

BEEES

on the roof



by
Robbie
Shell

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Dedication

To Honeybees and Beekeepers Everywhere

CONTENTS

Chapter 1	January 2	1
Chapter 2	January 3	6
Chapter 3	January 9	10
Chapter 4	January 10	13
Chapter 5	January 11	18
Chapter 6	January 17	28
Chapter 7	January 18	32
Chapter 8	January 19	34
Chapter 9	January 21	38
Chapter 10	February 9	42
Chapter 11	February 16	47
Chapter 12	February 20	51
Chapter 13	February 26	59
Chapter 14	March 23	63
Chapter 15	March 24	69
Chapter 16	March 26	73
Chapter 17	April 2	81
Chapter 18	April 9	87
Chapter 19	April 12	94
Chapter 20	May 7	97
Chapter 21	May 8, Morning	100
Chapter 22	May 8, Afternoon	107

Chapter 23	May 14	111
Chapter 24	May 23	115
Chapter 25	May 26	118
Chapter 26	May 27	122
Chapter 27	May 29	126
Chapter 28	May 31	128
Chapter 29	June 1	131
Chapter 30	June 12	135
Chapter 31	June 18	140
Chapter 32	June 23	143
Chapter 33	June 30	150
Chapter 34	July 6	157
Chapter 35	July 23	160
Chapter 36	July 30	162
Chapter 37	August 26	166
Chapter 38	September 10	169
Chapter 39	September 10	180
Chapter 40	September 11	184
Chapter 41	September 19	187
Chapter 42	September 22	190
An Afterword		196
About the Author		202
Acknowledgements		203
Endorsements		204

Chapter 1

January 2

Sam looked into the mirrored wall of the elevator as it sped nonstop from the fifteenth floor to the hotel's kitchen. The tuft of sandy brown hair that usually hung down almost to his eyes was in disarray despite the gel he had rubbed in five minutes earlier. Two cowlicks remained defiant, standing straight up, as if someone had attached a small whiskbroom to the top of his head.

Six thirty a.m. It felt like the middle of the night, and the backpack that hung off his shoulder seemed unusually heavy. Had someone secretly filled it with thirty pounds of wet sand?

He knew his father had already been awake for an hour overseeing three assistant pastry chefs as they began to whip huge vats of cream, beat dozens of eggs, and do the prep work for dough, batters, icings, and fillings. That was just for starters. The Meadows hotel and its four-star Bella Vista restaurant were catering a post-holiday afternoon party, and the centerpiece was going to be a huge cake in the shape of a Porsche racing car, its sleek body covered with silver icing anchored by chocolate wheels.

Sam navigated his way through the countertops to a small table at the back. He reached into one of the aluminum refrigerators for milk and juice, poured himself a bowl of cereal, and thought about the day ahead—January 2, the beginning of the long, cold,

post-holiday slog. It was hard to believe that he was already halfway through seventh grade, still harder to believe that it was six months since his father had been hired at the high end Bella Vista in midtown Manhattan and given, along with the title of head pastry chef, the use of a two-bedroom apartment at the top of the hotel.

“Bye, Dad,” he shouted to Nick, jumping up from the table and knocking over a milk carton as he bolted for the service door leading out to the street. Uh-oh, I’m in for it now, he thought. Time for the lecture on slowing down, watching what I’m doing, never assuming that other people will clean up after me. “Dad, I’m sorry about the milk.” Sam went over to the table where his father was preparing a small bowl of orange frosting for the Porsche’s racing stripes. “I’ll wash the floor when I get home.” An easy promise. No way the staff was going to let a puddle of milk sit there all day.

His father stared, one eyebrow raised, at the mess. “Sam, we’ll take care of it, just this once. You can’t afford to be late to school—again. Remember your New Year’s resolution.”

You mean *your* resolution, Sam thought, pulling his New York Mets cap out of his backpack while Nick launched into one of those thankfully short, man-to-man speeches: “Okay, son, this is an important day, the start of the second half of the school year. It’s going to be getting harder and harder, but I know that you will do well, like always, and I am so proud of you, and get going so you won’t be late, and I love you,” or something like that. The ritual hug, and Sam was out the door, chocolate chip muffin in one hand and metro pass in the other. With luck, the subways would be running on schedule, and he could slide into school, barely awake but on time.

Matt, Ella, and Tristan were waiting for him outside the main auditorium of the Manhattan School for Science, the private and

very prestigious midtown school for grades seven through twelve. January's opening assembly was scheduled to start in five minutes, and eighty seventh graders were heading for their reserved section in the back.

"This is going to be a long three-and-a-half months—no real break until spring vacation, more papers, more labs, more group assignments. Wake me up when it's April," Sam whispered to his friends. They found their seats, so far off to the side that Sam was sure no teacher would see his eyes close, his head droop ever so slightly onto his chest. He dimly heard the principal's droning reference to "the always brilliant, always mind-bending ideas that our seventh graders come up with for the science competition."

Then she went off script. "This year, for the first time, the winning team is being invited to Washington, D.C., for an event sponsored by the National Science Foundation that will give awards to the best projects in ten different categories."

Sam felt the back rows of the assembly suddenly jolt awake, as if an invisible rope had pulled their spines straight up out of the usual morning-assembly slouch. "That means you will be competing against winners from other seventh grades around the country," the principal said. "But win or lose, our team will be the NSF's guests for a three-day weekend that will include a visit to Capitol Hill, the Supreme Court building, the Air and Space Museum, *and* a meeting at the White House with the President of the United States!"

There was more. In another first, the principal announced that the competition this year would continue through the summer rather than end in late May, with the winners to be chosen at the beginning of school in September. "During the spring, you will have time to dive into your chosen projects and then present a comprehensive progress report to your faculty science advisor by the end of school

in June. At that point, we will choose eight projects out of the twenty that we feel are showing exceptional promise, and those eight teams will have the option of using the summer months to continue their explorations.”

She raised her arm in a slightly awkward rallying cry: “Let the competition begin!”

The science project. Sam had forgotten about that, but now a few sentences from the seventh grade syllabus slowly resurfaced: Students were instructed to divide themselves into four-member teams, choose a topic, and do all sorts of research using whatever resources in whatever formats they could find. He remembered one particular phrase in the syllabus because it sounded so *adult*: Students would be judged on “how convincingly they show the relevance of their topic to the world beyond the classroom.”

“Good sell, I mean about the science project,” Tristan said to Sam as they left the auditorium with Matt and Ella. “But it’ll be hard to keep up the excitement. I mean it’s only January. Winners won’t be chosen for nine months.”

Ella pointed to four students clustered into a tight circle off to the side, their voices low, their heads bent forward as if they were plotting revenge on an overly demanding gym teacher. “I don’t think that’s going to be a problem,” she said. “The human wrecking ball coming our way will make sure no one forgets there’s a contest with a winner-take-all prize at the end.”

Sam watched Reed, followed by his gang of three, promenading down the hall towards him. He looked especially giraffe-like today, with his elongated, slightly arced neck and small, flat ears pinned onto his head like crooked commas. All that’s missing, Sam thought, are the two “horns”—actually, bony knobs that grow out of a giraffe’s skull and are used to woo mating partners. How appropriate.

Reed stopped, taking in Sam and Tristan and lingering for a moment on Ella. “Hey, guys,” Reed smirked. “Good luck on the science project. As if you stand a chance.”

He swiveled his neck around to look at Matt. “You know what we have going for us? The fact that you’re not on our team. Any idiot can predict how this is going to end.” His parting words shot out like little bullets: “Washington. D.C. Here. We. Come.”

He sauntered off trailed by his friends—short, squat Miles; Charlene, her oblong gold earrings swinging like tiny nooses; and finally Jeremy, so thin and pale that from the side he looked like a cardboard cutout of a boy instead of the full-bodied, flesh-and-blood model.

“Why does he have it in for you?” Sam asked Matt as they headed to the basement for their biology lab. “What happened? Is this some ancient grudge?”

Matt shook his head. “No idea. Maybe because in our sixth grade Greek Games competition, I beat him in the 200-meter sprint, the hundred-meter sprint, the long jump and the final, most important, event of the day, the pie-eating contest.” Matt grinned and pounded himself on the chest, swatting away Ella’s hand as she tried to poke his stomach. “Reed is just a big coward who gets off on attacking anyone he thinks won’t fight back. So Sam, the science competition has a lot at stake. It’s us against them, good against evil, heaven against hell.”

He grinned, rubbing his hands together, then paused, as if an uninvited thought had suddenly skidded across his mind: “And by the way, what awesome idea is going to win us first place?”

Chapter 2

January 3

Sam ignored the tempting smells coming from Bella Vista's kitchen as the staff began prepping for the evening's four-star performance. "We need to start thinking about a topic. Now!" He looked at Matt, Ella, and Tristan gathered in the back corner of the empty dining room. "That's going to be more important than anything else we do for the next few weeks, right?"

Matt pumped his fist. "Right. Yeah, I'm psyched. And I'm hungry. Can we raid the kitchen for a quick snack? I think better when I'm full of protein."

"Protein?" Ella narrowed her eyes. She was sitting on a stool, her long, ash-blond hair caught up in a ponytail, her oversized sweater and collared shirt underneath covering the top of her jeans. "Why do I think it's not protein that you're after? And it's not really a kitchen that we're raiding. It's more like the bakery at a high-end department store, except that you don't have to pay for anything. But for you, Matt, I'm sure we can find some hard-boiled eggs."

Matt threw up his hands. "Okay, so I don't need to go heavy on the protein. But you have to admit: Brownies and cookies, or maybe a little cheesecake, a few cannoli sound perfect. You're so

lucky, Sam, to be living in this place. Everything you want just one elevator ride away.”

Everything I want? Sam repeated the phrase to himself. No. What I *want* is to go back to what my life was like a year ago. For that, I would trade all the desserts in the world. He took a deep breath: Keep looking ahead, moving forward, focusing on the present—phrases his father had spouted when they left their home and headed for a new beginning in a new city.

Matt was on the move. Incapable, as usual, of simply rising from a chair, he leapt up, landing squarely on both feet, hands raised, ready to sweep aside any and all enemies. It was a surprisingly nimble move for someone almost six feet tall who weighed close to 180 pounds and wore a size twelve shoe.

Sam followed him as he pushed through the swinging doors into the kitchen. “We’re here!” Matt announced to the staff. “Is there any food that you’re thinking of throwing away? We can help you with that.”

Miguel, one of the younger members of the kitchen brigade and the only one with tattoos of angel wings on both his forearms, feigned a look of great relief. “Yes, we were wondering when the sanitation crew would come by. Without your help—especially yours, Matt—we would have been stuck with all the cleanup.” He pointed to one of the countertops. “Here’s a plate of food for your immediate *disposal*.”

The cookies went first, then four pieces of cherry pie and finally, a wedge of blueberry cheesecake divided into four parts. Matt ate three of them. “I’m full,” he announced. “I could use some fresh air.” He widened his eyes at Sam, who gave his head the slightest nod. It was code for: roof time.

On the 16th floor, at the end of a dark, musty storage area, Sam pulled down a trap door with steps going up to a small landing. He had found his way there just days after he and his father had moved into the hotel, when he was feeling caged in by the kitchen at one end, the new apartment at the other end, and a claustrophobic elevator connecting the two. Sneaking out onto the roof one afternoon, he had sensed for the first time that he could catch his breath, that there might be room for him here after all.

It was their third visit to the roof. Sam led the way as they climbed out through an unmarked steel door. And there it was, Manhattan on a dazzling January day—the windows of tall buildings catching the afternoon sun, cars like little Pac-men slowly winding through the grid of avenues and streets, the southern border of Central Park opening up a world of trees and curving walkways that stretched as far as they could see.

“I bet no other kid in the school has anything like this,” said Tristan. “It’s big. It’s quiet. No one knows where we are. We should make it our official science project meeting place.”

Sam shook his head. “Listen, guys, I’m already feeling guilty about coming up here. We need to hold off, at least until I let my dad know what we’re doing.”

“In that case,” said Matt, “I’m going to take one last look.” He sprinted over to the low concrete parapet that ran along the roof and climbed onto it, taking a bow and then throwing up his arms against the wintry blue background of the sky.

Ella shrieked. “Matt! Get down, now! Do you hear me? Now! You’re crazy! Sam, Tristan, tell him to get *off!*”

Sam ran up to Matt, stopping two feet from the ledge. “This is so *not* cool,” he shouted at him. “If you don’t get down in two seconds, I will never speak to you again.” No response. “And I will never, ever let you into my kitchen for as long as I live.”

Matt jumped down. “Okay, okay, relax. I wasn’t in any danger. I wanted to see what it felt like to be that high. It was awesome, like I could lift off and fly anywhere I wanted, all the way up to that old monastery we visited or down to the Staten Island ferry. The whole world below me, and I would be on top. For once.”

Ella looked at Sam and managed a quick smile. “Life without your father’s cheesecake suddenly opened up before him,” she whispered. “It’s good to know what our *leverage* is.”

Back in the fifteenth floor apartment, Sam collapsed on the living room couch. “Just in case I didn’t make it clear, the roof is most definitely off limits, for now.” He spoke to the group but finished up with a long, cold stare at Matt. “So let’s move on. We need to start thinking about the science project. And remember, there’s a lot riding on this. We could be the first science team our school sends to Washington, D.C., and the White House. We need an idea that is so creative, so unusual, that it will leave all the other teams eating our dust.”

Chapter 3

January 9

Sam walked out of Bella Vista's kitchen with a plate full of leftovers from the previous night's dinner and sat down next to his father. It was Monday, one week after the kickoff to the science competition. The dining room was closed to the public, which meant the two had the place to themselves.

"Our volleyball team won our second game on Friday, no thanks to me," Sam started off. "I stink. Our record is now two and five. You can safely skip the playoffs." He grinned: It was a joke. His father could never make it to any events that took place in the afternoon. It was one of the busiest times of the day for the pastry staff.

"But the big news is that ideas for the science projects have to be presented to a faculty committee for review in less than two weeks. If we're late, we automatically lose half a grade in the final scoring. Which means we need to come up with a big idea. Fast."

He paused again. Normally you would be all over this, Sam thought. But you're not. Something's wrong.

"Dad?" Sam felt a chill run up and down his back, the kind that usually signaled the arrival of very bad news. He stared at Nick, suddenly noticing how the chef's hat that always sat perfectly straight on his father's head was now tilted; actually it was drooping. And the pristine white chef's coat that always draped elegantly over

his body, even on the crazy-busiest days, had food stains on the front and looked huge, like it had swallowed him up, leaving just his head poking out of the top.

“Dad!”

Nick’s eyes finally focused on his son. “Sorry, Sam. I’m just thinking about the big event tomorrow night. Lots to do, and I’m behind on the design for the cake. It has to be really special.” The thought hung for a moment in the air, more like a warning than a statement. “Really special. We’ll talk later. You can tell me what’s going on at school. I want to hear it all. But not right now. Too much to do.”

He bent over so that his forehead rested briefly against Sam’s own. It brought up the memory of many nights in their old house when Nick would come in late from work, tiptoe into Sam’s room and gently tap his forehead against his son’s. The lightest touch, but Sam always felt it, even in his sleep.

And then Nick was off. Sam stayed at the table. I’m right, he thought. Something’s wrong.

Approximately twenty-four hours later, before the dinner guests were due to arrive at Bella Vista, Sam snuck into the back of the kitchen, his slender frame easily hidden by one of the big wooden cupboards. He knew that Simon, the head chef, always met with Nick before every dinner to confirm that final preparations for the dessert course had been completed. They had. Occupying the place of honor on a big round table off to the side was Nick’s latest creation—a foot-tall chocolate cake in the shape of a Steinway grand piano, its tiny keys etched in with black and white frosting, the Steinway & Sons logo block-printed in sugar granules dyed gold.

“This is spectacular.” Simon patted Nick on the back. “No

one in any of the five boroughs makes cakes this beautiful.” He paused. His voice got softer, flatter. “Armand and Elaine just gave me the latest figures,” he said, referring to the hotel’s chief investor and property manager. “They’re not good. Best and its splashy menu are killing us. It’s like a big vacuum has suctioned up our customers and dropped them at Best’s door two blocks away.”

Simon and Nick walked towards the dining room, but Sam could still hear enough to get the message: A new restaurant called “Best” had opened in the same neighborhood and, within weeks, had become “the place to go.” Bella Vista’s dinner reservations were way down, which meant that the restaurant and its catering business were both losing money. Sam caught phrases like “shorter hours,” “simpler menus,” and then, more ominously, “possible layoffs” and “excellent references.” He saw Nick’s shoulders begin to sag, each pronouncement from Simon an invisible rolling pin pounding him lower and lower into the floor.

Sam caught his breath. He realized, in one of those hair-on-end thunderbolts of insight, that if Nick lost his job, they would have to move out of their home at The Meadows. Home? Had he really used that word? He had always described where he lived as “the staff apartment” or “the fifteenth floor.” But it was home, even if his father didn’t own it, even if there would never be room for a drum set. Apartment 15F was where he had been able to leave behind sad memories and to focus, as his father had advised, on the future.

Now, all of a sudden, his friends, his school, the big sprawling city he had only begun to explore—all seemed rootless, like the façade of a Hollywood movie set, two-dimensional, temporary. If an upstart new restaurant could destroy a foundation that had seemed so solid, then nothing was safe. Looking to the future didn’t seem like such good advice after all.

Chapter 4

January 10

Sam pulled Ella into a computer lab that had just emptied out. “Ella, I need to tell you something, but you have to promise not to tell anyone, okay?” He didn’t wait for a response. “My dad’s restaurant is in big trouble because a new place down the street is stealing a lot of its business. Bella Vista doesn’t even have a waiting list for dinner reservations on the weekends anymore. I haven’t seen him look this upset since...” He stopped.

“Why can’t they just buy more advertising, or get someone to write a great review?” Ella quickly filled the silence. “My mother says it’s the top restaurant in the city. She would know. She eats out with people from her company about every other night.”

Sam shook his head. “It would take a lot more than one good review to turn things around. It’s that whenever anything really hot comes up, people go chasing after it, like they’re afraid it will disappear before they get to say they’ve been there. They don’t care if a place closes and people are thrown out of work.” Again.

Ella was looking at him strangely. “Come on. What are you thinking? You look like you’ve seen a ghost.”

“No, no ghost.” Just the memory of lives unraveled, turned upside down in the time it takes a shooting star to blaze across the

sky and fall to earth. Best to improvise. “Yeah. So I just realized I don’t have an article picked out for Harriton’s class. With my luck, today is the day he’ll call on me. I need something fast.”

Ella headed down the hall. “Don’t worry about your dad. Mine’s always fretting about some crisis in the fashion business, and then it seems to get miraculously solved. Until the next one. Let’s worry instead about the science project. Whatever we come up with, it has to be better than anything Reed and the super-obnoxious Charlene think of. I’ve decided I agree with Matt. This is about more than a science competition. It’s about good versus evil, light versus dark, us against a bunch of bullying, blood-sucking lowlifes. Does that cover it?”

Sam burst out laughing, the shadows swept aside by Ella’s alliterative rant. “Wow, Ell. I’m impressed. ‘A bunch of bullying, blood-sucking lowlifes’ pretty much says it all.”

In a seat at the back of a nearly empty computer lab, he pulled up the latest edition of *The New York Times*. David Harriton, the notoriously demanding seventh grade history teacher, required his students to bring in a current events article every Wednesday and be prepared to summarize it for discussion. There were always muttered complaints about the relentlessness of the assignment—*every week?*—but Sam had to admit he always looked forward to this class more than any other.

His eye was caught by a weird headline on the *Times*’ home page: “Colony Collapse Disorder: Cancel the Blueberry Pancakes.” There was an even weirder photograph underneath showing a bunch of bees crawling over what looked like tiny empty cutouts in a cardboard milk carton.

The article described a syndrome that was causing the sudden disappearance of honeybees and the collapse of almost half

the country's beehives. Since bees are responsible for pollinating most of the country's one hundred major crops—everything from apples, strawberries and blueberries to almonds, cucumbers and cantaloupes—Colony Collapse Disorder, or CCD, was having a devastating effect on big farmers and beekeepers. It could soon be felt by food shoppers as well: The article cited recent price hikes in the fruit and vegetable sections of local grocery stores.

In response to CCD, the *Times* article went on, more landowners were being encouraged to use fewer pesticides, which some research scientists contend are toxic to bees in ways that aren't fully understood. For example, herbicides, also known as weedkillers, can kill plants that bees depend on for nectar.

Sam focused on something else the article pointed out: Because of colony collapse, more and more people were becoming backyard beekeepers, setting up a few hives, or colonies, of their own in order to do their bit for the environment, but also to guarantee themselves a supply of honey. Some of them had joined a beekeepers association that advised city people on how to start their hives and—more importantly—where. Apparently it wasn't just backyards where hives could be found; it was also in community gardens, on apartment terraces, or wherever a tightly packed urban population could find space.

Including rooftops.

Bees, thought Sam. Beehives. Rooftops. An idea was stirring in the back of his head: honey ... rooftops ... bees ... Bella Vista ... science project. Was this the answer? He could hardly wait to get home.

Sam cornered Nick in the kitchen just as the staff was cleaning up from the dinner service. "We did pretty well," Nick

said, looking at the big piles of dirty dishes waiting to be washed. “Phew. I’m beat. Did you want to ask me something? You seem to be hovering.” Nick smiled at his son.

He’s in a good mood, Sam thought. So get the bad stuff out of the way now, like the fact that I hid in the kitchen so I could listen in on his private conversation with Simon.

He ran through it quickly, watching as Nick’s face went from angry (red flush) to resignation (big sigh). “You’re right, Sam,” he said. “We’re losing customers to Best. It’s practically in our backyard, and its name is brilliant: Simple and easy-to-remember, and it suggests, with just one word, that its food is better than what you will find at any other restaurant.”

Yes, Bella Vista was elegant, and the food was excellent, Nick said, “but Best is innovative and trendy. It’s the new kid on the block. We’re the old kid on the block. You’re right about the waiting lists, too. They’ve just about evaporated.”

In fact, Nick said, sometimes, at both lunch and dinner, there were empty seats. At Best, on the other hand, diners who hadn’t been able to get reservations waited in the restaurant’s lobby hoping to cash in on any late-minute cancellations. He gave a weak smile: “The joke going around is that unless a woman is having a baby *that moment*, or a man is having his gall bladder out *that night*, no one will give up a reservation. In short, Best is eating our lunch.

“What’s worse,” Nick continued, “is that Best’s menu allows diners to choose a dinner by color.” A red night might offer shrimp scampi, smoked beet casserole and cherries flambé. A green night might feature fettuccini verde, roasted asparagus and key lime pie. “It’s gimmicky, but it’s caught on. People aren’t just talking about the meal. They compare dishes. They try to guess what Best’s chefs will do next to create their color palettes....” He paused. “Armand

and Simon aren't optimistic. We're all wondering how long we can keep the place open."

That's my cue, Sam thought. The lines he had rehearsed earlier in the day came bubbling up. "So, Dad, what Bella Vista needs is its own way to stand out, something that isn't just a gimmick, something that people might think is clever but that also makes them feel good. When customers get tired of this color game—you said yourself they follow the latest trend—then you'll have something to bring them back to Bella Vista."

Nick rested a hand on Sam's shoulder. "I like that you have such faith in us. But tell me, just what exactly is that 'something?'"

"I'm working on it, Dad." Sam lifted his little finger to the corner of his mouth and raised his eyes to the ceiling—his best Mini-Me adaptation. It always got a laugh out of Nick. "I'll let you know when inspiration hits. For both of us."

Actually, inspiration had already hit. But before he could move ahead, there were three important people who needed to be shown the brilliance of his idea.

Chapter 5

January 11

In the fenced-in basketball court behind the Manhattan School for Science, Ella, Matt, and Tristan were already huddled together trying to ignore the freezing drizzle. “You’re late.” Ella, her ponytail looped around and partially hidden under a big wool hat, shot Sam a hostile look as he walked up. The team had agreed to spend their lunch period outside where no one could overhear them brainstorming ideas for their science project.

“Sorry,” Sam mumbled. “The Spanish quiz went long. But I’m here. Let’s get started. We have a little more than a week to come up with an idea. Who’s got one, even a half-baked one? Or should I say half-frozen one?” Okay, so he hadn’t really expected anyone to laugh.

Ella pointed to Tristan. “You’re the physics expert. We’re counting on you for a dense, impenetrable, brilliant—”

“The impact force of falling objects,” Tristan blurted out. “We could analyze different cushioning materials, like hard hats or rubber floors, to see how much they reduce the damage. Do you ever watch *MythBusters* on the Discovery channel? They had a show where they dropped a piano onto the roof of a house and tried to figure out its impact. We could do experiments, too. We could figure

out which materials offer the most protection, depending on what's being dropped and what it's being dropped on. There's a lot of calculations involved. We'd have to do some work to learn them, but then we could build our own models, create some useful software programs. It's a project that would meet the 'relevance' criteria."

No one spoke. Tristan lightly rubbed a small scar—the result of a biking accident—that ran in a straight line across the bottom of his chin, its thin white ridges standing out in stark contrast to his brown skin. He does this, Ella had once told Sam, whenever he feels especially anxious or tense, like now, or when his brain is working overtime, a frequent occurrence. "Your enthusiasm is overwhelming," Tristan said. "Maybe I'll look into this sometime on my own. So who else has an idea?"

Ella piped up. "I was thinking about a project on how houses and office buildings could use more renewable energy. It would mean analyzing different alternative power sources, like solar, wind, and water and probably a bunch of others I don't know about."

She started to describe a trip with her parents to a home in southwestern Pennsylvania that was built over a waterfall. "It was designed by Frank Lloyd Wright, one of America's most famous architects, and it was the weirdest, most beautiful house I've ever seen, but what was really incredible was how—"

Matt interrupted her in mid-sentence: "But Ella, doesn't that just mean using solar energy for heating and cooling? Hasn't that already been done a lot? I mean what could we offer that's new? I'm not sure this makes for a whole project. Or at least, not a *winning* project."

Matt, as usual, was interested in winning, or, as he often put it: "It's not whether you win or lose. It's whether you win." Sam figured it came from having an older sister who happened to be a

star—co-captain of the girls’ soccer and tennis teams, captain of the debate team, a National Merit Scholarship finalist. Still, it couldn’t hurt the project if Matt was driven by a need to be number one in something. I’m just as driven, Sam thought, and the consequences of losing are so much greater.

Ella glowered at Matt. “Okay, your turn. Make it fast. And it better be spectacular.”

Matt glowered back. “Jeesh, Ella. Lighten up. Yeah, it’s cold, but you don’t have to turn into the wicked witch of the East ... or is it the West? I can never remember which witch is which ...” He began to laugh, but choked it off after a quick look at his audience. “Okay, so last night at dinner, we were kidding my mom about how every winter when we were little she would tell us to wash our hands whenever we touched anything outside the house—like a doorknob or a basketball or some other kid’s backpack. We didn’t do any of that and hey, we survived!”

Ella rolled her eyes. Matt sped up his delivery. “But maybe for our project we could look at different kinds of bacteria—why some grow, why some don’t, which bacteria are the good guys and which are the really bad ones. My dad said we could test how heat and moisture and other things affect the spread of germs and why some people get really sick but others stay healthy. We’d have to get—”

It was Sam’s turn to interrupt. “That sounds really good, Matt, except yesterday I heard Jamie talking to one of the science teachers about his team’s idea to do what you just said—study ‘microscopic organisms,’ like bacteria and viruses and germs. They’re planning to spend some afternoons working in a lab at Mt. Sinai Hospital where Jamie’s mom happens to be head of the microbiology department. I would say they pretty much own that topic.”

All eyes turned to Sam. “Okay, I have an idea, too. It’s from reading *The New York Times* last week and then doing a lot of research. But before I tell you what it is, I’ll tell you why it’s good.” He ignored the exaggerated calisthenics coming from Matt.

“We all know that HineLine is a tree hugger and an exercise freak,” Sam said, referring to the teacher in charge of the seventh grade science curriculum. “For starters, she runs the New York Marathon every year, she has a community vegetable garden somewhere in Brooklyn, and she’s always trying to organize hiking and kayaking trips.” Which means, he went on, “she would probably be interested in a topic that has something to do with the environment... like honeybees.”

Honeybees. The word floated up there, wafting lazily along in one of those comic book thought balloons. “So yeah, we could study what role bees play in our ecosystem, how they are one of our most important crop pollinators, how their hives are organized, but most importantly, why these days they’re dying off by the millions. But I’ve saved the best for last.”

He was speaking fast, trying to get it all out before the bell rang for fifth period. “We would set up our own hives on The Meadows’ roof so we could learn about honeybees first hand. It means we could produce honey for ourselves and also give some to my dad for his restaurant. We would be the school’s only rooftop beekeepers. We would be doing something relevant, meaningful, global ... all those syllabus words....” Sam paused.

Tristan reacted first. “I saw that same article in the *Times*,” he said. “The hexagonal cells were amazing. The bees make them out of wax produced by their own bodies, and then use them to store honey.... It’s almost like alchemy—creating complex systems out of very little material and in a very small space. Everything seems

to work together so neatly, like some master plan was embedded in every bee's DNA. If we go ahead, I'll do the research on the structure of the hive."

Wow, thought Sam. Unlike me, he actually read the whole article and understood it, even the technical parts. No surprise there. He knew that Tristan's grandfather had been the only African American on the team of engineers responsible for designing one of the first personal computers. And no surprise either that Tristan had been accepted into a programming course offered two afternoons a week by Columbia University for exceptionally gifted middle and high school students.

"Tristan, you get it!" Sam offered a mock salute. "Not just the mechanics, but the mystery. I'm counting you as a 'yes.'"

That left two to go. Matt, staring off into space during Tristan's response, landed back on earth, a smile just beginning to light up his face. "So, despite what you said, we could go back on The Meadows' roof. Right? It could be our official meeting place, and we'd keep it stocked with our own private supply of high-nutrition baked goods—you know, to keep our brains functioning at the highest level." He smiled sweetly at Ella.

"So like you, Matt," she smiled sweetly back, "to focus on what's obviously the most important part of the project—your food intake. Or perhaps it's that we now have proof of what we always suspected, that your brains are in your stomach."

Even Matt had to laugh. "Yeah, I'm a walking medical miracle. But at least we won't be stuck in a lab all day, or even in the library. We would be doing research on living things...." He stopped. "But Sam, honeybees? Seriously? It sounds like the subject of a picture book for three-year-olds. I mean, is that topic complicated enough to win a prize?"

Tristan turned slowly around to face Matt. “Complicated enough? Matt, I don’t think you get how complicated our environment is, and how bees play an incredibly important role in it, and how life in the hives is continually being studied because there is so much we still don’t know about bee society.”

He looked at Sam. “But I agree with Matt. We can’t just recycle the same facts that people already know about bees. We need to come up with something else—like new data, or some experiment that no one has tried before. That’s what would set our project apart. We wouldn’t just be regurgitating what someone, somewhere, already knows.”

Ella was next. Her response surprised everyone. “I can’t imagine what I would do if honey disappeared,” she said. “I put it on toast, pancakes, crackers, bananas, or I just eat it straight out of the jar. And it’s in the Bible. You know, the land of milk and honey? That’s what a lot of people lived on. Milk I could skip, but honey ... So Sam, count me in.”

The bell rang. “Honey on *bananas*?” Matt whispered to Tristan as the two of them headed off to class. Just before disappearing through the double doors, he turned back to Sam. “I know what we can call our project: ‘No Bull, Just Buzz.’”

Sam could imagine a collective groan. He and Ella walked slowly back into the school building, a free period ahead of them before the next class. “I think we’re on,” he told her. “I think you tipped the balance.”

Ella headed off for the library. “I meant what I said about honey. Just think of the hive—it’s an efficient home, after all, and if you remember, that was the theme behind my idea for the project. A place where people, or insects, can live and work in ways that are resourceful and sustainable and communal—all those buzz words

that people use when they talk about our planet.”

Another smile and she was gone. Sam was reminded of his first day last September in a new school, one where most of the kids in his class already knew each other from the K-6 they had attended a mile away. He did the obligatory humiliating thing—fumbling through the lunch line and dropping his tray while he was looking for a seat, any seat, to slide in unnoticed. Suddenly a girl he had never seen before was there, tapping him lightly on the shoulder and motioning him to a nearby table.

“Here, sit with us,” she said, leading him to a group of eight kids already midway through lunch. She pulled a chair over next to her seat. “What’s your name?” she asked, then: “Hey, everybody, this is Sam.” That’s all it took. It was like landing on soft grass after being caught up in a windstorm. From that point on, the others simply absorbed him into their group—an ameba gently rolling along and pulling in an errant cell. Gradually, without any noticeable effort, he and Ella, Matt and Tristan became a subset within the set. A math class term that finally meant something real.

He never asked Ella why she had singled him out, and she never mentioned it. It was just like her. She didn’t talk much about her parents or her two younger sisters. Sam knew that they lived in a townhouse on the Upper East Side, her father was an executive in a fashion company, and her mother was helping to launch a high-tech startup in one of the boroughs. And he knew, from Matt, that one of her sisters was diagnosed with bone cancer when she was eleven. The cancer was in remission, but the treatment had required amputation of her left leg above the knee.

And finally, he knew that Ella was often the one who cooked—or *assembled*, as she once described it—dinner when her parents worked late. Geez, Sam thought: She gets points as both a

worker bee and the queen bee. Would she like that comparison? He wished he knew.

Sam sat on the kitchen stool at the end of one of the counters, aware that he had, at least for the moment, his father's full attention. "Okay, Dad, just sit down and don't say a word until I finish talking. I have one totally crazy idea that might help us both, but we'll have to get all sorts of permissions, and we'll need to clean up the roof a bit, and we'll have to get the right kind of hives and—"

Nick's voice jumped up an octave: "*The roof? Hives?* Sam, what are you talking about? Who's getting hives? On whose roof?"

In that brief moment, Sam realized he was about to experience a mind-bending, relationship-altering moment: He was going to lead his father down a path that could change their lives. "Listen, Dad, what if, as part of my science project, my team sets up some beehives on the roof of The Meadows, and we become beekeepers, rooftop beekeepers. It will be part of our report on this thing called 'Colony Collapse Disorder' which is destroying bee colonies and will probably make it harder to find the fruits and nuts you use in a lot of your pastries."

Sam went on to what he hoped would be the punchline. The rooftop hives, he said, would produce honey that Bella Vista could use, but that could also be given out to the restaurant's customers. "You would be sending a message to people about where their food comes from and why it's important to protect the environment. It won't be gimmicky, and it will make Bella Vista stand out like it used to."

Nick stared at his son. "So let's see if I get this. You and your team choose honeybees for your science project, and as part of your research, you become beekeepers on the roof of The Meadows?"

He paused for a minute, looking past Sam to a bin full of fresh vegetables. “Actually, our location is perfect, just a few blocks off Central Park. Hundreds of its trees and gardens rely primarily on bees for pollination.”

Sam suddenly realized he wasn’t sure how pollination actually worked. Oh, how that was going to change.

“At the right moment,” Nick continued, “you and your team collect the honey, share it with Bella Vista, and it becomes a selling point for the restaurant.” He paused. “Just how do you see that working?”

Sam looked at the small containers of jams, jellies, and pâtés lining one of the long countertops. “Okay,” Sam said. “What about if we—I guess that means you—create new dishes, even whole new menus, using the rooftop honey as one of the ingredients? And then you fill little pots with it and put them out on the dining room tables so that customers can take home whatever they don’t use.”

Nick began to pace around the counters. “With a clever design and colorful, new logo, it would be like an advertising campaign for the restaurant that happens to also support a good cause—the bees.”

Sam bounced up and down on the stool. “Yes! And it wouldn’t have to just be honey pots. We could also have honey lollipops, honey muffins, honey cookies, honey bubble gum...”

He stopped. Nick was smiling, laughing, the first joyous sound Sam had heard from him in weeks. I’m on a roll, he thought. Keep it going.

He explained how a lot of the action in the hives starts in the spring but gets really busy during June and July. He and his team would be around most of the summer to keep tending the bees. “I promise you that Bella Vista will get the first jar of home-grown

honey, except that it will be roof-grown honey,” he told Nick. No, he thought, “home-grown,” if all goes as planned. “We could call it ‘Honey from The Meadows.’”

He admitted the three rooftop visits, leaving off Matt’s high wire act, and waited for his father to express disappointment, disgust, anger, or anything in between. But Nick barely seemed to have heard him. Instead, he took out an order pad and began to make notes. “The first thing to do is present this idea to my bosses. You’ll be the main speaker, so I suggest you do some homework and come up with solid information,” he said.

“Me?” Sam knew his voice had just squeaked. “Present to your bosses? Why not you? I mean, you know them. You know the restaurant and everything needed to make this happen. We haven’t even done much research yet....”

Nick cut him off with a smile. “Well then, you’ve got a lot of work ahead of you.”

Chapter 6

January 17

The countdown was beginning. In seventy-two hours, a group of eight faculty members would decide which ideas were good enough to sustain a semester-long project.

“How do we convince them?” Sam addressed the team as they sat in a glassed-in study room at the back of the school library. “To start, we have to make honeybees so totally interesting and important that everybody wants to know a lot more about them. Which means *we* need to know a lot more about them. So,” he said, turning to his laptop. “Allow me to present you with highlights from my three hours of research, beginning with a video showing you a hive arriving in the mail to a beekeeper in Queens.”

The opening scene showed hundreds of bees moving quietly, almost meekly, out of a container the size of a shoebox into a wooden hive set in the middle of a small garden filled with wildflowers. The beekeeper, according to the voiceover, had lost his hives to a plague of varroa mites and was trying to start a healthy new colony.

“What got me,” Sam said, “is the way each bee knows exactly what she has to do, like she’s following the orders of some invisible drill sergeant. And by the way, I do mean ‘she,’ but more on that later. Look, the bees are just making an orderly exit—no pushing

or shoving, no butting in—even though their ride through the U.S. postal service must have been incredibly uncomfortable.”

And then they get inside the hive, and each one, according to the narrator, immediately goes to work setting up her new home. “How do they know what their duties are, and why aren’t they bumping into each other or fighting over who gets the bigger space or the easier job?” Sam asked. “And what are those jobs? What are they doing in there?”

He quickly threw out some more facts. The hive is ruled by females, including the queen bee, who gets fed a special high-protein food that makes her bigger than all the others. “And that’s a good thing,” Sam went on, “because she has a lot of work ahead of her—like laying 2,000 eggs a day—about a million in total over her lifetime. They hatch mostly into female worker bees, but there are also a few males, called drones, whose main job is to mate with a new queen. Once they do that, they die.”

Matt broke in: “What a waste. All that manpower cut off in the prime of its life. I think bee culture needs a do-over, starting with a king bee at the top.”

“Sure thing, Matt,” said Ella. “Then it’s the king who can be surrounded by all the workers, smothered or stung to death and tossed out of the hive. That’s what happens to the queen after she can no longer lay eggs. Right, Sam? I’ve been doing some research, too.”

Sam nodded. “Yeah, unfortunately the queen’s last days don’t always go well for her.... But moving on, if something bad happened to bees, we would lose about one-third, maybe more, of our entire food supply. What does that mean, you might ask,” he said. No one did. “And even more important, which third of our food supply are we talking about?” Again, blank faces.

I'm losing my audience, Sam thought. Time for inspiration. He grabbed his backpack. "Come on," he said. "We're going food shopping."

A short subway ride, and they were a block away from a big grocery store near The Meadows. Sam led the way into the fruit and vegetable section. "Watch me," he said, taking off down the aisle. He stopped every few steps and pointed to bins of strawberries, apples, apricots, blueberries, cantaloupes, peaches and grapes. He moved down another aisle filled with asparagus, celery, cucumbers, zucchini, squash, and all kinds of beans.

"Are you getting the picture?" he asked. "If bees are no longer around to pollinate these crops, they'll be in much shorter supply, and they'll probably cost a lot more. Next, the nuts." He pointed to bags of almonds and cashews.

Matt's jaw dropped open. "Almonds? What about Almond Joys and Snickers and Cashew Butter Crunch and all that?" He grabbed his throat and gasped for air.

"Yep," said Sam. "You might have to start looking for substitutes. That also goes for jams and jellies."

Honey made its appearance on the next shelf. Clover and orange blossom looked like big sellers. "Honey's taste and color depends on what flowering plants the bees are getting their nectar from," Sam said. "What's amazing is that a single bee produces only 1/12th teaspoon of honey in her lifetime. So each of these jars represents a huge team effort."

He moved on to the display case of the bakery section and tapped the glass in front of coconut bars, chestnut pralines, muffins, strawberry shortcake, and cherry, apple, and peach pies. "Oh, and forget pumpkins at Halloween and watermelons. Bees pollinate those, too."

Tristan approached a small kiosk near the cash registers that sold bouquets of flowers, gift-wrapped assortments of spices, beeswax candles, and other items for the last-minute shopper. “Better add these to the list.”

Ella sighed. “I guess that includes wildflowers—all those beautiful plants you see in the gardens around Central Park. If these tiny pollinators ever become an endangered species, it could shut down our whole planet. Would people—*us*?—start disappearing from grocery store aisles along with everything else? It would make a great plot for a sci-fi movie.”

Chapter 7

January 18

The loud beep-beep-beep caught everyone at the Manhattan School for Science by surprise. Sam joined packs of reluctant students shuffling outdoors at the slowest possible speed to stand in the frigid air while the fire safety committee went through its compliance check.

Milling around with a group of seventh graders, he realized after a few moments that Tristan was nowhere to be seen. I know what's going on, Sam thought. Tristan's in a computer lab, and his concentration is so intense that he probably didn't hear the alarm, didn't notice that all the other kids were filing out of the room, and he was the only one left.

Sure enough, a teacher, shaking her head, soon appeared at the school door with her hand on Tristan's back propelling him not-so-gently forward. As he moved into the crowd, Reed and Miles came up on either side and began a barrage of taunts. "What's the matter, Tristan? Are you deaf?" Reed hissed in his ear. "Or just dumb?"

No-neck Miles, looking like R2-D2 in a down jacket, had the other ear: "Or maybe you just don't like people. Come to think

of it, I'm not sure I've ever seen you actually talk to a live human being, just those machines. Do they talk back?"

Seconds before Tristan was completely surrounded, Ella was there, pretending to trip and fall against the back of Reed's knee, hard enough that he lost his balance and finally fell, arms flailing, into a puddle on the ground. "So sorry," Ella said, glancing down at him. "I wasn't looking where I was going. I would offer to help you, but I don't want to get my hands dirty."

Sam caught up with Tristan once the all-clear signal sounded. "So, are you really excited about our project, or were you hoping for a more scientific, tech-oriented idea?" he asked. "Sometimes I can't really tell."

Tristan hadn't spoken much since his comments about the hive. But then he rarely said much on any occasion, even in class. He's not shy, someone had once told Sam; he's *thinking*. Which made sense, Sam thought. Tristan was so much more comfortable in front of a screen than in front of people,

"No, I'm good," Tristan said. "Bees are pretty exciting—orderly and efficient, and then there's all those chemical reactions that go on in the process of making wax and honey and everything else. Humans could probably learn a lot from observing their social structure. But let's be careful not to anthropomorphize them. It would take away from the seriousness of our research."

"Sure," Sam said, peeling off for the library. "Whatever that means, we won't do it. I promise."

Chapter 8

January 19

Sam stared at the charts and illustrations the team had created for its faculty presentation. Each had been torn into pieces and smeared with what looked like honey and jam packets from the cafeteria. Even the easel had been attacked, its spindly frame smashed into what looked like a collection of broken bones. “I think the science competition has just been ratcheted up to a new level,” he said, his voice shaking. “Any doubt who did this? We should have hidden our stuff in a locked closet instead of leaving it in the storage area.”

Matt began to collect some of the pieces while Tristan leaned silently against the wall, trying not to look at the wreckage. It doesn't fit in with his image of a rational, orderly world, thought Sam.

Ella knelt for a closer inspection. “Leave it to the Evil Ones to choose honey as their weapon,” she said. “But the big question is, how do we fix this in the next twenty-four hours? Our presentation to the faculty is tomorrow at two.” No one answered.

“Wait a minute!” Ella jumped up. “Maybe we *don't* fix this. Maybe we let the broken pieces tell the story of Colony Collapse Disorder. You know, like we intended all along to present an image of destruction, of things falling apart, of how life on this planet would

become degraded, *splintered*, without bees and pollination. We just have to figure out how to use all this mess to our advantage.”

She presented a step-by-step strategy. Start by skipping last period—“desperate times call for desperate measures.” Put all the broken pieces in whatever bags they could find. Take the subway to The Meadows. Stop in the kitchen for “protein to power us through the night.” Head up to Sam’s living room. “Then we’ll assemble the presentation we would have made—without the scorched-earth attack—and reorient it to dramatize our message about bees and CCD.”

Matt looked at Ella. “There’s one part of the plan that you left out. Revenge. They’re not getting away with this. After tomorrow, we decide what to do, when to do it, and how to do it for maximum impact. This is stealth warfare. We’re dedicated warriors, fighters for the good, avengers of stolen honor...”

I wonder what video game he’s been playing now, Sam thought as they headed out to the street. “Good idea, Ell, although I have no idea how we’ll pull it off. I mean Reed made sure we have almost no time to fix this. He thinks of everything. And he never seems to get caught.”

“I feel like we’re in line for the guillotine,” Ella mumbled the next morning as they sat in the hallway with the other three teams assigned that day to present their science competition ideas to a faculty panel. “Off with their heads!” She tried to giggle but it sounded more like a strangled hiccup.

We’re all jittery from exhaustion, Sam thought, trying to calm himself by estimating the combined number of hours the team had slept last night. About twelve, he decided, watching Matt shift his weight from side to side while Tristan barely moved, the palm of

his hand massaging the scar on his chin in tight little circles.

Down the hallway, Reed's team, now officially known as "Robots R Us," banged restlessly against the walls like a pack of caged, hungry wolves. The auditorium door opened, and a faculty member beckoned them in. Exactly fifteen minutes later, they came out, Reed's long neck swiveling from side to side as though acknowledging accolades from a crowd of admirers. The team high fived each other and swaggered down the hall, too cocky to bother taunting the remaining presenters.

The door opened again, and a teacher called out the names of the bee project team, then pointed to a table and chairs lined up in place of the front row. "You have fifteen minutes to convince the faculty of the merit of your proposal," she announced, sounding more robot than human. "Go."

Ella went first. She quickly set up the easel, patched together and covered with pieces of a torn menu. The panel could just barely make out a selection of appetizers, entrees, and desserts, none of which included vegetables or fruits. "Our project looks at the dangers facing the honeybee population due to a convergence of events that scientists are calling 'Colony Collapse Disorder', or 'CCD,'" Ella stated, as Matt put out a few small bowls of cherries and almonds. She briefly explained different theories about the causes of CCD, and noted that the team would explore them in depth in their report.

She passed around charts and graphs, some of them with slash marks and ripped edges to drive home the consequences of CCD devastation. On cue, Matt snatched away the fruit and nuts just as three of the teachers reached for them.

Tristan and Matt were up next: They unveiled the second poster—a chart, hastily reconstructed the night before, outlining the steps by which honey is produced, including pollination. On the

third poster, a large drawing of the inside of a hive was defaced by magic marker scribbles. Globes of discolored, sticky honey and jam remained smeared around the edges, suggesting once again, Tristan said, the havoc that CCD has inflicted on bees and the environment.

And finally, Sam. He explained their plan to set up beehives on top of a landmark Manhattan hotel, and then ended by showing a photograph of The Meadows' roof, photoshopped to include bees and beehives. The fifteen-minute buzzer sounded.

Sam managed a quick look at the faculty as the team gathered up their materials. Most of them seemed, if not impressed, at least not skeptical. Only one—Suzanne Bowers, a tenth grade biology teacher—raised her hand to speak to the panel. “Given that we don't allow time for questions, I will just say that I feel this project idea is gimmicky and unoriginal, with nothing to suggest that it will go beyond your typical middle school science report on a much studied insect population.”

An awkward silence followed. Sam heard Stephen Cain, the school's science resources coordinator, respond just before the door was shut. “I understand what Suzanne is saying, but I would add that the students have made a good case for the importance of studying honeybees at this pivotal point in time, when so many of them are dying off for as yet unexplained reasons. Provided this project offers serious, in-depth analysis, I would suggest we accept the proposal.”

Chapter 9

January 21

The next morning, a short email from the head of the science department went out to the four teams that had appeared before the faculty panel the day before. All four ideas had been accepted.

“I think the almonds and cherries, or rather their sudden disappearance, did it,” Sam said to Ella as he set out his carton of orange juice and a cranberry nut muffin brought from home. “In any case, we made it!” he added, all his energy focused on trying to pry open the carton without spilling the juice.

Ella, slumped in a chair next to him in the school’s cafeteria, didn’t respond. Sam looked up in time to see her angrily brush away a sudden rush of tears. “Ell! Are you crying? What’s going on? What’s wrong?”

She slapped a single sheet of paper onto the table. It was a crude drawing of a young girl with only one leg being attacked by a bunch of winged insects. Underneath was the caption: “One-legged wonder can’t outrun horde of killer bees.” Ella wiped her eyes. “It was pasted to the door of my locker. I can’t believe someone would be this evil. Except, of course, that I know who it was.”

She sank even lower in the chair. “In case you hadn’t guessed, it’s supposed to be my sister. It’s not like her leg is a secret. At our sixth grade graduation, everyone watched Allison walk up and give

me a bear hug as I came off the stage. Kids know that nothing stops her: She can throw a fastball faster than anyone on the softball team and shoot ten baskets in a row. She's one of the most popular girls in her class."

Ella closed her eyes for a moment, then tore the paper into little bits and tossed them into the big trash can by the door, just as Tristan and Matt walked in. "Hey, guys, what's up?" Matt asked, his eyes devouring Sam's uneaten muffin. Tristan glanced quickly at Ella and sat down, silent.

At least she's stopped crying, Sam thought, listening to Ella's brief explanation. Matt pounded his fist on the table so hard that an arc of orange juice spurted out onto the muffin. "Is there any doubt who did this?"

Ella shook her head. "No. It's Charlene. I saw her staring at me during first period to see if I was upset, so I tried to act normal, like nothing was wrong. What are we going to do? We can't pretend this didn't happen."

Sam looked at Tristan. I'm not giving him a pass on this, he thought. He can't just clam up as if it doesn't affect him. "Tristan! You haven't said a word. Do you agree we have to do something? Any ideas? *Anything?*"

Tristan flinched. "Okay, guys. Yeah, so I'm not good at picking up signals." He hesitated. "But I get it. I know how Ella feels. I know that we need to respond in a way that reflects the seriousness of the situation."

Matt grinned: "What you mean is, 'Time for Immediate Revenge.' And I happen to have a plan."

Charlene, everyone knew, was totally, deathly, obsessively afraid of snakes. Two years ago, during a fifth grade class trip to the Museum of Natural History, the guide assigned to them had paused

for a teaching moment in front of cages full of reptiles. Charlene was whispering nonstop to a friend during the presentation and hadn't seen the guide pull a six-foot long yellow gopher snake out of the cage and swing it gently in an arc in front of his visitors. When Charlene turned her head to see what her friend was looking at so intently, she was staring at her worst nightmare ten feet away.

The shriek reverberated off the walls and along the corridors of the museum's fourth floor, Ella said. It was as though someone stuck Charlene's whole body into an electrical outlet and turned up the power. Five museum guards rushed in ready to arrest some troublemaker and instead, walked off shaking their heads and chuckling. "It's probably the only thing any of us remember about that day."

Snakes? No problem. Sam led the way to a science lab that had just been opened by one of the school administrators. Among spiders, moths, dragonflies, and toads was a cage full of harmless gray garter snakes munching on earthworms and snails.

"Too bad Charlene isn't afraid of something more interesting, like pigeons or vampire bats," Matt said.

"Vampire bats? In New York City?" Sam asked, forgetting for a moment how pointless it was to ever engage in Matt-logic. "Never mind, just hurry up. We have to get out of here, fast."

Matt reached in, pulled out the biggest snake, and put it in a paper bag that had, ten minutes ago, contained his day's worth of snacks. "For good luck, I'm adding some spiders and worms," he said, handing the bag to Ella.

She paused. "Just so you know, this means Charlene and company are probably going to strike back in some totally disgusting way. It's okay for you guys, but I have to see her every day in the locker room. I'll be the target, not you."

It was Tristan who responded. “The question to ask ourselves,” he said quietly, “is what should we, or anyone, do when mean kids decide to make us a target? As it is, we don’t retaliate because we’re afraid it will only make things worse and because we’re worried that none of the other kids will support us. But what if we *did* hit back? Then bullies might start to worry about *us*. They’re not used to being on the other side of the line. We never think how *they* would react if *they* were the victims, if all of a sudden *they* had to look over their shoulders.”

By now, his voice had dropped almost to a whisper. “Think about it: Aren’t there usually more kids who are bullied than there are bullies?”

Tristan talking about *retaliation*? The team was definitely bonding, Sam thought, wondering just how many times over the years Tristan had been picked on by kids bigger, meaner, and dumber.

Ella reached for the paper bag. “Tristan’s right. I know it’s not exactly what the books say, but I don’t care. Charlene deserves everything we’re giving her. Why should we be the ones to back off and not her?”

Outside the lab, the team split up—Sam and Tristan to Spanish class, Matt to English, Ella to the girls’ locker room.

When the bell sounded for the end of second period, the team headed to the lockers to change out their class materials for the rest of the morning. Within two minutes, the basement’s calm undercurrent of chatter was broken by what Tristan later said was the *loudest* screech he had ever heard. Sam would say it was the *longest* screech he had ever heard. For Matt, the most *satisfying* screech. Ella never mentioned it, that day or any other. She came out of the locker room, hoisted her backpack, and walked silently down the hall. Message delivered. Time to move on.

Chapter 10

February 9

Science Project Idea Agreed on by Team: Check

Science Project Idea Proposed to Faculty Committee: Check

Science Project Idea Accepted by Faculty Committee: Check

Science Project Research Started:

“So how are we going to organize the research for our project, or rather *who’s* going to organize it?” Sam looked at Tristan, who looked at Ella, who looked at Matt, all of them perched on top of Bella Vista’s kitchen worktables. “We’re already way behind. Some of the other teams are meeting almost every day in the cafeteria. I see them hunched over their laptops, taking notes, looking at books, collaborating. We need to start moving.”

Three sets of eyes turned to Sam. “So move,” said Matt. “It was your idea in the first place.”

Sam had prepared for this moment. “Okay. First off, we need to get permission from the city to set up the hives. Second, we need to figure out how to order the bees. Third, we need to study bee

colonies, pollination, life in the hive, how honey is made, and get the latest information about colony collapse since that's what everyone is talking about, or at least everyone in the bee world. Plus it makes our project that all important word—'relevant.'”

He gave out assignments. Ella would look into colony collapse, Matt into pollination and honey production, and Tristan into bee life and bee society. Sam would research how to order the bees and bee equipment, plus check out space on the roof, and last of all, come up with a cost estimate.

“Hey, you have the best job!” said Matt. “The roof part, I mean. Can't we all go up and check out the space?”

“Sure, we can all do that,” Sam said, deciding that Matt did not share the worker bee trait of doing the job he was assigned without complaining. “And let's report back to each other on Thursday. Our first team deadline. One more thing. We need a name for ourselves.”

Matt jumped up, scattering cookie crumbs on the floor. “I've got it. How about ‘The Honey Bunch?’” Ella pretended to put her finger down her throat. “That bad?” Matt mouthed the words.

“That bad,” she mouthed back. “Besides, I have a better idea. What if we call ourselves ‘The Bee Team’? It's short, direct, it's obviously a pun, and it immediately gets people to ask, ‘Why aren't they calling themselves ‘The A Team?’”

Tristan's response, concise and to-the-point as usual, sealed the deal. “I like it. It combines the two most important parts of our project—the bees and us, the team.”

Sam made it official: “From this moment on, apiarists—that's what they call beekeepers—we will forever be known as the Manhattan School for Science's unbeatable Bee Team.”

An hour later, Matt's self-appointed role as de facto poison tester for the Bella Vista kitchen was winding down for the day. He snatched the last chocolate-dipped macaroon from a dessert platter just as Nick walked in to begin decorating a large rectangular cake in the shape of the Madison Square Garden ice hockey rink, its smooth surface dotted with small, plastic New York Rangers pro hockey players, two goalie cages made of peanut brittle, and a tiny chocolate puck.

"Only one, Matt?" Nick asked, raising his eyebrows in mock horror. "Please, take the whole plate. And there are more of them in the fridge. Our poison tester needs to stay on top of his game."

Matt, Sam was surprised to see, actually turned red, then pretended to gag on the macaroon. "I'd say this one has a *touch* of arsenic, or perhaps a *dash* of hemlock. Maybe Bella Vista needs some new chefs?" He closed up his backpack and waved goodbye to Nick and the others. "Off to get my stomach pumped. Thanks for the snacks."

"Food brings out the best in Matt," Ella grinned, then gave Tristan a gentle shove. "We're out of here, too. See you tomorrow."

"Dad," Sam said as the door shut. "I'm feeling good. I think we're all getting what it is about bees that's so amazing. Their teamwork, the way they do everything for the good of the hive. There's no infighting, no inflated egos, no slacking off. And they pollinate fruits, vegetables, trees, flowers more efficiently than any system we could possibly make up."

"Yeah, and look at us," Nick said, shaking his head. "We've managed to create a society that's in danger of killing them off. Bees have been around for what, millions of years? And here our highly sophisticated, technologically advanced, space age civilization seems to be doing nothing as they're all destroyed."

Sam let out a whoop. “Wow, Dad, nice going! You’ve just written the final sentence in our report. Consider yourself an honorary team member. From now on, you’re responsible for all our brainy-sounding conclusions plus our afternoon snacks.”

Nick smiled. “I think I’ve been responsible for that second item from the moment your friends set foot in this kitchen.”

Sam felt his stomach do a sudden flip. Time for an update. “Dad,” he said. “I don’t suppose anything has changed about the restaurant? I mean, are things still not looking good? And what about us? Your job, our apartment, my school?”

Sam thought of those carnival masks that have a sunny, smiling face on one side, and on the other, a dark frown, eyebrows drawn together into a scowling “V.” Nick’s face was “the other.”

“No, Sam, nothing’s changed.” Nick’s voice was subdued. “The hotel has told me that it won’t take any action for a few months, maybe even until the beginning of the fall when people return from their summer vacations. But they also told me to make sure my resumé is together and ready to send out.” The fact is, he added, pastry chefs are not exactly a hot property. “Head chefs, yes. Good ones are always in demand because a restaurant’s reputation can rise and fall on their success.”

Sam knew that Nick had a reputation, too—a chef whose name had appeared in local newspaper and magazine articles as the creator of amazing pastries and cakes in the shape of an Amtrak train, a Big Mac, a 747 jetliner, a fairy princess, a roller skate, a violin. But Sam also knew it probably wasn’t enough to get a job anything like the one Nick had now, in a top-flight restaurant in a landmark hotel with a two-bedroom apartment that looked out on the vast expanse of Central Park.

“So, what does that mean for us?” Sam asked, hating the

tremble in his voice. “Will we have to leave New York?”

Nick came over to Sam and gave him a quick hug. “I honestly don’t know,” he said. “But if you can convince Armand and Elaine and Simon that honey from The Meadows’ hives can help revive Bella Vista—well, it can’t hurt.”

He looked at his watch. “I have to get the icings going, and you have to do your homework. Let me know when you might be able to make your pitch to the bosses. And if you feel nervous, think of it this way: What do you have to lose?”

Sam repeated the phrase to himself as he got on the elevator. What do I have to lose? Let’s see: How about the science competition, a four-star food source, a home at the top of a luxury hotel, a city I belong in ... and Ella.

CHILDREN'S FICTION / ADVENTURE



BEES on the roof

WHAT'S HAPPENING TO THE BEES?

SAM NEEDS TO FIND A SEVENTH-GRADE SCIENCE FAIR PROJECT AND A WAY TO SAVE THE RESTAURANT WHERE HIS FATHER WORKS. WHEN HE ENROLLS THREE FRIENDS IN AN EFFORT TO RAISE BEES ON A HOTEL ROOF IN NEW YORK CITY, THE COMPLICATIONS MULTIPLY. BEE STING ALLERGIES, A GREAT BEE DIE-OFF, A RIVAL TEAM'S CHEATING, A MYSTERIOUSLY RECLUSIVE SCIENCE TEACHER, AND SAM'S ROMANTIC FEELINGS FOR A CLASSMATE MAKE THE BEE PROJECT ANYTHING BUT SIMPLE. THIS STORY INCLUDES LOTS OF FACTS ABOUT BEES AND COLONY COLLAPSE DISORDER.

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