

**Student**

Laura Fulton  
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**Summary**

A thirsty dancer explores the antimicrobial properties of water bottle materials and discovers that the Science Buddies Project Guide is the perfect partner for success!

**Bottle Your Own Bacteria?**

Plastic, aluminum, or stainless steel—concern over chemicals present in common materials that may leach into bottle contents have many people wondering which type of water bottle is safest and best for our health. But as Laura Fulton, an 8th grader in Egg Harbor Township, New Jersey, knows, chemical exposure is not the *only* health risk when it comes to drinking containers. Laura wanted to stay hydrated during her dance classes, but she questioned what kind of water container she should use. "Bacteria in saliva is redeposited back into water bottles with every drink," explains Laura, a fact that led her to ask which materials—soft plastic, hard plastic, aluminum, or stainless steel—do the best job of inhibiting the growth of bacteria. Encouraged by her science teacher, she turned her curiosity into a project for the Jersey Shore Science Fair.

Laura used resources on the Science Buddies website to help turn her question into a focused science project. After constructing her hypothesis and identifying her control group, she was ready to experiment. Science Buddies' microbiology resources and [nutrient agar information](#) helped her get started testing bacteria levels in water bottles. "I constantly referred to the [Project Guide](#)," Laura adds. "It definitely helped me to structure my project better." Laura also worked with a microbiologist at a local college who taught her additional skills she needed to complete a microbiology project.

With the help of Science Buddies and her local mentor, Laura's project, "BYOB=Bottle Your Own Bacteria?", won 1st place in the Microbiology category at the local fair. She then went on to win a 2nd place award at the Delaware Valley Science Fair. While she had hypothesized that stainless steel bottles would be the best choice, her experiments show that aluminum bottles allow the least amount of bacteria growth. Laura now feels more confident about her health-conscious water bottle choice, and since conducting this experiment, she's gone on to compete with another successful microbiology project!

