

Stargazing through a child's eyes



No matter how many times we look at familiar sights, we don't always *see* them. Seeing and looking are two different activities. Looking is a visual activity, but seeing something involves cognition, emotion and experience. This is true for us in all moments of our lives: gazing upon our children's faces, navigating our familiar routes about town, or beholding our natural environment.

And it is especially true of our night sky. I often hear the comment from planetarium visitors: "I never noticed that before." It's always a joy for me to show people something that is right there in front of them; they just need a little guidance in the seeing department.

Looking at the stars, there are some tricks we can employ to see better in the dark. Allowing our eyes to adjust to darkness is one. Our pupils must dilate to allow in more light, and a photochemical reaction takes place, allowing our eyes to work more effectively. Waiting a full ten minutes is one way of learning to see better.

Learning to use a red filtered flashlight is another. Humans have acute vision. We see better in terms of color, detail and clarity than just about any animal—at least in the daytime. We all know that owls have us beat when it comes to night vision. But in the evolution of the

owl's fabulous night-adapted eye, compromises were made. Owls' eyes are relatively huge in their heads to accommodate the large number of rod cells that allow them to see better at night. Bigger eyes took up room for the muscles that would allow an owl to move its eyes within its head; owls cannot look left and right without moving their heads. Of course, they can turn that head around 270 degrees!

We have more cone cells for seeing better in the daytime. Our rod cells are located a little off to the side of our visual field. When you are stargazing, make use of this; when trying to resolve a dim object, such as a distant nebula or galaxy, look slightly away from it, and it will come into view. By relaxing your eye, and using your night vision, you will see more of the sky than you have been looking at.

I hope that I have opened your eyes for you as a kindergarten visitor to the planetarium once did for me. Upon seeing the Milky Way galaxy brilliantly stretched across the planetarium sky, he proclaimed it "a rainbow that has lost all its colors!" This image persists for me whenever I seek our beautiful galaxy. He opened his eyes and his mind, and allowed me to see. 🌌

—Lisa Daly