

THINKING SKILLS

Being Flexible

It's a hot, sunny summer day. Pedro Garcia is riding in the car with his father and his 8-year-old brother, Joaquin. Suddenly, there's a loud BANG! inside the car; Pedro's ears are ringing, and warm, fizzy cola is spraying everywhere. In the back seat, Joaquin looks startled. His father, with cola running down the back of his neck, pulls to the side of the road and stops the car. He reaches back and picks up a can of foaming cola from the seat beside Joaquin. He asks Joaquin, "Son, did you shake this can?" Joaquin answers, "No, I didn't touch it." Mr. Garcia thinks out loud, "What else could have caused the can to explode?" Pedro says, "I think that can has been in the car for a while." They all want to know what happened.

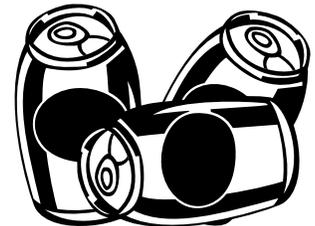
Flexible Thinking

In the scene above, Mr. Garcia came to what he thought was the obvious conclusion, that Joaquin shook the can and then opened it. But Joaquin said he hadn't. To solve the mystery, Mr. Garcia used flexible thinking. *Flexible thinking* is when you **consider different explanations** for an event or a chain of events. In this case, Mr. Garcia wondered, "What else could have caused the can to explode?" Mr. Garcia came up with the following three explanations:

Flexible thought 1: Perhaps the can had been sitting on the grocery-store shelf for a long time before Mr. Garcia bought it. Finally, it got so old that it just burst open.

Flexible thought 2: Joaquin had brought the can of cola from home, and the can had been sitting in the back seat all day. Maybe while the family was shopping, the sun heated the can of cola until it got hot enough to explode.

Flexible thought 3: Maybe someone had shaken the can a few days ago. As it sat in the back seat, it was shaken more by the movement of the car. Finally, it exploded.



Which explanation seems most likely to you? Why?

Which explanation seems least likely to you? Why?

Being Flexible, continued

Can you think of any other explanations? Explain your own flexible thoughts.

Eventually, Mr. Garcia decided on the most likely explanation. He had never heard of soda cans exploding because they got too old. But he knew that liquids expand when they are heated. He also thought that the movement of the car might have been a factor. Thus, he decided that while they were shopping the sun must have heated the can. Then when they started driving home, the car's motion shook the can a little. Those two factors combined to cause the can to explode.

Flex Your Brain

Here's another chance to practice your flexible-thinking skills. Try to think of a realistic explanation for each of the following examples.

Example 1: You live far from any lake or sea. While digging a hole in your backyard, you find a small, beautiful seashell.

Example 2: One day the branches of a tree near your home are unexpectedly filled with birds.

TROUBLESHOOTING

If you are having trouble thinking of creative explanations, try imagining two people debating what happened in the example. Picture their conversation in detail. If you can imagine their two points of view, then you've just thought of two explanations!

TRY THIS!

Create your own mysterious scenario, and then trade with a classmate. You'll be surprised at the explanations your classmate proposes!