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"I read something really gross last night," said Greta, as she sat down with her friends Conchita and Phong in the school canteen to eat her lunch. "In the paper it said cheap ice-creams are made out of a chemical that's used in making shoe polish! Nasty unnatural chemicals – I don't want them in my food! And shoe polish – yuck! How could people eat that? It must be really bad for you. And how can those scientists even work out how to make such yucky stuff into food? They shouldn't even try to do things like that – it's just bad." She reached for the salt to put a bit more on her chips.

"Watch out!" shouted Conchita. "Don't put that salt on those chips!"

Greta blanched and snatched the salt shaker away from her chips. "Why not?" she asked.

"Because ... you remember what we've learned in science, don't you? Salt is sodium chloride. You remember what happened when we chucked that sodium in water the other day ..."

"Yeah, it was great!" snorted Phong. "It was all fizz and flames – especially when Luigi got Mr Carey to put that big piece in. It was almost an explosion!"

"But what's that got to do with my chips?" queried Greta. "Salt doesn't explode on my tongue. And I've heard you need salt to live. In history we were learning about how people who live a long way from the sea had to trade with those near the coast to get salt."

"But don't you see?" prompted Conchita. "It's just like your ice-cream. Just because something is poisonous doesn't mean it stays poisonous when it gets made into something else."

"How could that happen?" Greta mused. "I get what you're saying though. Come to think of it, I seem to remember that chlorine was used as poison gas in the First World War. But how can stuff lose its poison when it's made into something else?"

"It's all about chemical reactions, isn't it?" offered Phong.

"Is it? Well, I've never understood all that stuff. How can that messy lump of sodium and a gas get together to make little white grains anyway? They're just totally different things. It all seems like magic to me."

"It's atoms," explained Conchita. "I don't know how they know about atoms – I've never seen one – but I've always had a sort of picture in my head. It's like these atoms are like little people rushing around. I sort of see a sodium atom as a bully, trying to get his hands on someone else and beat them up. And chlorine's the same. When they get together, they just grab on to each other so hard they ignore anything else coming past. So if you have one sodium atom for each chlorine atom, they're all tied up and the whole lot is harmless."

"Wow!" exclaimed Phong. "That's not what I see. I think of atoms as like tiny little billiard balls ..."

"Boring, compared to Conchita," cut in Greta. "Anyway, salt's natural, not like sodium and chlorine – you have to make those in a factory, don't you? I bet the sea makes its salt some other way – it doesn't do it by mixing sodium and chlorine. I reckon you have to be careful to eat only natural things if you want to be healthy."

"That's rubbish!" Phong stated forcefully. "My little brother ate some rhubarb leaves last year, and the doctor had to give him some antidote to save his life. The antidote wasn't natural, but the rhubarb was! Natural and artificial are two different things from healthy and poisonous!"

"Oh Phong, I'm sorry," wailed Greta. "I remember that time – it was awful! I didn't mean medicines – some of them are really important. But you're always seeing labels on food saying 'all natural' or 'contains no artificial ingredients' or 'chemical free'. Why else would they say that if it wasn't that it's good to have natural ingredients and bad to have chemicals?"

"My dad says that's all nonsense," asserted Conchita. "It's just to suck you in to buying stuff. Dad reckons everything is made of chemicals."

"Everything?" echoed Greta. "Come on – chemicals are made in factories. They're not natural but artificial. Everyone knows that!"

"Everyone?" echoed Conchita. "You certainly hear it a lot, but that doesn't mean that it's true. My dad doesn't believe it, for one. I'm not sure why he says that, but I'm going to ask him when I get home. In fact, I better go now. See ya!" Waving goodbye to her friends, she set off for home.