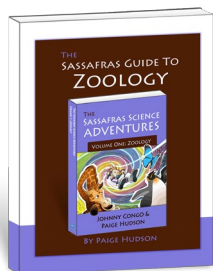
Continue your journey with the
Sassafras Twins by purchasing
your copy of this book at

SASSAFRASSSCIENCE.COM.

THE SASSAFRAS SCIENCE ADVENTURES

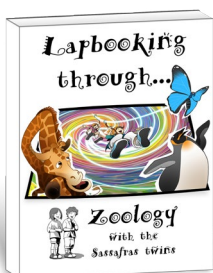
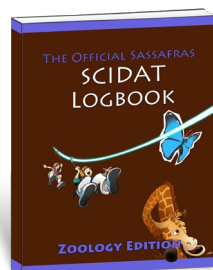
MAKE THE MOST OF YOUR JOURNEY WITH THE SASSAFRAS TWINS!

Add our activity guide, logbook, or lapbooking guide to create a full science curriculum for your students!



The Sassafras Guide to Zoology includes chapter summaries and an array of options that coordinate with the individual chapters of this novel. This guide provides ideas for experiments, notebooking, vocabulary, memory work, and additional activities to enhance what your students are learning about animals!

The Official Sassafras SCIDAT Logbook: Zoology Edition partners with the activity guide to help your student document their journey throughout this novel. The logbook includes their own SCIDAT log pages as well as habitat sheets and a zoology glossary.



Lapbooking through Zoology with the Sassafras Twins provides a gentle option for enhancing what your students are learning about animals through this novel. The guide contains a reading plan, templates, and pictures to create a beautiful lapbook on zoology, vocabulary, and coordinated scientific demonstrations!

STILL HAVE QUESTIONS?

Email them to support@elementalscience.com.

THE SASSAFRAS SCIENCE ADVENTURES