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# CONDENSATION OF Ghost in the Water

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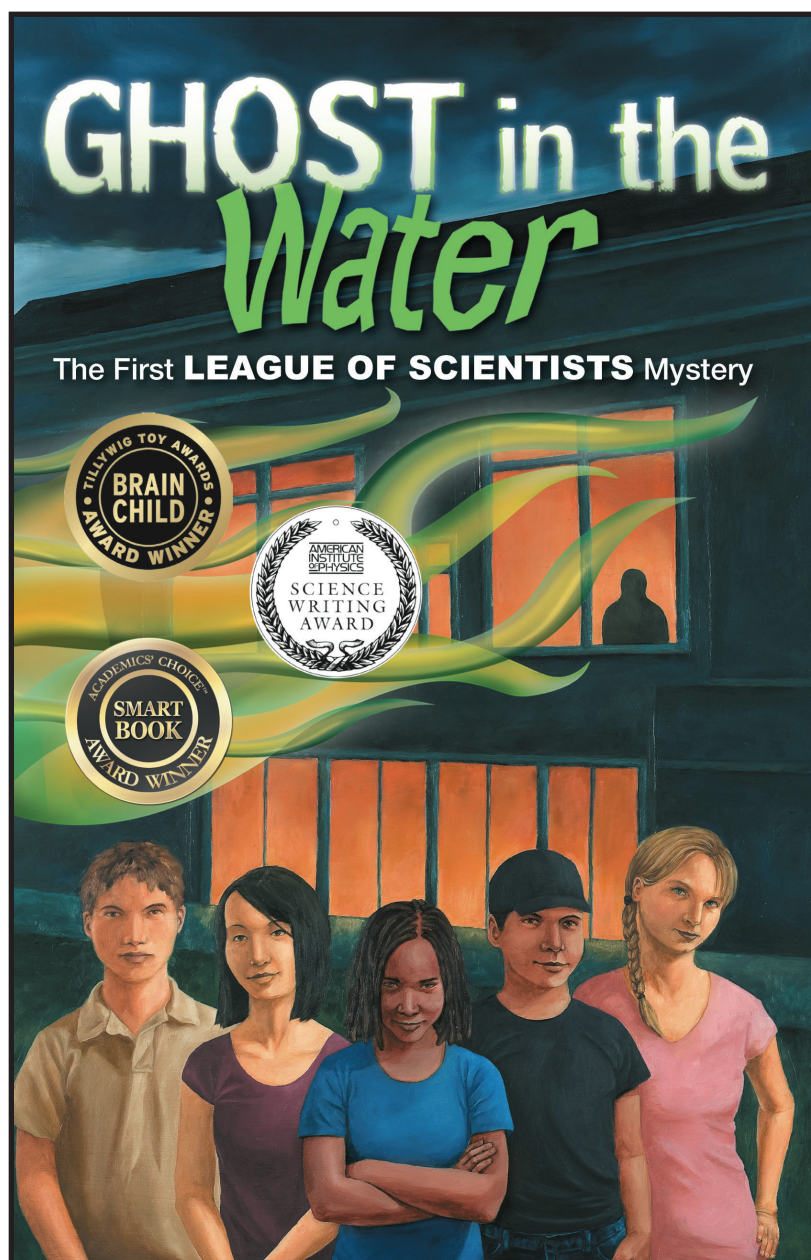
By The Editors at Science Naturally

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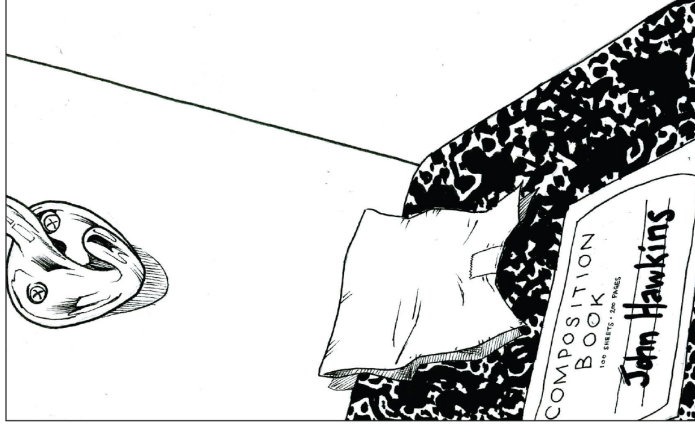
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## CHAPTER 1

As the bell rang, signaling the end of the school day, John headed down the hall and put his books in his locker. Unlike the other students, he was in no rush. Malena had called a League meeting for this afternoon. But instead of meeting at the Lab like they usually did, she was having everyone meet on the fourth floor of the school, in room 14.

The room was dark and empty when John walked in. *Strange*, he thought, *normally there's a teacher still in here from last period*. He didn't have much time to figure it out because

suddenly the lights flickered on. Malena Curtina stood behind him in the doorway, backpack in hand.

“Are you ready to go?” she asked him.

“Go? Go where?”

“Why, to the secret location, of course! Did you really think we would meet in the school? Anyone could be watching,” she said in the most serious tone she could muster. John, however, could see a small smile tugging at her lips and knew that she was trying to scare him.

Walking past Malena and out the door, he asked, “Where are we going?”

“If I told you, then it wouldn’t be a secret, now would it?” she responded, as she dashed past him. “Race you down the stairs!”

John sprinted to catch up, pushing himself to make it to the front entrance before her.

“And the winner is ... JOHN! The crowd is going wild!” John yelled as soon as he made it to the sidewalk. He collapsed on the grass to catch his breath while Malena walked over to him.

“Well it wouldn’t be nice of me to beat you on such a special day,” she huffed.

“Special day?” John asked, confused. “What’s so special about today?”

“You’ll see,” Malena responded. “Come on, we don’t want to be late.”

Malena held out her hand. John took it, and she hoisted him to his feet. They walked quietly for a few minutes until John broke the silence. “Is it usually this slow in the case department for the League?” John asked.

“No,” Malena replied, “it’s really strange. It’s almost like someone’s making sure there aren’t any mysteries.”

In a dark room on the fourth floor of East Rapids Middle School, a shadow stood in front of a window. It moved away. It had seen enough. It had heard enough. It had watched enough.

“Surprise!” everyone yelled as John walked into Ruby’s Supreme Frozen Delights with Malena.

Too shocked for words, John just looked around the room at all his friends.

“Welcome, *tomodachi*, to your surprise party!” Natsumi announced, gesturing to the room around her.

“Surprise party? Surprise for what? My birthday’s still six months away.”

“The party’s to mark when you joined the League. It’s your anniversary. It’s been two months,” Kimmey stated proudly.

“Wow, thanks guys!” John said, a grin spreading across his face. “Natsumi, what does *tomodachi* mean?”

“*Tomodachi* means ‘friend’ in Japanese,” Natsumi replied as she got up to get some green tea ice cream. She topped it off with gummy bears and peanut butter pieces, creating her own special *dezaato*.

“Well, you may be a *tomodachi* to her, but you are an *amigo* to me,” Hector laughed, clapping John on the shoulder.

“Are you guys going to eat that ice cream or sit there chatting all day?” Malena teased as she scooped a spoonful of *soursop* sherbet, her favorite flavor, into her mouth.

“If you put it that way, I guess I’ll eat my ice cream—just as soon as I concoct the perfect combination of toppings,” Hector answered as he poured banana chips, chocolate brownies and macadamia nuts into his bowl of *lucuma* sorbet, a fruity treat that always made him happy.

“Hey, leave some sprinkles for the rest of us,” Kimmey joked, pushing him out of the way so she could reach the toppings for her ice cream.

“You’re one to talk. Do you really need to add brownies to your Double Chocolate Chip Cookie Dough?” Hector replied, while watching John fill his cup. “John, *mi amigo*, you have awesome taste in friends, but when it comes to ice cream, you are so boring.”

“You just don’t appreciate the delicious simplicity of Vanilla,” John shot back, “Rich. Creamy. Perfect.”

Everyone gathered around, enjoying their ice cream. Soon, each of their faces had splotches of fudge and sprinkles, but none of them cared. As they were finishing up their sundaes, Kimmey’s father arrived and took a picture of them together.

It was to replace the old photo back at the Lab.

The next day at school, John was sitting in Mr. Elinger’s Algebra class when, from the corner of his eye, he saw something small and round flying toward his face. In that split-second, John knew both what it was and who it came from. Unfortunately, this knowledge did not prevent the spit wad from slamming into his cheek. Wet and slimy, it slid down John’s face and onto the floor.

He looked down at the disgusting blob and nudged it with his shoe. There was more saliva this time. He looked around the classroom and caught Dowser smiling maliciously from three rows away. John turned back toward the front of the room with a quiet sigh. He wasn’t angry or even upset. He was just tired.

Whenever these things happened at his old school, John’s mother would tell him to ignore them. “A bully needs a reaction. If you ignore him, he’ll leave you alone.” It was good advice, John had to admit, but not for someone like Dowser.

Dowser was almost double the size of John, and his hands were as big as John’s head. He didn’t seem very smart, but that may have been because he never paid very much attention in

class. On homework assignments and tests, it was more common for Dowser to use his intimidating size to cheat rather than create anything of his own.

The only class Dowser ever paid attention in was the HTML class he had with John during fifth period. Only a couple of weeks after John moved to this new school, his HTML teacher held a competition for the best website. Dowser’s was pretty good—in fact, so good the whole class had been speechless. No one knew Dowser had it in him, or that there was something he felt strongly enough about to apply himself.

However, much to his surprise, Dowser didn’t win the competition, but John did. Ever since, Dowser held a grudge against him and didn’t pay attention in that class anymore. He took all of his hurt and insecurities out on John every chance he got.

When Dowser first started tripping John in the hallways and firing spitballs at him in class, John tried to ignore it. After all, bullies were nothing new to him. Usually, they stopped after awhile or just fired insults whenever they were around their friends. John could handle that. What he couldn’t handle, what he couldn’t understand, was Dowser’s persistence. Sometimes, Dowser even chased John home from school for no other reason than because he could.

John had tried talking to him, but Dowser just snickered. Sometimes, when Dowser was chasing him, John thought about turning around quickly and giving him a big shove. But of course, that would never happen. Dowser was big and athletic, a powerful forward on the East Rapids Middle School basketball team. His spiky blond hair and rope neck made him even scarier to look at. John, on the other hand, was small and skinny, his bones and joints jutted out from his body at weird angles.

John knew that someday Dowser’s spit wads, shoving, and

“Anyway, I gotta run. *iHasta luego!*”

John had to agree. Being bullied was not something he wanted in his day-to-day life. He wouldn't complain though because while being at East Rapids meant dealing with Dowser, it also meant that he had actual friends for the first time in years.

In the past, John had been a loner. He didn't have any brothers or sisters, and his mom's shift often didn't end until just before he went to bed. His dad wasn't in the picture; he had left when John was still a baby. As a result, John had a hard time getting close to people. He was always afraid of getting left behind. Plus, every time his mother broke up with another boyfriend, she and John would pack up their things and move to a new town.

The longest John had ever stayed in one school was three years. After the first couple of moves, John gave up trying to make friends. It took a lot of energy and he was tired of saying goodbye. Instead, he spent his free time hidden away in his room tinkering with technology.

There was something nice about his robot kits and electronic gadgets. They only did what they were told, and there was no way for them to leave him behind.

Before, he spent most of his time building and tweaking. Now that he had real friends, he still built things, but they were usually only for cases the League was working on. Being recruited for the League was one of the best things that ever happened to him. He finally felt like he belonged.

As John rushed to get to Ms. Heida's class before the bell, he thought back on the day that he met his friends in the League of Scientists and the first case he helped them solve.

It had been a day worse than most. Dowser was being particularly vicious in his attacks, and John was beyond tired of it all. He had to stay behind in Mr. Elinger's class to turn in

corrections on an assignment, and it meant that he had to dash to history. John hurried to his locker, bumping against streams of students hurrying to get to class. He didn't want to be late and he still had to get upstairs.

He yanked open his locker, his hands still shaking from the verbal assault he just received from Dowser. When he looked at his bookshelf, the shaking stopped.

A folded piece of red paper sat on top of his book pile. From the crumpled edges, it looked like someone had shoved it through his locker's ventilation grille.

John stared at it a moment before looking up and down the hall. In the mass of students, no one was paying attention to him. He grabbed the paper and shoved it inside his backpack. Checking to make sure he had his history book, he ran for the stairs.

Nearly out of breath, he made it to his class just before the bell. He sat in the last row to avoid attention and pulled out his textbook. He left it closed on his table and slid the bright red paper underneath. He wanted more cover before he opened the message.

“Sit down, everyone,” called an authoritative voice from the back of the room. John jerked his head up just as Ms. Heida skirted past his desk. She stopped at the projector in front of the chalkboard and turned back around to stare at her students. “Kimmy, will you hit the lights?”

John watched a pretty blonde girl rise from her desk. He noticed that she looked older than a typical seventh grader as she moved towards the light switch. Once the lights were turned off, John's attention was drawn to the glowing projection.

“Today, we'll be talking about the Egyptian pharaoh Khufu,” Ms. Heida said. “Khufu built the Great Pyramid. You've probably seen photographs of it. It's the largest one in the world.” She clicked her remote and the image of a pyramid dissolved to

show its interior. An intricate drawing showing many rooms and passages appeared on the screen.

“Even today, experts don’t know exactly what all the rooms and passages were for. Some held treasure and, yes, maybe a mummy or two. Some might have been passageways allowing the pharaoh’s *Ka*, or spirit, to escape the pyramid after burial.”

John normally loved this stuff, but today he was too busy thinking about the red piece of paper to pay attention. He opened his textbook slowly. Then, holding his breath, he slid the mysterious note out from beneath his textbook, placed it on top of the open book, and began to read:

<p>We need to talk</p>
001    0001
010    1111
011    0110
100    1010

This was a puzzle—a secret message. Who gave it to him, and why?

*We need to talk*, John read quietly and felt a thrill. He looked again at the numbers. Were the numbers themselves a message?

The zeros and ones didn’t appear to represent letters.

*A substitution cipher?*

*A Caesar cipher?*

*Binary?*

### *Binary.*

John loved electronics and building robots. The process was more than just “Bolt wheel A to axle B;” he still had to tell the robot what to do.

He’d first begun programming robots with beginner kits. They were easy to figure out—the robots were programmed with a series of pictures. For example, a big green arrow meant “drive forward” and a red “X” meant “stop.”

The first language of all robots and computers was binary. All electronic brains knew binary, and for that reason, he’d been working very hard to learn it.

He squinted at the numbers and bit his pen. Quietly, he slid a notepad from his backpack, glancing up to make sure Ms. Heida hadn’t noticed. She was tracing the path of a pyramid tunnel on the projector, talking about airflow... or something.

“*One, two, four, eight, sixteen, thirty-two, sixty-four, one hundred twenty-eight...*”

John muttered the sequence to himself. Starting from the right side of each group, John assigned each digit a number from that sequence. Then he multiplied each digit by the assigned number and added everything together.

The first group of three numbers, “001,” was easy:  
 $(4 \times 0) + (2 \times 0) + (1 \times 1) = 1$

The second group of three, “010,” was similar:  
 $(4 \times 0) + (2 \times 1) + (1 \times 0) = 2$

Binary had been tricky at first, but it got simpler once you knew the formula and had time to practice it. John did so frequently.

Head down, he furiously scrawled calculations, glancing up

occasionally to make sure Ms. Heida wasn't watching. When he finished, he read the results:

1	1
2	15
3	6
4	10

John stared at the numbers. They still didn't make any sense to him, but something about them seemed familiar.

He began to scribble notes on another piece of paper. After a moment, he looked from his notes to the message and made the connection. He straightened up with a jolt.

The message was his afternoon class schedule. The algebra class he'd come from, where he had been spitball'ed by Dowser, was on the first floor, in Room 1. Ms. Heida's history class was on the second floor, in Room 15. His last class of the day was science on the third floor, in Room 6.

Someone knew where he was. Someone was watching him.

Since John had no reason to be on the fourth floor after his last class on the third floor, he knew that had to be where he was supposed to meet the note's author.

John had no idea who might want to talk to him or why. He'd only been at East Rapids Middle School for a couple of months and he hadn't made any friends.

Floor 1, Room 1
Floor 2, Room 15
Floor 3, Room 6
Floor 4, Room 10

It always struck him as ironic that it was so much easier to make enemies. Making friends was a complicated process; it was hard and it was emotionally risky. Rather than make himself vulnerable, John kept his head down, did his schoolwork, and had fun at home with electronics and robot designs. The fact that someone wanted to talk to him came as a complete surprise.

*Is it a prank? Somebody playing a joke? Maybe Dowser?*

He didn't think so. It didn't feel like a prank, and Dowser's methods were anything but subtle. At any rate, this was a mystery he really wanted to solve. After his final class ended, he'd sprint up to the fourth floor and see who, or what, was waiting for him in Room 10.

Getting through science class was agony. They were focusing on cell biology, and the subject never interested him very much even though Mr. Steinacker had sat him down earlier in the semester and explained how living things have a lot in common with robots. Human cells, for example, have their own power supply (the mitochondria), a control unit (the nucleus), and an outer covering (the cell membrane and



a cytoskeleton).

But John didn't care, especially not right now. He couldn't think about anything except the note. He looked up to make sure no one was watching. As usual, Malena Curtina dominated the questions and answers. She sat in the front row where John couldn't see much of her except for her braided black hair and a hand that rose to answer almost every question Mr. Steinhacker tossed out.

Malena was a science genius who could do any work given to her and answer for the rest of the class. The problem, though, was that Mr. Steinhacker knew this. He also knew his job as a teacher wasn't to teach only one student, but rather to teach *all* the students. That meant it was just a matter of time until—

“John, can you tell us the answer?”

John groaned inwardly. Mr. Steinhacker looked up from his notes, his pen pointing toward John. Malena twisted her body in her desk to stare at him. She was grinning, probably because she thought he didn't know the answer. He'd show her—that is, if he could remember the question.

“Uh, could you say that again?”

“A plant sitting in the sun will wilt. The cell structure loses water and can't support the plant's shape. What's the part of the cell that holds water and helps a plant keep its shape?”

John thought frantically, mentally searching through his memorized lists of cell parts.

“The cytoplasm?”

Malena's hand shot up instantly.

“No, not the cytoplasm,” Mr. Steinhacker said, his grey eyes intense behind the rectangle frame of his glasses.

“Remember, the cytoplasm is the jelly-like liquid in the cell that allows all the other parts of the cell, the organelles, to move freely. Anyone else have an idea?”

He looked for other volunteers, trying to avoid Malena's

flailing hand. None of the students offered an answer.

“Malena?”

“The vacuole is one of the organelles that keep the plant upright. If the plant doesn't get watered enough, the plant sags like a balloon losing air.”

“Exactly,” Mr. Steinhacker said. As he began to discuss vacuoles more in depth, John found himself staring at the clock. Twenty-one minutes left. There were 60 seconds in a minute, so 60 times 21—John scribbled in the corner of his notebook—1,260. There were 1,260 seconds in 21 minutes, so if he counted slowly, all the way up to 1,260, he'd be able to count his way out of the class. Easy.

*One. Two. Three. Four—*

He sighed. It was going to be a long class.

After what felt like an eternity, the final bell rang. A thick mass of students flowed from the classrooms to the doors, onto the stairs, all heading towards freedom.

Instead of following them, John headed back up the stairs, pushing through the throng of students headed in the other direction. His slow progress against the crowd reminded him of the photos he'd seen of salmon swimming upstream. Once he was on the fourth floor, he headed straight to Room 10. He pushed open the door, breathless. Four beaming faces stared back at him.

“John!” one of the students cried. “You made it!”

The speaker was Malena Curtina.



## CHAPTER 6

Casey Keller dove into the pool. He somersaulted underwater, slapped the bottom with both feet and rocketed back up. Surfacing, the pungent smell of chlorine filled his nostrils as he breathed in deeply. He loved that smell. He was where he wanted to be, doing what he enjoyed.

This was his favorite time of day—early morning, long before the other students arrived, before most of them were even awake. He hadn't seen Coach Warren and would leap out of the pool if he came by. Casey wasn't supposed to be swimming alone; it was

against school policy after all. But Casey had been swimming since he was in diapers and loved the freedom and feel of the water.

Time to practice. The swim team needed it. The team needed *him* this year more than ever. Casey thought of some of the newer swimmers and sighed. It just meant that he'd have to do that much better next week during the swim meet against West Shore. It was only five days away!

Warmed up, he began a fast freestyle, cutting through the water like a speedboat. He stayed in the second lane near the wall. In competitions, he would dust everyone else from the center lane, but when he practiced alone, it made sense to stick near the edge in case he cramped.

His heart rate and breathing were steady as he sped through the water. He did a flip-turn and zoomed back down the lane.

A sudden chill was the first indication to Casey that something was wrong. The pool air was colder than usual. The early morning sun was just peeking in through the massive windows of the indoor pool, so the pool's greenhouse effect hadn't had a chance to kick in yet.

At first, the water was fine, but as he swam, he'd pass through a chilly spot every once in a while. Not just chilly, he corrected himself, but freezing. *What was this? Was the pool's heat pump malfunctioning?*

As he slowed down his laps, Casey noticed something occurring near the pool's edge. It was hard to focus through the fog of his goggles. Pulling them off, he realized the fog was not on his goggles—it was in the room. A layer of fog hung over the pool. A gentle cloud curled, twisted, and brushed the surface of the water. It began moving toward him. Perplexed at the scene unfolding around him, he had no idea what was going on. Casey kept treading water as he stared at the cloud accumulating in mass. It moved

quickly until it was directly in front of him. Casey looked into the swirling fog and thought he saw something familiar. He squinted and leaned closer trying to decipher the outline.

It grew colder still, and Casey felt his muscles stiffening from the lack of heat. His teeth chattered and goose bumps pierced through the skin on his arms and legs. It became harder to tread water.

*This isn't real*, Casey thought. It was too strange to be real, and yet there he was, watching and feeling it. This wasn't a dream. He had to get out *now*!

Sometimes, a person sees things that bring their animal instincts front and center. All worries are forgotten and all problems disappear except for survival. The logical part of Casey's brain shut down in terror. His animal instincts took over. His basic instincts told him to get away, to escape.

Choking and spluttering, gripped by fear, Casey tried to swim to the opposite side of the pool, away from the cold water and from the fog. His strokes were wild; finesse meant nothing now. His movements were inefficient and choppy as though he'd only just learned how to swim. Arms moved only to push him away from the danger and legs kicked without rhythm. His breath came in raspy and fast as he choked on a mouthful of water. He could barely hold back a panicked cry.

Then, only feet from the pool's edge, he made a mistake.

He looked back. He saw a hand. A gelatinous tentacle. A stretching claw.

*He saw a ghost!*

It shot towards him from beneath the water. Moving fast, it reached toward his legs. It glowed a sickly dark orange, opening its claws as if to grab him.

Casey thought he felt a claw reach his ankle, and shrieked. High piercing sobs punctuated his frantic splashes. His kicking and punching at the water moved him slowly to the other edge of

the pool. The gigantic, empty room amplified his cries.

He grabbed the side of the pool. Scrambling and grappling his way over the edge carelessly, Casey's skin was scraped off his elbows, stomach, and knees, but he didn't even feel it. He stumbled up on weak, shaky legs. Water spattered onto the floor as his feet flailed wildly running to the locker room.

He took one last look at the pool right before he ran under the doorframe. He could no longer see the glowing orange of the ghostlike thing that made a grab for him. The pool shone an eerie ghostly green. Casey quickly slammed the door and dragged the laundry cart to barricade himself inside.

Gasping for breath, he swore he'd never go back into that pool ever again.

# Glossary

## Alpha

The first letter of the Greek alphabet. The symbols for Alpha are A and α.

## Altimeter

An instrument used to measure the altitude of an object. The altitude can be calculated by measuring the atmospheric pressure around the altimeter. High pressure means the altimeter is closer to earth because there is a lot of atmosphere to apply pressure on the instrument. The lesser the atmospheric pressure, the higher the altitude of the object.

## Amigo

The Spanish word for “friend.”

## Amphipod

A small animal in the crustacean order. Similar in shape to shrimp, they are usually scavengers. Amphipods are mostly marine animals, but can also live on land.

## Anpan

A type of Japanese sweet bread, most commonly filled with red bean paste.

## Arigato

The Japanese phrase for “Thank you.”

## Bacterium

A member of a large group of microorganisms that only have one cell. The cell is made up of cell walls, but lacks organelles and an organized nucleus. See *Organelle*.

## Barometer

An instrument that measures air pressure, and is used to predict changes in the weather.

## Beta

The second letter of the Greek alphabet. The symbols for Beta are B and β.

## Binary Code

The code used to program computers and electronics, made up of combinations of the numbers 0 and 1.

## Biodegradable

Capable of being decomposed through consumption by bacteria or other living organisms.

## Black Light

A type of lamp that emits ultraviolet light and has special filters to only let through the longest wave lengths of UV light. Together with fluorescents, it can make surfaces of light colors glow, which is why white shirts glow purple under black light. See *Ultraviolet Light*.

# Index

## A

Alpha, 28, 178, 181  
Altimeter, 93, 178  
*Amigo*, 11-12, 25, 146, 178, 183  
Amphipod, 64-65, 178  
*Appari*, 111, 178  
*Arigato*, 35, 178  
Axle, 18

## B

Barometer, 93, 178  
Basketball, 13, 41-42, 49, 51-52, 100, 106  
Bacterium, 62-66, 121, 181  
Beta, 28, 178, 181  
Binary, 17-18, 24, 26, 178  
Biodegradable, 151, 179  
Biology, 24, 64  
Black light, 117-123, 179  
Bulb, 30-31, 33-36, 41, 43, 45, 48, 5-52, 79, 182

## C

Caesar cipher, 17, 179  
*Calmate*, 35, 179  
Camera, 35, 48-50, 52, 104, 141-142, 161  
Candelabra, 28  
Car, 40, 75, 87  
Carbon dioxide, 117, 179-180  
CGI, 89  
Chemistry, 25-26, 97, 111, 133, 135, 175  
Chlorine, 55, 66, 92, 131, 151  
Cipher, 17, 179, 184  
*Claro*, 112, 179  
Commensalism, 63, 179  
Competition, 13, 56, 63, 69, 179  
Computer, 18, 26, 33, 43, 68, 88-89, 90, 93, 136, 175, 178-179  
Computer port, 93, 179  
Core field of science, 68  
Cryptography, 64, 180  
*Cuidado*, 44, 180  
Cytoplasm, 21, 180, 183  
Cytoskeleton, 20, 180

## D

Data, 34-36, 40, 44-45, 67, 179-180  
*Dejá vu*, 80, 180  
*Dezato*, 11, 180  
Dihydrogen monoxide, 109-111, 180

## Don itashimashite

35, 180  
Dowsing, 42, 140, 180  
Dry ice, 89, 118-119, 122, 125, 147-148, 152, 156, 158, 163-164, 173, 180, 184

## E

East Rapids, 11, 13, 15, 20, 26, 30-31, 43, 52, 73, 91, 95, 112-113, 126, 143, 155, 168, 176  
Electronics, 18, 20, 26, 39, 40, 143, 178  
Environment, 64-65, 151, 179, 181

## F

Fire, 89  
Fluorescein, 120-121, 124, 146-149, 151-152, 156, 158, 163-164, 166, 173, 181  
Fog, 56, 58, 67-68, 81, 87-89, 118-121, 163-164, 167  
FUDDU, 146  
*Futbol*, 41, 181

## G

Gamma, 28, 181  
Gelatinous, 58, 79, 181  
Geat Pyramid, 17  
Greek alphabet, 27, 178, 181, 183

## H

Hadopelagic, 64-65  
*Hasta luego*, 15, 182  
Houdini, Harry, 126, 148, 181  
HTML, 13, 181  
Humidity, 34, 79, 182  
Hypothesis, 45, 66, 136, 184

## I

Infrared, 117, 182  
*Incredible*, 176

## K

*Ka*, 17, 182  
Kelp, 68, 182  
Khufu, 17

This blended fiction mystery is served with a side  
order of the supernatural ... or is it science?

John Hawkins is in yet another new school as he begins the 7th grade. His life would be just fine except for the fact that Dowser, the school bully, has it out for him.

Things change when his passion for robotics lands him an invitation to be a part of a secret club. John joins Malena, Natsumi, Hector, and Kimmey as the newest member of the League of Scientists. Together, these friends pool their knowledge of biology, technology, logic, and chemistry to unravel the mysteries that haunt their quiet town of East Rapids. The League is in a race to solve the secret of the ghost who is terrorizing the middle school pool. Can the case be closed before the big meet against East Rapids' biggest rival?

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