



## Chapter 1

The late-afternoon sun shone through the forest trees, leaving the ground speckled with light. Jake walked through the undergrowth, the sound of leaves crunching under his feet. His small frame often made people think he was younger than 13, but his dad reassured him that he just hadn't hit his growth spurt yet. He wore work boots, jeans, and a flannel shirt. A dark-grey stocking cap covered his short brown hair. He often came to the forest to get away from the noise and busyness of Pottersville. He had been hiking through the hills for about an hour, looking for geocaches.

A strong gust of wind started to blow the leaves around him, and something caught his eye. There was a long, skinny strip of paper that floated by with the leaves. Intrigued, Jake began to chase the paper, thinking it might be part of the cache he was trying to find. When he finally caught up to the piece of paper, he reached down and picked it up, then flipped it over to examine. What he saw was perplexing! It was just a string of letters, all jumbled up. There were no words he could make out. Curious what the letters might be, and tired from all the hiking, he abandoned his geocache search, stuffed the piece of paper in his pocket, and headed back toward home.

When Jake reached his second-floor apartment, he could hear the sizzle from the frying pan as his grandma made dinner while watching the evening news. Even though Jake was short for his age, he was still a few inches taller than her. Grandma Cromley walked with a limp nowadays, but her slow movements were paired with a quick wit and a sharp mind.

## POWERFUL MATHEMATICIANS WHO CHANGED THE WORLD

She greeted Jake with a kiss on the cheek as he came in, then said, "How's my favorite grandson?"

"Good." Jake was so exhausted from his hike in the woods that he didn't even think to show her the strange paper he found. He collapsed on the couch and fell asleep to the noise of the television news team speaking over the sounds of his grandma's cooking. The lead story showed a flashback to the ribbon-cutting ceremony for Bridger Solar Solutions, the solar panel manufacturing plant in town. They had finished construction of their headquarters and factory about a year earlier at the top of the hill in Pottersville. At the ceremony, Bridger Solar Solutions CEO James Bridger and Mayor Susan Justta smiled as they held giant scissors in front of a large red ribbon.

Standing outside the tall glass headquarters of Bridger Solar Solutions, the reporter said, "With the help of its innovative mayor, Susan Justta, and cutting-edge green energy companies like Bridger Solar Solutions, Pottersville has made it to the final round of competition to be named the Greenest Small Town in the Mid-Atlantic! The next steps in the process for this prestigious designation include a series of site visits, interviews, and inspections."

During Mayor Justta's interview, she proclaimed, "We are the greenest town, large or small, in the Mid-Atlantic region! Earning this prestigious designation has been one of my highest priorities since becoming mayor. Thanks to the innovative work being done at companies like Bridger Solar Solutions, I feel confident that our town will receive this honor."

"Yeah, while you kick out all the original citizens of the neighborhoods by buying up entire blocks of houses and doubling the rent, just to demolish them and build those fancy headquarters!" shouted Jake's grandma, irritated by what she was hearing.

Jake stirred on the couch as the second news story came on. One of their neighbors was being interviewed about her recent move to the bottom of the hill in Pottersville.

"I lived up there for 73 years! I grew up in the Forestville neighborhood. I raised my babies there just a few blocks over, and I had been enjoying my retirement in the city until I got this letter in the mail from my landlord!" their neighbor Mrs. Singleton said, holding up a wrinkled envelope.

"Would you care to tell us what that letter says, Mrs. Singleton?" asked the reporter. "Well, yes, I would!" Mrs. Singleton replied. Her aged fingers fumbled with the letter. "Right here it says, 'As of July 1st, your rent will now be \$1,450.' That's more than twice what I had been paying for years! So, I had to move down here and leave behind the only area of this town that I knew. It is dirty here, the houses and apartments are run-down, and they cost the same as what I was paying at the top of the hill! My grandchildren can't go to school up there with all their friends anymore. They're stuck down here with a school that is failing these kids!"

## THE MYSTERY UNDERGROUND

“Yes, sister!” shouted Jake’s grandma at the television screen.

“What are you yelling about in there, Mama?” Jake’s father asked as he walked through the door, as he had just gotten home from work. He leaned down to kiss her on her cheek. Jake’s father was six foot three, giving Jake hope he would hit a growth spurt someday.

“Son, Mrs. Singleton was just on the news talking about how Pottersville priced us all out and forced us to move to the bottom of the hill to make way for the mayor’s new shiny green city,” Grandma Cromley replied with disgust. “Now our grandbabies are down here going to school with textbooks older than you are, leaky roofs, mold on the walls, and 40 kids in every classroom! It’s a shame.”

The news switched to a story about fish that were mysteriously found floating dead in the Gillatook River. The reporter was standing on the bank of the river, and the water next to him was littered with floating dead fish.

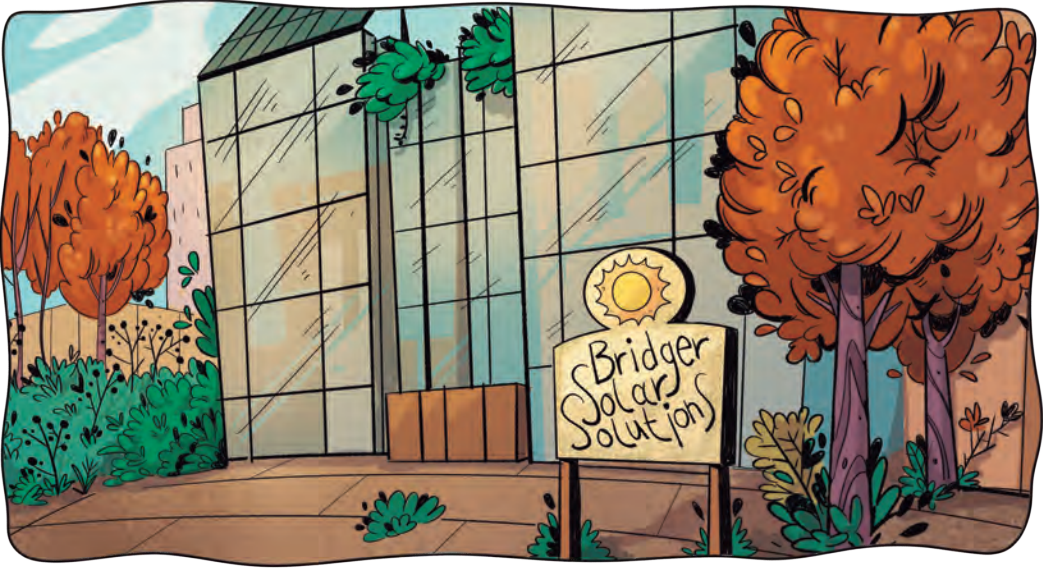
“Residents of Pottersville are growing concerned, as they have seen their river covered with dead fish for several months. As you can see next to me, it is not just a few fish. There are literally hundreds of dead fish in our view. It smells like rotting flesh, and it is so overpowering that I am wearing a mask just to bring you this shot of the river. The stench is so heavy and strong that it takes your breath away. I can’t imagine how the residents living close to the river are able to deal with it,” the reporter said.

“See?” said Grandma Cromley, exasperated. “Even the water here is filthy, while on the hill they have new schools and clean water. I’m sure they can go fishing in the rivers without having to worry about what’s lurking in the water, killing their fish! Now I know why it always smells like rotting corpses here! We used to live in Forestville, the same neighborhood as Mrs. Singleton. I remember our house was so nice and the rent was affordable. Then they go off and double our rent, forcing all of us to move. You would think they would have done something nice with the houses once they forced us out. But nooo, they go in and tear down the houses, our house, to make way for the Bridger Solar Solutions headquarters!”

“Look, Mom,” Jake’s dad said calmly as he began to reminisce. “I miss our neighborhood too. I remember the park on 25th Street where I always played basketball with my friends. I know you miss getting together with your friends for coffee at the cafe. I miss our big front porch and my bedroom upstairs. I remember how you loved your big kitchen.”

Jake’s grandma had a far-off look in her eyes as she thought about the old cafe and how she cooked the foods her family loved in her spacious kitchen. “All of that is gone now and replaced with office buildings full of corporate jerks!” she said with disgust. “You know,” she said, shaking her wrinkled finger, “I bet they’re poisoning our water!”

“Come on, Mom! Really? Mayor Justta is working to get Pottersville designated as the Greenest Small Town in the Mid-Atlantic! Do you really think she’d let those corporations pollute the river? She’s been working with the Environmental Inspection Bureau for a few months now. They regularly inspect the factories, test the water, and make recommendations for ways to run their factories in the safest way possible. And now the awards committee is coming to inspect the town and do interviews. There’s no way she’d let anything wreck her chances of winning that award. I don’t trust her after how she treated us and pushed us out to make way for the new businesses, but I know she wouldn’t let anything tarnish her image! She seems to care more about that than the people living down here at the bottom of the hill! We need upgrades to the school, the roads, the buildings, just about everything! But at least Pottersville will be the Greenest Small Town in the Mid-Atlantic!” Jake’s dad said sarcastically as he rolled his eyes.



## Chapter 2

Mayor Susan Justta wore a bright-red business suit as she walked down the broad hallway of Bridger Solar Solutions. Her blond hair was perfectly styled as always, and there was an echo of her high heels click-clacking down the hallway. Mayor Justta was an ambitious, no-nonsense mayor with a seemingly endless amount of energy focused on making Pottersville dynamic, innovative, and well respected. Her optimistic outlook helped her keep striving to fulfill her goals. She was well regarded and liked by both leaders in the business world and the residents of Pottersville. Well...some of the residents. Those at the top of the hill in Pottersville loved the bold steps she was taking to make the town a lively, business-friendly destination. They recognized Mayor Justta's plans for Pottersville were raising the value of their homes and improving their community and schools. Those at the bottom of the hill, however, were less than impressed; actually, they were downright resentful. They viewed the mayor's bold moves as gentrification that was pushing them out of their neighborhood. They were priced out of their homes at the top of the hill and forced to move to the less desirable part of town—the Crestview neighborhood. The bottom of the hill received little to no attention from the mayor, and it wasn't included in the city's plans for improvement.

None of that discontent mattered so much to the mayor, especially today. She was headed to congratulate James Bridger, the CEO of Bridger Solar Solutions, on the one-year anniversary of his company's headquarters' grand opening. Bridger Solar Solutions was



the town's largest employer, and its headquarters and factory occupied prime real estate in the business district at the top of the hill overlooking the valley. The headquarters was an eight-story office tower encased in glass and metal. It was designed with state-of-the-art architecture and was energy efficient. The factory had the market cornered on solar panels, and the company had a large team that delivered and installed the panels across the United States and around the world.

Mayor Justta enthusiastically shook hands with Mr. Bridger outside his large and lavish office. Mr. Bridger was tall, with salt and pepper hair. He wore a pinstripe suit that was perfectly tailored for him. He had a warm and confident demeanor and was decisive and knowledgeable. Despite being the CEO of a huge corporation, he spoke to people in a way that made them feel heard. His office was styled with modern, minimalist decor that he felt best represented his innovative and highly successful company. The hallway of the executive office suite was all glass because Mr. Bridger wanted to create an atmosphere of collaboration among the top employees.

"We're so glad you chose Pottersville for your headquarters and solar panel production plant, sir! Your company's commitment to renewable energy this past year is one of the key factors that led to us making the final round of the Greenest Small Town in the Mid-Atlantic competition! And your type of business is *exactly* what I want our town to be known for. You've played a significant role in putting our town on the map!" Mayor Justta said enthusiastically.

"Well, we appreciate the warm welcome we have received over the last year. We're happy to be part of this community and honored to be the first multinational company that Pottersville is partnering with. I personally appreciate all of the tax breaks you've provided us to make that happen," Mr. Bridger replied.

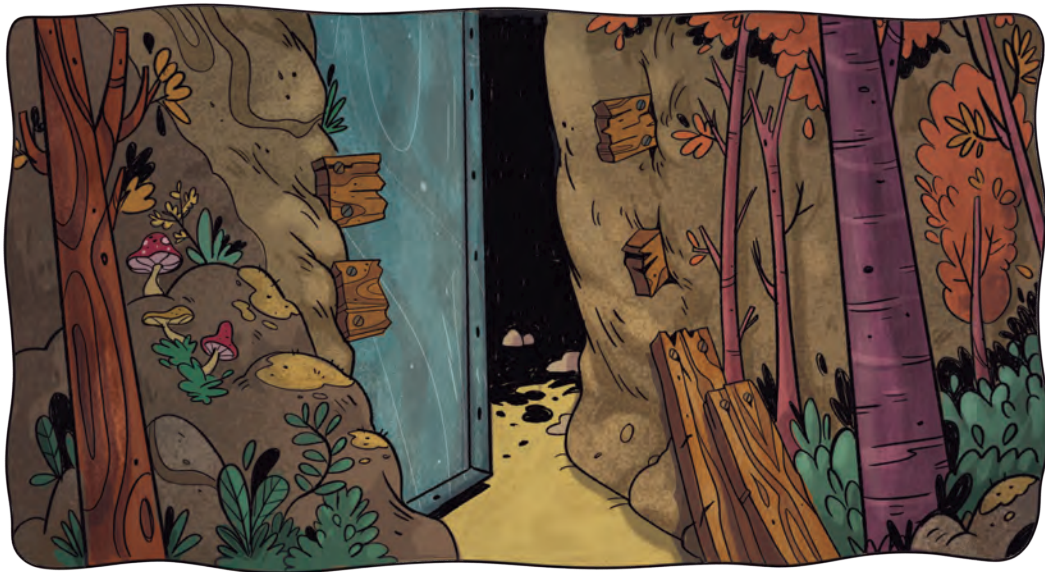
"I know we are both very busy, so let me just cut to the chase," the mayor said. "I'm sure you've heard the news reports of the dead fish at the bottom of the hill." Mayor Justta never liked to beat around the bush and always got right down to business, which most people in Pottersville appreciated. "I noticed in your waste disposal plan that the waste disposal for your factory is near the river. You know, in order for our town to be seen as environmentally conscious and to impress the award committee that will be here soon, we cannot have these types of things happening. The dead fish give off the wrong impression and detract from our opportunity to be recognized as the Greenest Small Town in the Mid-Atlantic. I have prided myself on innovation, growth, and progressive energy policies. I refuse to let some fish carcasses at the bottom of the hill damage my image and wreck our chances of winning this award. The negative news coming out of Pottersville has to stop!"

Mr. Bridger seemed equally concerned. Nodding his head in agreement, he said, "We can assure you that as a green energy provider, nothing is more important to us than

## THE MYSTERY UNDERGROUND

the well-being of our environment. We have a rigorous waste disposal monitoring process. I can assure you that we are not improperly disposing of any hydrochloric acid waste. And we recycle the silicon tetrachloride to be used again in our manufacturing process.”

“That is good to hear, Mr. Bridger,” the mayor replied. “As you know, I hired the Environmental Inspection Bureau a few months ago to investigate and find the source of the river pollution. They have been gathering background information, and they will be on-site in a few days to begin their investigation and provide regular reports to me and the local news station. They will test the water daily. We appreciate your commitment to the environment, so please keep up your monitoring efforts as well. I’m confident these negative news stories will become a thing of the past if we work together. It is important to get the river cleaned up by the time the award committee arrives.”



## Chapter 3

Jake walked briskly up the one-and-a-half mile hill off the main drag through Pottersville to continue his geocaching quest. He stared down at his phone, looking at the GPS coordinates for the next geocache. He was getting close to where he needed to turn off the road and head into the woods. When he looked up, he noticed a girl with straight, reddish-brown hair wearing a light-blue windbreaker and jeans walking toward him from the opposite direction on the other side of the road. She waved at him and he waved back.

He continued following the GPS coordinates and looked both ways before crossing the empty three lane road to reach the edge of the woods. There were always a lot of geocaches hidden in the woods near the Gillatook River because of the abundance of trees, brush, and rocks. Jake headed down a well-worn path through the woods. Behind him, he heard leaves crunching and twigs snapping. When he looked back, he saw the girl in the windbreaker scanning the woods as if she were looking for something.

“Hey! Do you need help? Are you lost or something?” he asked her.

“Huh? Oh, I’m good. Just looking for a geocache.” She paused for a moment, then added, “A geocache is a—”

Jake interrupted her. “I know what a geocache is. I’m looking for one too,” he said.

“Really? Where’s the one you’re looking for?”

Jake showed the girl the coordinates on his phone.

“No way!” she said. “Me too! Do you want to look for it together?”



“Sure. By the way, I’m Jake.”

“Hi! I’m Selah. I don’t remember seeing you around in school. What grade are you in?”

“I’m in seventh grade. I go to Green Valley Middle School,” Jake replied.

“Ah, that’s why I don’t recognize you. I go to Clear Creek Middle School.”

“Is that the new one they just built a few years ago with the big wall of windows at the entrance?” Jake asked her.

“Yeah. I love it there. So, do you go geocaching a lot?” she asked him.

“Uh-huh,” Jake said, nodding. “I live down the road off Ivy Lane in the Crestview neighborhood. I haven’t made many friends yet since moving there, and I like to get away from everything. So I go out looking for geocaches. It’s fun exploring the woods. I always find something interesting.”

Selah told Jake that when she’s in the woods, she didn’t wander too much off the path they were currently on, but she noticed several of the side paths had been getting more use lately. “Maybe it’s deer? There have been a lot killed on the road lately,” Selah said.

Jake replied, “Maybe. Where exactly did you see these paths? I never noticed them before, and I’d usually spot something like that.”

“I’ll show you. It’s not too far up the hill. Just a little further up this path. I was going to Donutville for breakfast because I got a coupon for a free cream-filled donut at school earlier this week, but I have some time. I’ll show you,” Selah said.

Jake and Selah continued down the main path. The air got cooler as they walked deeper into the woods. “See? Look over there.” She pointed to a path.

“That does look like a well-used path,” Jake said.

Jake and Selah began walking along the other path. As they walked, the trampled grass became thinner and thinner, unearthing a muddy trail where rocks and twigs stuck out. The leaves with their bright-orange hues gradually fell and sprinkled the muddy trail. Selah watched her step to avoid tripping over the rocks and twigs. When she looked down, she noticed some tracks in the mud, which she pointed out to Jake. He said, “It looks like human foot traffic, not animals. My dad and I go hunting every year, so I know what animal tracks look like, and this is not a deer path. Come on, let’s see where it goes!”

They walked up a little incline and continued following the well-used, zigzagged path. The path didn’t branch off, but it started following the base of a hill Jake had never noticed before.

“Have you ever been here before?” Jake asked Selah.

“No, I just stick to the main paths. There’s another entrance to the path about a half mile from here. But this area looks really different from that path entrance. That one is mostly flat and goes to a lake. This part of the path winds around the base of this rocky

hill. Hey, look! What's over there? Is that an old metal door?" Selah pointed to her right and started walking in that direction.

"Yeah! It looks like it! What in the world? It looks like those boards covering the door are supposed to keep people out, but the posts they are nailed into are so rotten that anyone could get them off," Jake said.

Always a risk-taker, Selah said, "Let's do it!"

"I-I don't know...I don't want to get in any trouble," Jake said nervously.

Selah looked at Jake with her big brown eyes and said, "We'll just peek in, and if we see anything that you don't like, we can just leave."

Jake shrugged and said, "I guess. You sure are adventurous!"

Selah gave him a big smile. "That's my middle name and what gives my parents nightmares!" She laughed. "It's also what puts me in the emergency room. Over the last two years, I've broken a leg from rescuing a cat and had my shoulder dislocated playing soccer. I always go with my gut, which has gotten me in trouble, but it's so much fun!"

Jake shook his head and shrugged again. "OK, I'll go with you. But if anything seems sketchy, I'm out!"

Jake and Selah removed the four wooden boards from the rotting wooden posts on either side of the door. Immediately after they removed the boards, the door opened slightly.

"Wow! It's dark in there," Jake exclaimed as he pulled the door open. A musty, damp smell drifted toward them. He pulled out his phone and turned on the flashlight. Selah stepped inside the door, with Jake right behind her, and they noticed the area was pretty small. The floor was hard-packed dirt, and there were three pathways leading from the main entryway. Selah again displayed her adventurous spirit, saying excitedly, "Let's go exploring!"

By now, she had her phone out, flashlight on, and was leading the way toward the left path.

Jake followed right behind her and said, "I think people have been in here. Look! There's a candy wrapper and it looks like it hasn't been there long. Over there are footprints in the dirt."

Selah looked over her shoulder and nodded, saying, "Let's go this way. It looks like there's something down here!"

They walked through a low arch and continued down the pathway. It was pretty narrow and felt very closed in, like someone had hand-dug a tunnel path. They walked for a couple of minutes. There were spiders scampering across the floor, and the tunnel felt stuffy. They had been steadily going downhill before they came to a room that had some natural light streaming in through a skylight. The floor was still dirt, but the walls were

## THE MYSTERY UNDERGROUND

stone and felt smooth to the touch. The room had a door on the opposite side.

Suddenly, they heard a noise that sounded like heavy footsteps. Jake and Selah stopped and looked at each other, wide-eyed.

“Do you hear that? It sounds like someone’s coming!” Selah whispered.

Jake nodded his head, frozen in fear. His mind was racing. *The door was nailed shut with boards. How is there someone else in here?* he wondered.

They saw dust that had been kicked up, then a man shouted, “Hey! Get out of here!” Jake’s and Selah’s hearts started pounding.

“Let’s go!” yelled Jake.

They both turned around and sprinted up the steady incline back to the entrance, where they burst out the door. Jake turned and slammed the door shut, racing to put the wood slats back across the door like they were before.

Jake and Selah looked at each other and shouted in unison, “Who was that?!”