

Monster Mission

Introducing Doyle and Fossey, Science Detectives.

Known throughout the fifth grade for their relentless pursuit of answers. And not just any answers. The right answers.

On a damp, drizzly day, in an attic not too far away, Drake Doyle worked alone in his homemade laboratory. The laboratory was filled with the latest scientific equipment: a chalkboard, racks of test tubes, flasks and beakers, dozens of sharpened pencils, and a lab coat with his name on it.

Drake's hair was quite wild (some would say it stuck straight up) and the color of toast. Cinnamon toast, that is. And perched on the end of his nose was a pair of round glasses, making him look very scientific indeed. Which, of course, he was. On this damp, drizzly day, an experiment was under way. A very important experiment.

The solution in the test tube fizzed and popped.

Drake Doyle glanced at his watch, then scribbled the results in his lab notebook.

Fizzed and popped.

Right on time.

Not a Second late.

Experiment a Su((ESS).

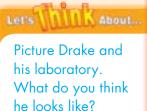
Drake slapped his notebook shut. (Serious scientists always slap their notebooks shut.) He shoved his pencil behind his ear just as the phone rang. "Doyle and Fossey," he answered, speaking in his best scientific voice. Nell Fossey was Drake's lab partner. They were in business together. Serious business. Their business card read:

DOYLE AND FOSSEY
Science detectives
CALL US. ANYTIME.
555-7822

"Hurry! Hurry! It's a major emergency!" someone screamed on the other end of the phone. "There's a monster in my garbage can!"

Drake pushed up his glasses with his finger. Obviously, this was an important phone call. Very important. And important phone calls were more important than important experiments. He set his test tubes aside. "Who is this?" he asked.





W Visualize



"Gabby Talberg," she shrieked. "Hurry! Hurry!"

"Oh, hi, Gabby." Gabby Talberg was in Drake's fifth-grade class at school. She was a nice girl, even if she did talk too much. "Now, calm down and speak slowly. What seems to be the problem?"

"Speak-slowly?-Are-you-nuts?-I-said-there's-a-huge-giant-bloodsucking-monster-in-my-garbage-can-and-it's-growing-bigger-and-bigger-every-second-and-I'm-alone-in-the-house-and-it's-going-to-gobble-me-up-and-I-don't-want-to-be-someone's-dinner!" Gabby gasped for breath.

Drake was excited. This could prove to be a great day for Doyle and Fossey, Science Detectives. They'd never had a monster assignment before. And, of course, it would be a great day for the small town of Mossy Lake. They'd publish their findings in the local newspaper. GARBAGE-EATING MONSTER DISCOVERED! MOSSY LAKE'S GARBAGE PROBLEMS SOLVED! Maybe they'd even lecture at Mossy Lake University!

But Drake couldn't allow his excitement to overwhelm his good scientific sense. That was the first rule of science. And Drake was a stickler about rules of science.

He cleared his throat and forced himself to speak calmly. "What makes you think there's a monster?" he asked.

"All kinds of weird gasping noises are coming from my garbage can. Something's inside. Hurry, Drake, you have to come over immediately and get rid of it. Because if you don't, I'll just have to call James Frisco."

Great Scott! thought Drake, horrified. Not James Frisco! Frisco was in their fifth-grade class at school. Frisco was a competitor. Frisco was a scientist, but he was a bad scientist. A very bad scientist. A mad scientist, you might say.

Frisco's business card read:

FRISCO

BAD MAD SCIENTIST

(Better than Doyle and Fossey)

Call me. Day or night.

555-6190

Why was Frisco such a bad mad scientist?

Because if Frisco didn't like a number, he erased it. Because if an experiment asked for pink, Frisco used blue. Because if an experiment called for two, Frisco used one. (Or three.) But most especially, because if an experiment said "Adult Supervision Required, OR ELSE!" Frisco did it anyway. Alone.

Let's MINK About.

How are Frisco's views about following rules different from Drake's views?

Monitor and Clarify

Drake knew that if Gabby hired Frisco, there was no telling what could happen. Knowing Frisco's sloppy scientific techniques, Frisco might let the monster out of the can, and he and Gabby would never be seen again! Gobbled in the blink of an eye!

"Drake," said Gabby, "Drake, are you there? I said you have to come over immediately and get rid of it or else I'll call Frisco!"

"Check. I'll be right there."

Click.

Drake phoned Nell. She was the most fabulous partner an amateur scientist and detective genius could have. Whenever they had a serious case, Nell dropped everything and reported for duty.

"Doyle and Fossey," she answered, picking up the phone on its first ring.

"Drake here. Meet me at Gabby's house right away. Gabby's garbage is gasping."





Nell was already waiting on Gabby's porch by the time Drake arrived. He wasn't surprised, as she was the fastest runner in the fifth grade. With her coffee-colored hair pulled back in a no-nonsense ponytail, her scientist cap shoved atop her head, and her mouth set in a firm line, she looked ready to take on this most difficult case.

"Afternoon, Scientist Nell."

"Afternoon, Detective Doyle." And so saying, Nell rapped sharply on the door.

Inside Gabby's house, Gabby pointed to a dark corner of the garage. "There," she whispered. "There's the bloodsucking monster. Inside that garbage can. Hurry, get rid of it before it eats us all."

Suddenly, the garbage can gasped.

It trembled.

It burped and yurped.

It belched and yelched.



Can you visualize Nell? What kind of person do you think she is?



All in all, it was very scary indeed.

Drake and Nell immediately went to work. They pulled on surgical gloves.

Snap!

Gabby edged toward the door. "You're not going to take off the lid, are you?"

"If there's a monster inside," Drake replied, "removing the lid would be most foolish. Now, stand back, we'll take it from here."

They tapped the sides of the can. "Sounds hollow," whispered Nell. She scribbled in her lab notebook and tapped again.

Drake sniffed the air. "Smells like fresh-baked bread," he observed. "Hmm. That reminds me. Ms. Talberg, isn't your dad a baker?"

"The best baker there is," answered Gabby. "He won the blue ribbon last year at the county fair. Why?"

"Just wondering," Drake muttered as he recorded his findings in his lab notebook.

Meanwhile, Nell peered at the garbage can with her magnifying glass. She checked its temperature. She drew diagrams and charts. She was a most efficient scientist.

Finally, Drake and Nell stood back and removed their surgical gloves.

Snap!

"Well?" asked Gabby.

"Puzzling," said Drake.

"Fascinating," said Nell.

Drake pushed up his glasses. "Tell me, Ms. Talberg. Does your garbage can always sit here next to the furnace?"

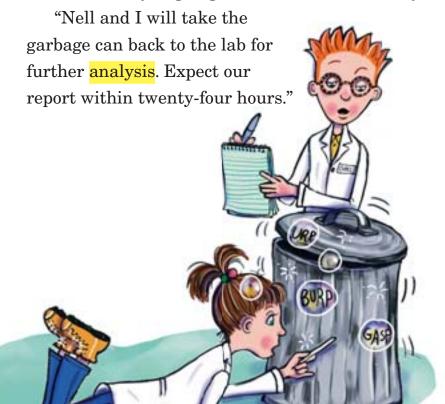
Gabby shook her head. "My dad moved it a few days ago. Why?"

"It's very warm next to the furnace, that's all," said Drake.

"Eighty-seven degrees, to be precise," added Nell.

"Curious. Very curious," mumbled Drake. He jotted a note to himself in his notebook.

"What are you going to do now?" asked Gabby.



Let's MINK About.

Will the noises from the garbage have something to do with the temperature?

Predict

What details give you an idea of the type of scientists

Let's MINK About...

Drake and Nell are?

Inferring

Great Gasping Garbage!

Drake and Nell slogged through mud puddles, lugging the garbage can between them. For a monster, it wasn't very heavy. Even so, Drake slipped and almost fell because his glasses had fogged. Nell helped him up and brushed him off. She was a great partner. (And besides, she was his best friend.)

Finally, they pushed the garbage can through Drake's back door, dragged it up two flights of stairs, and into the attic lab. They set the garbage can in a corner next to a heater. "We must simulate the same environment," said Drake.

"Eighty-seven degrees, to be precise," said Nell.

Drake cleaned his glasses and put on his white lab coat. Nell did, too, except she didn't have any glasses to clean. They stuck sharpened pencils behind their ears, sat on stools, and opened their lab notebooks. Drake pulled a book off the shelf and shuffled through it until he found the right page. It read: "Monster Analysis: What to do when your garbage is gasping."

Just then, Drake's mom poked her head in the lab. Kate Doyle was a fine cook and ran her own catering company from home. Blueberry muffins were her specialty. Now Mrs. Doyle asked if they wanted any hot chocolate with their muffins, seeing that it was such a damp, drizzly day.

"No thanks," Drake said politely. "Just muffins." (Real scientists don't drink hot chocolate. Ditto for real detectives. And they were both.)

"Let's go over the facts again," said Nell.

Drake nodded. "Just the facts, ma'am."

Together they pored over their observations.

After a while, Drake's dad stuck his head in the lab. Sam Doyle owned a science-equipment and supply company.

He regularly brought

home used equipment for the lab: computers, microscopes, telescopes, glassware, Bunsen burners—even an old sink that he plumbed with hot and cold water. If either Drake or Nell needed equipment, Mr. Doyle was the man.

Now Mr. Doyle glanced at the rumbling garbage can and told them to be careful.

"We will," said Drake and Nell.

Mr. Doyle rolled his eyes and closed the door. "What's he think we're going to do?" asked Drake. "Blow up the lab?"

"You did last time," reminded Nell.

"That's beside the point. Now, where were we? Ah, yes. Based on our observations, Scientist Nell, I have formulated a hypothesis. . . ."

All through the evening they worked. Later Mrs. Doyle brought them tomato soup and grilled cheese sandwiches with a pickle on the side. (Mrs.

Let's MINK About.

How does Mr.
Doyle's job help
Drake? What
evidence in the text
makes you think so?
Inferring

36

Lef's About

author's description

help you experience

moving the garbage

10 Visualize

How does the

can?

Doyle always cooked from her vegetarian menu whenever Nell was around, because Nell was a vegetarian.) Drake and Nell washed their hands and sat at Drake's desk, knowing they should never eat or drink while conducting experiments. They were top-notch scientists.

After supper, Nell called her mother and asked if she could stay extra late, given that there was no school tomorrow and that they were swamped with experiments and under a deadline. Ann Fossey was a biology professor at Mossy Lake University. Her specialty was wildlife biology. "Goodness gracious sakes alive," exclaimed Professor Fossey. "Sounds like you're a busy

my dear. I'll be sure to feed your rats and lizards."
"And don't forget my snakes and bugs."

scientist. Now, don't you worry about a thing,

"Of course, dear," said Professor Fossey. "I'll leave the light on for you."

Finally, after midnight, they had their answer.

In the morning, Nell hurried back to Drake's house. They called Gabby first thing. "Meet us in

the lab," said Nell. "We've discovered the identity of the monster."

After Gabby arrived, Drake paced the floor while Nell sat on a stool. "You see, Ms. Talberg," Drake was saying, "it's really quite simple. Nell?"

"Thank you, Detective Doyle.
First of all," said Nell, "the
garbage can sounded hollow when
we tapped on it. Second, the
garbage can wasn't too heavy."

"You see, Ms. Talberg," said Drake, "most monsters are quite heavy."

"In addition," added Nell,

"the garbage can was stored in
a very warm environment. We
copied that environment in our lab by

setting the can next to the heater and checking its temperature. But most important, the garbage can smelled like bread."

"Remember, your dad is a baker," said Drake.

"The best baker around, to be exact. Therefore, based on the clues and our observations, I developed an educated guess—what we scientists call a hypothesis. I believed that the monster lurking inside your garbage can was not really a monster at all, but . . ."



How do you know that the problem in the story is close to being solved? Story Structure

What can you learn about Nell from her conversation with her mother? Inferring

38

Let's About...

Good readers ask evaluative questions of text as they read. For example, "How does knowing the clues help me solve the case?" What questions can you ask yourself to evaluate this text as you read? Inferring

Let's About...

Do you think the information Drake wrote in his notebook helped solve the case? Questioning

"Yes?" asked Gabby, her eyes wide.

"Yeast," said Drake. "Pure and simple yeast." "Yeast?"

"Yes, yeast. Allow Scientist Nell to explain."

Nell pointed to a chalkboard with her long, wooden pointer. "As I said, the smell of fresh-baked bread was our biggest clue. You see, yeast is used in making bread. Yeasts are tiny plants that eat starches and sugars. They then turn the starches and sugars into alcohol and carbon dioxide gas."

+	
1	GARBAGE (AN (LUES
	1. Sounded Hollow
-	2. Wasn't Heavy
	3. Warm Environment
	4. Smelled Like Bread
	5. Gabby's Dad a Baker

"The tiny bubbles in bread," said Drake, "are the result of carbon dioxide gas."

Nell tapped the chalkboard with her pointer. "You see, Gabby, your dad must have thrown away a combination of yeast and flour. Ingredients used in baking bread. Easily purchased at any grocery store."

Drake pushed up his glasses.

"With the right amount of moisture—"

"And a warm environment—" added Nell.

"The yeast was able to grow and multiply by feeding on the flour inside the can," finished Drake. "Quite harmless, really. But the yeast produced so much carbon dioxide gas that the garbage can simply had to 'burp' to release some of the gas."

"We tested our hypothesis," said Nell, "with a thorough set of experiments. We examined the yeast under the microscope and grew it in several different mediums. We've positively identified yeast as your culprit. You can be certain there is no monster inside your garbage can."

Naturally, Gabby was a little disappointed. After all, yeast was not as exciting as a bloodsucking monster. She shook their hands anyway for a job well done. "I knew you could do it," she said. "I can't wait to tell all my friends."

Nell handed Gabby their business card. "Call us. Anytime."

Later that day, Drake wrote in his lab notebook:

Let's MIN & About...

Summarize

How would you

of the Gasping Garbage?

summarize The Case

monster analysis a success. Received two prize loaves of bread Hypothesis correct. (EXTRA RAISINS, EXTRA NUTS) as Rating on the delicious scale: 10.

Paid in full.