**CHALLENGING MISCONCEPTIONS**


Almost everyone who has taken a biology class knows the following:

1. Mendel studied seven traits of peas and came up with the foundation for Mendelian inheritance.
2. Science research is accomplished by using “the scientific method.”
4. DNA fingerprinting is a way of revealing what is coded in a person’s genome.
5. Males possess an X and a Y chromosome, while females have two X chromosomes.
6. Errors in science experiments are solved by replicating the experiments.
7. There are absolute laws of biology responsible for the way living organisms grow, develop, and survive.
8. Nobel Prizes in science fields have been awarded only to scientists who drew accurate conclusions in their research.

But wait! Are these statements all true? Actually, these examples, like much of the information we, as teachers, learned in science classes and later taught to students, are not completely accurate. Erroneous biological information is accepted by numerous people who haven’t really verified that it is true. Biological nonsense is often shared as fact.

**CHILDREN’S SCIENCE**


Based on the incredible story of Lyudmila Trut and the decades of research she and others conducted in Siberia on silver fox domestication, this is a heartwarming tale of friendship and the bonds that she formed with one of the many young foxes she studied during her career. Many of us are familiar with Lyudmila’s work through Lee Dugatkin’s other book, How to Tame a Fox and Build a Dog, which explores generations of research into selective breeding of wild foxes in an effort to understand the social and genetic processes that have resulted in the bonding traits of dogs as we know them today.

So often in the stories of our science, we set aside the deeper connections and passions that we have for that which we are studying. I tell students that it is our passion that drives us to do what we do in light of failed experiments and changing understandings and how important it is that we capture that for students and others who are the future of science. For me, this book goes great lengths to show the bond developing between fox and human and takes you through the deeper connection, beyond just the research that was being done. It truly shows the depth of love that drove the hope for understanding, which is something that should be modeled more in stories of our science.

This book has become a part of the bedside collection of my eight-year-old son, who loves science and has a deep love of animals. The story of the little fox and how she grew to bond with Trut was touching and relatable, while the scientific talk that surrounded what the scientists were doing made for some incredible side discussions with him about traits and behavior and how all these things come into play in humans and other animals. The images in the book are outstanding and make it very easy for younger readers, as well as more experienced readers, to connect with the story. This is a great children’s story but also a great teaching story. I could see this being used in K–8 classrooms as a reading activity or read-aloud to talk about a variety of scientific topics, as well as a great book for home!

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