

BRUCE SMITH

BLENDING

ENVIRONMENTAL STORYTELLING WITH SCIENCE EDUCATION

As a scientist who's spent much of my life researching and managing wildlife populations and their habitats, environmental education is an important product of my work. But recently I changed course. Instead of writing adult nonfiction about science and natural history, I switched to children's fiction.

I've found that people are influenced by stories as much, and maybe more, than by facts and figures. I believe that science-derived information can be folded and blended into stories that capture the imagination of readers. Learning becomes a part of an entertaining reading experience, perhaps especially so for kids.

The climate crisis is a prime example of this. And so my middle-grade novel series, *Legend Keepers*, wraps its environmental message in a grand adventure at the roof of the world. Readers, young and old alike, experience the mountains' changing environment through the eyes and lives of the books' characters, both kids and wild animals.

Who better to guide us through the climate crisis than a female kid mountain goat and an introverted boy turned environmentalist? Such stories of hope and empowerment can inspire readers to do something—and sometimes more than we realized—to make our world better.

How we, and previous generations, have used and abused its resources is changing our planet. As greenhouse gasses accumulate in the atmosphere, the average global temperature has warmed by 1.2° degrees Celsius since 1880. Most of the increase has occurred since 1970, the first year Americans celebrated Earth Day.

That rise in temperature may sound insignificant to some, but its consequences are clearly not. So, if global warming doesn't strike a chord, then think of what's happening as global weirding. I find that a useful way to comprehend 25 inches of rain in Fort Lauderdale in seven hours, massive fires across the West, or epic drought followed

by epic rain and snowfall in California. One-hundred-year and five-hundred-year weather events are happening way more often than that.

In an article in the September 2022 issue of *Science* magazine, the authors forecast that today's six-year-olds will experience three times as many climate disasters in their lifetimes as their grandparents will. What we adults do during our lives will affect today's kids for decades. This has been the belief of American Indian tribes who historically lived their lives mindful of the next seven generations.

Today's climate crisis is a crisis of leadership. Although science provides an objective rationale for decision-making, humans ultimately can, and do, disregard science when facing problems. Our values, cultural and social mores, and economic interests often prevail. So young people around the world—like Swedish climate activist Greta Thunberg and Montana's own courageous plaintiffs in *Held vs. Montana*—are seeking ways to fill the leadership void.

That's why I'm a champion of science education which has the wonderful capacity to open young minds to possibilities. It fosters a desire for knowledge and prompts kids to ask questions about their world, especially the "how" and "why" questions. By equipping students with skills to critically analyze problems, science education trains them to solve environmental crises plaguing our planet.

Teaching STEM in schools, beginning in elementary grades, helps prepare young people to face a challenging future.

I also believe that literature can enhance classroom science education. Both nonfiction and fiction—including eco-fiction—convey engaging and evocative examples of science in action. Such storytelling provides role models and helps both young and old to see what's possible. We need to be able to imagine, to dream of the future we want. Only then can we seek and achieve it. This is our shared responsibility to future generations, and to planet Earth.

