

CASE FILE

Confidential

The Case of the Science Fair Swindler

Cloverville Detective Agency

It's Saturday morning, but the parking lot at Cloverville Community School is overflowing. Since the Science Fair judging is in the afternoon, you guess that the crowds must be for the annual Science Share Festival aimed at family and friends. This must be why Chief Kimbrell asked you to meet her here instead of at the station; she is probably here somewhere with Sal.

You push past the throngs of people and into the building. You can barely hear the announcement "We will be closing in 15 minutes" above the noise. You glance at the map and see that the Science Fair projects have been set up in the gym, so you head over that way.

Rows and rows of trifold boards fill the gymnasium, spilling into the hallway and several nearby classrooms. You are impressed by how hard everyone had worked to pull off such a large event. You think back to when you were a student at CCS. There wasn't a Science Share back then, just the Science Fair part. You had made a volcano using vinegar and baking soda to demonstrate chemical reactions; not because you cared about chemical reactions at the time, but because your older cousin said it was an easy project. The projects before you are clearly much more sophisticated, with students asking and answering their own science questions. No wonder Sal was so upset about his display.

"Hey! We're over here!" Chief Kimbrell's voice cuts through the din. You look up and see her waving to you from the far end of the gymnasium. You make your way over to her and Sal as the crowd streams past and heads towards the exits.

"Hi, Sal!" You flash a wide grin. "The display looks great!"

[Click on the Science Fair image to take a look at Sal's project.]

"Now it does," he responds. "Someone keeps stealing my breads."

You notice that there are several mini-loaves and one flat cracker-like thing displayed along with the trifold board. "Tell me about your project," you say.

Sal beams with pride. "I wanted to learn how to bake bread, and so I learned that one of the things you need is a living organism called yeast. Only, the stores were all out of yeast last summer. So then I wondered if there were other ways to bake bread that didn't need to have yeast."

"I see you have a bunch of little loaves here. You must have figured something out."

"Yes. I learned that yeasts are all around, so I made a sourdough starter and baked bread from that. That's this loaf. This one is the one I made from yeast I bought at the store to compare it with. And then these," he points to the display, "These don't have any yeast in them. One has baking soda and one has baking

powder instead. And this doesn't have any kind of leavening agent at all."

"What's a leavening agent?" you ask.

"That's the stuff that makes bread rise. So, like, some kinds of foods like angel cakes, those are made with egg whites that are whipped to be all puffy, but most baked stuff, like bread or cookies or muffins or cakes or whatever; that stuff works differently. They need these things called 'leavening agents,' which is like yeast, baking soda, and baking powder; they all make chemical reactions happen in the bread dough. The chemical reactions produce carbon dioxide bubbles. Did you know that carbon dioxide is the gas you breathe out." He demonstrates breathing out carbon dioxide by exhaling a long, loud sigh. "And all the carbon dioxide bubbles from the chemical reaction, that's what makes the bread rise. See the holes? That's where the bubbles were."

"So that's why this one is flat? It doesn't have any leavening agents?"

Sal nods. "Yup."

"Does it make a difference if you don't use yeast, but you use a different agent instead?"

Sal nods again. "Yes. You have to change the recipe a little bit sometimes. And it tastes different. I like the yeast ones best."

"Cool. Thanks for sharing! Good luck this afternoon! So, Chief, what's up?"

Chief Kimbrell furrows her brow. "Makayla Baker over at Makayla's Masterpieces called yesterday afternoon. She thinks that someone might be spying on her. Like, maybe the bakery has been bugged or something. I'm going to head over to the bakery today to talk with her some more and take a look around, and I figured it would be helpful to have an extra set of eyes there. Our senior detective is out on maternity leave, so I called you."

"Why, thank you, Chief, for thinking of me. I am glad to help out. Always enjoy working with you and the CPD. When are we going over to the bakery?"

"I was thinking we could go now before it closes for the day," she replies. "Sal has a break until the judging starts back up later this afternoon, so I can drop him at the house along the way and he can get something to eat."

Sal perks up at the mention of his name. "Can't I come along to the bakery? I don't like being home by myself."

"No," Chief Kimbrell says. "I am going to be working while I am there."

“Please?” Sal begs. “I am so hungry. I could eat something there for lunch while you are working and then I won’t bother you. Plus maybe I can learn something that will help me with my presentation this afternoon for the judges, so it could be educational. Please?”

“Oh, all right,” Chief Kimbrell relents. “Come along, then. But remember, I need you to be quiet while we are talking with Ms. Baker and anyone else.”

“I’ll be quiet as a mouse,” Sal promises. He happily grabs his notebook and pencil. “Let’s go!”

To unlock the next level, what causes bread to rise? Enter the password with no spaces or capital letters.
