

Investigating Water



When discussing favorite books, I usually mention *Cadillac Desert* (Reisner 1986) as one of mine. Eyes glaze, though, when I explain that it is a history of water rights in the West. It just doesn't sound riveting. But trust me, this book is full of intrigue integrated through science, economics, and politics. The history of the West is the history of water

rights to a great extent. Water is a major world currency and continues to be critical for...well, everything. We can figure out how to live without oil. But I have yet to hear how we might live without water.

Water seems like a simple little molecule. Even kids know water as "H-Two-O," just three atoms from two elements. Nothing like those huge, complicated protein or polysaccharide molecules. But its apparent simplicity masks some important characteristics. Like other liquids, water is not compressible and doesn't have a fixed shape. But unlike other liquids, it is the only one that we experience naturally in three different states: solid, liquid, and gas. This simple fact about water carries enormous implications for weather and the cycle that makes it tick. We have all learned, and probably taught, the basics of the water cycle. In this issue we show two variations on that theme:

- "A Drop Through Time" (p. 30) places the water cycle into an integrated unit using a variation of the learning cycle called "Do-Talk-Do."
- "Precipitation Matters" (p. 38) extends our knowledge and teaching of precipitation through the use of technology.

In addition to the water cycle, you probably remember learning about water as the "universal solvent." So what? Because of this property, water dissolves many substances necessary for life. Ask a fish about dissolved oxygen. But water can also dissolve and carry things that could harm the environment.

- "The Dirty Water Challenge" (p. 26) describes a

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lesson that can teach kids the importance of water filtration while honing their skills to conduct investigations.

- Students go the next step in "A Science Club Takes Action" (p. 35), when they are empowered by their knowledge of science to make a difference in their community.

Water is critical to many processes on Earth. Watersheds have an enormous importance for both biological and geologic processes.

- In "Watershed Seasons" (p. 20), students study watersheds all year long and learn the role that these watersheds have in geology and biology.

And last, what is a summer without a stack of books to read? "Solstice, Science, and Summer Reading" (p. 46) takes some of the guesswork out of choosing a good book.

Loren Eiseley stated "If there is magic on this planet, it is contained in water." We hope this summer issue finds you snug on a lounge chair enjoying the magic.

References

Eiseley, L. 1957. *The immense journey: An imaginative naturalist explores the mysteries of man and nature*. New York: Random House.

Reisner, M. 1986. *Cadillac desert: The American West and its disappearing water*. New York: Penguin Books.

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