

## Unit 11: Smile Trial

**Narrator:** A smile is a powerful thing. Did you know that when you smile at someone, they are likely to smile right back? But did you also know that a fake smile is one of our most common non-verbal lies. Today, we're going to test your ability to spot a fake smile. One of these smiles is real, and the other is fake.

Which one do you think is fake?

If you picked the one on the left, you were correct. OK, let's try that again!

The one on the right is fake. Were you surprised? It's harder than you thought, right? If you didn't get these correct, you're not alone. Research showed that people only get the correct answer about 50 percent of the time.

So, how do you spot a fake smile? First, you need to know what a real smile looks like. Scientists have learned that a real smile involves the muscles around the eyes. A genuine smile is called a "Duchenne smile". Guillaume Duchenne was a scientist who in the mid-1800s ran experiments to learn about facial expressions. He used electricity to move the muscles around people's mouths, making fake smiles. Then he compared them to real smiles by telling his test participants a joke. And the difference was clear. What he discovered was that a real smile causes the muscles around your eyes to move, creating lines—or crinkles.

Scientists now know this is because real smiles are made by the area of the brain related to emotion, so our whole face moves. But a fake smile is made by a part of the brain called the motor cortex. This part controls movements that we choose to make. Now that you know the trick, let's see if you can pick out the fake smile.

Which smile is real? The right? Or the left? Look closely at the eyes.

The smile on the left is real. Want to try another one? What do you think? See how the skin around the eyes moves?

The left smile is real. Okay. One more. Which smile is real? Right or left?

Can you see how her eyes are different on the right image? That's the real smile.