DNA of colorblindness: One woman’s take on how the genetic lottery shaped her family

My 7-year-old son has fallen in love with Rainbow Loom, the wildly popular sets of pegs and rubber bands kids use to weave friendship bracelets and necklaces. On a recent weekend, I bought him several new packages of rubber bands, as well as a compartmentalized plastic box to store them in. He sat at the kitchen table and started sorting the bands into color-coordinated piles. White. Black. Red. Blue. Pink. Yellow.

Two piles of translucent bands stuck out from the others: light green had been combined with peachy orange, and lavender mixed in with baby blue.

“Those piles have two colors, buddy,” I said. “No, they don’t,” he said, not even bothering to look up at me as he continued sorting away.

My two sons are colorblind. They inherited their vision from me. I see color normally, but I carry a quirky set of genes on one of my X chromosomes, passed down from my colorblind grandfather to my mother to me.

Women are rarely colorblind because they have two X chromosomes, one from their mother and the other from their father. The “normal,” dominant color vision genes on one chromosome override the effects of the funky, recessive genes on the other.

But boys and men get only one X chromosome — from their mother — which means they don’t get that backup DNA. In flips of a genetic coin, my boys both inherited my colorblindness genes.

Read the full, original story: Seeing colorblindness through her son’s eyes