

Naturalist Writers and Environmental Sentiments

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*****Note: Figures may be missing from this format of the document**

Naturalist writers provide a myriad of potential learning experiences, from extolling the virtues of uninhibited inquiry to developing an appreciation for observation skills. Simultaneously, the works of naturalist writers offer students the opportunity to explore the nuances of other landscapes and cultures, as well as their own. Incorporating naturalist writers into your curriculum offers a refreshing opportunity for instruction that is substantive and relevant to a number of broad, interdisciplinary themes. This is critical for middle school students who strive to make a connection between their lives inside and outside of school.

Many activities may be geared towards the writers featured in this article. Some middle school teachers report that their students enjoy being read to; so a simple activity would be to just read aloud from the works of the writers featured in this article. Biography is likewise a motivator and captivator for many middle school students. Having students locate information on the naturalist writers and then portray them in class engages them

Some naturalist writers

Edward Abbey

- *Desert Solitaire: A Season in the Wilderness*
- *Fire on the Mountain*

Rachel Carson

- *The Edge of the Sea*
- *Silent Spring*
- *Lost Woods*

John Muir

- *My First Summer in the Sierra*
- *The Yosemite*
- *A Thousand-Mile Walk to the Gulf*

Henry David Thoreau

- *Walden*

Jan DeBlieu

- *Hatteras Journal*
- *Wind*

Wendell Berry

- *Entries*
- *Waste Land: Meditations on a Ravaged Landscape*
- *The Long-Legged House*

Annie Dillard

- *A Pilgrim at Tinker Creek*
- *An American Childhood*

Aldo Leopold

- *A Sand County Almanac and Sketches Here and There*
- *Game Management*

Gary Snyder

- *Turtle Island*
- *The Practice of the Wild: Essays*

Terry Tempest Williams

- *Pieces of White Shell: A Journey to Navajoland*
- *Refuge: An Unnatural History of Family and Place*

in literacy, drama, and science. Or, incorporate technology by asking students to create a Powerpoint presentation on their author that you can compile into a collection for each student in your class.

Ties to The Standard

National Science Education Standards F and G are clearly addressed by the activities suggested in this article (NRC 1996). Content Standard F indicates that all students in grades 5-8 should develop an understanding of populations, resources, environments, natural hazards, and science and technology in society. Content Standard G states that all middle school students should develop an understanding of science as a human endeavor, as well as an understanding of the nature of science and the history of science. The writers profiled in this article discuss environments and natural resources, the issue of human population growth and its impact on the environments that they cherish, and the nature and history of science. These writers were selected to represent the diversity of naturalist writers from different time periods and different geographical regions of the United States. Additionally, each focuses on a particular environment, one in which the writers immersed themselves.

Furthermore, each of the writers approaches societal issues in a different way, from Thoreau's civil disobedience to Abbey's adoption of atheism.

The activities in this article directly address Curriculum Standards for Social Studies I: Culture; II: Time, Continuity and Change; and III: People, Places, and Environments (NCSS 1994). By simply reading the selections in the activities that follow, students will be performing Standard I as they experience each of the naturalists' interpretations of their culture. Activity 2 clearly speaks to Standard II. Students must examine the author's selections and look for textual and contextual clues to determine when the passage was written. When reading the passage written by Thoreau, for instance, students will notice that the writing style differs from modern writing. They will also develop a critical sensitivity to the differences in values and behaviors in various historical contexts. People, places, and environments are the major themes of content Standard III—themes that are clearly included in the geographical placement and environment identification activities. Students will also read descriptions of physical locations and make conclusions about these geographic landforms and their relationships to the ecosystem.

Incorporating naturalist writers

The activities include addressing the interpretation of naturalist writing in three different ways: geographically, chronologically, and by the environment described. In each of the three activities students are given selections from a few naturalist writers and asked to match them according to directions at the top of the sheet.

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Journal writing resources

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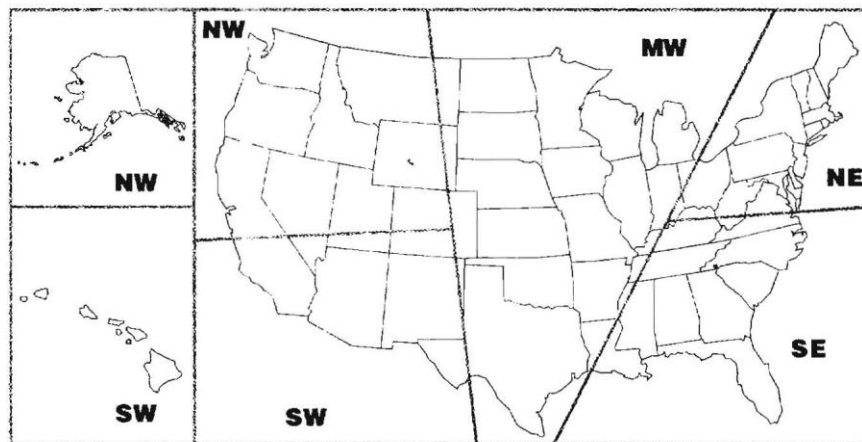
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FIGURE 1

Answer key

Question	Activity I: Regional writing	Activity II: Timely writing	Activity III: Describing environments
A	SW—Abbey, <i>Desert Solitaire</i>	1901–1950—Leopold, <i>Sand County Almanac</i> , 1949	Desert—Abbey, <i>Desert Solitaire</i>
B	SE—DeBlieu, <i>Hatteras Journal</i>	1850–1900—Thoreau, <i>Walden</i> , 1854	Marsh—Leopold, <i>Sand County Almanac</i>
C	MW—Leopold, <i>Sand County Almanac</i>	1901–1950—Carson, <i>Lost Woods</i> , 1922	Woods—Thoreau, <i>Walden</i>
D	NW—Muir, <i>The Yosemite</i>	1951–present—Williams, <i>Refuge</i> , 1991	Woods—Snyder, <i>Turtle Island</i>
E	NE—Dillard, <i>American Childhood</i>	1951–present—Berry, <i>The Long-Legged House</i> , 1969	Desert—Abbey, <i>Desert Solitaire</i>

Activity I: Regional writing



Match the following quotations with the geographic region described in the writing selections. The letter "X" has been substituted for words that describe the region.

A. "In the government truck I make a final tour of the park. East past the Balanced Rock to Double Arch and the Windows; back again and north and east to Turnbow Cabin and up the trail to Delicate Arch; back again and northwest beyond the Fiery Furnace into Devil's Garden, where I walk for the last time this year out the trail past Tunnel Arch, Pine Tree Arch, Landscape Arch, Partition Arch, Navajo Arch, and Wall Arch, all the way out to Double-0 Arch at the end of the path." **Region**

B. "Late in April the beach at Rodanthe began to fill with holes I knew to be the entrances to ghost crab burrows. Anyone who has spent time on the X and X coast has seen these sandy shelled crabs that retreat to underground chambers in the hottest part of the day. Long thought to be scavengers—the garbage collectors who clean the beaches of dead organisms—ghost crabs are really adept predators who feed on mole crabs and coquinas. Field guides frequently describe them as an evolutionary link between animals of the land and the sea, since they cannot swim but must wet their gills with ocean water at least once a day." **Region**

C. "In the lake states we are proud of our forest nurseries, and of the progress we are making in replanting what was once the north woods. But look in these nurseries and you will find no cedar, no tamarack. Why no cedar? It grows too slowly, the deer eat it, the alders choke it. The prospect of a cedarless north woods does not depress our foresters; cedar has, in effect, been purged on grounds of economic inefficiency." **Region**

D. "No temple made with hands can compare with Yosemite. Every rock in its walls seems to glow with life. Some lean back in majestic repose; others, absolutely sheer or nearly so for thousands of feet, advance beyond their companions in thoughtful attitudes, giving welcome to storms and calms alike, seemingly conscious, yet heedless of everything going on about them. Awful in stern, immovable majesty, how softly these mountain rocks are adorning and how fine and reassuring the company they keep" **Region** _

E. "Many old stone houses had slate-shingled roofs. I sued to find blown shingles cracked open on the sidewalk; some of them bore—inside, where no one had been able to look until now—fine fossil prints of flat leaves. I heard there were dinosaur bones under the buildings. The largest coal bearing rock sequence in the world ran under X and popped out at Coal Hill, just across the Monongahela. There were layers of natural gas beneath X, and pools of petroleum the pioneers called Seneca oil, because only the Indians would fool with it."

Region

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Activity II : Timely writing

Match the quotations with the time periods in which they were written: 1850- 1900., 1901-1950, or 1951– present. Use the following facts as clues in making your choice

" The 1950s marked^{the} bringing of the Cold War, a time which testing of atomic weapons occurred.

, Rachel Carson's *Silent Spring*, published 1962 spurred public discussion about human impacts on the environment,

- In the early twentieth century, wolves we considered a game species.
- Railroad travel was the primary form of transcontinental travel in the United States in the late 1800s.
- Before the 1960s, when the use of plastics became widespread, people carried water in metal containers.

A. "We saw what we thought was a doe fording the torrent, her breast awash in white water. When she climbed the bank toward us and shook out her tail, we realized our error: it was a wolf. A half-dozen others' evidently grown pups, sprang from the willows and all joined in a welcoming melee of wagging tails and playful maulings. What was literally a pile of wolves writhed and tumbled in the center of an open flat at the foot of our rimrock.

In those days we had never heard of passing up a chance to kill a wolf. In a second we were pumping lead into the pack' but with more excitement than accuracy; how to aim a steep downhill shot is always confusing. When our rifles were empty, the old wolf was down' and a pup was dragging a leg into impassable side-rocks.

We watched the old wolf in time to watch a fierce green fire dying in her eyes. I realized then, and have known ever since' that there was something known only to her and to the mountain. I was young then, and full of trigger-itch; I thought that because fewer wolves meant more deer. that no wolves would mean hunters' paradise. But after seeing the green fire die, I sensed **that** neither the wolf nor the mountain agreed with such a view." **Time period**

B. "As I sit at my window this summer afternoon, hawks are circling about my clearing; the tantivy of wild pigeons' flying by two and threes athwart my view, or perching restless on the white pine boughs behind my house' gives a voice to the air; a fish hawk dimples the glassy surface of the pond and brings up a fish; a mink

steals out of the marsh before my door and seizes a frog by the shore; the sedge is bending under the weight of the reed-birds flitting hither and thither; and for the last half-hour I have heard the rattle of railroad cars' now dying away and then reviving like the beat of a partridge, conveying travelers from Boston to the country. For I did not live so out of the world as that boy who, as I hear, was put out to a farmer in the east part of the town, but ere long ran away and came home again' quite down at the heel and homesick. He had never seen such a dull and out-of-the-way place; the folks were all gone off; why, you couldn't even hear the whistle! I doubt if there is such a place in Massachusetts now." **Time period** _____

C. "The call of the trail on that dewy May morning was too strong to withstand. The sun was barely an hour high when Pal and I set off for a day of our favorite sport with a lunch-box, a canteen, a notebook, and a camera. Your experienced woodsman will say that we were going birds'-nesting—in the most approved fashion.

Soon our trail turned aside into a deeper woodland. It wound up a gently sloping hill, carpeted with fragrant pine needles. It was our own discovery, Pal's and mine, and the fact gave us a thrill of exultation. It was the sort of place that awes you by its majestic silence, interrupted only by the rustling breeze and the distant tinkle of water." **Time period** _____

D. "When the Atomic Energy Commission described the country north of the Nevada Test Site as 'virtually uninhabited desert terrain,' my family and the birds at Great Salt Lake were some of the 'virtual inhabitants'...The fear and inability to question authority that ultimately killed rural communities in Utah during atmospheric testing of atomic weapons is the same fear I saw in my mother's body." **Time period** _____

E. "*The Peace of Wild Things*

When despair grows in me

And I wake in the middle of the night at the least sound
In fear of what my life and my children's lives may be,
I go and lie down where the wood drake

Rests in his beauty on the water' and the green heron feeds. I come into the peace of wild things

Who do not tax their lives with forethought

Of grief. I come into the presence of still water. And I feel above me the day-blind stars
Waiting for their light.

For a time

I rest in the grace of the world' and am free." **Time period** _____

Activity III : Describing environments

Match the quotations with the biomes described, The letter

X has been substituted for ,voids That directly describe the biome. Choose between desert, woods, or marsh

A. "There is something about the X that the human sensibility cannot assimilate, or has not so far been able to assimilate. Perhaps that is why it has scarcely been approached in poetry or fiction, music or painting; every region of the United States except the arid West has produced distinguished artists or has been represented in works of art which have agreed-upon general significance... the X waits-- mesa, butte, canyon, reef, sink, escarpment, pinnacle, maze, dry lake, sand dune and barren mountain—untouched by the human mind."

Environment _____

B. "A dawn wind stirs on the great X. With almost imperceptible slowness it rolls a bank of fog across the wide morass. Like the white ghost of a glacier the mists advance, riding over the phalanxes of tamarack, sliding across bogmeadows heavy with dew. A single silence hangs from horizon to horizon. ...At least a glint of sun reveals the approach of a great echelon of birds. On motionless wing they emerge from the lifting mists, sweep a final arc of sky, and settle in clangorous descending spirals to their feeding grounds. A new day has begun on the crane X" **Environment** _____

C. "After I got a bird book I found, in the deep X, a downy woodpecker working a tree trunk" **Environment** _____

D. "*Pine Tree Tops*

In the blue night

Frost haze, the sky glows With the moon

Pine tree tops

Bend snow-blue, fade Into sky, frost, starlight. The creak of boots

Rabbit tracks, deer tracks. What do we know" **Environment** _____

E. "The X is different. Not so hostile as the snowy peaks, nor so broad and bland as the ocean's surface, it lies open—given adequate preparation—to leisurely exploration, to extended periods of habitation. ...The X waits

outside, desolate and still and strange' unfamiliar and often grotesque in its forms and colors, inhabited by rare, furtive creatures of incredible hardiness and cunning, sparingly colonized by weird mutants from the plant kingdom, most of them as spiny, thorny' stunted and twisted as they are tenacious." **Environment**

Extensions

1. Locate some of the works from which these excerpts came. Read to your students to set the tone for an outdoor experience, to introduce a concept in a lesson, to provide stimulation for journal entries, or to start or end class.
2. Allow students to choose one of the naturalists' excerpts to research on the Internet. Students can report on the general geographic location, the flora and fauna located in that region' and then find and describe pictures of specific flora and fauna mentioned in the excerpt they have chosen. This activity also provides an opportunity for you to introduce students to the Geographic Information System (GIS) and suggest that they use GIS locations to obtain specific information about flora and fauna in a particular location.
3. Using the naturalist writings as models, have students create their own journals. Encourage creativity of expression and provide opportunities for outdoor learning experiences in which students can record their thoughts in their journals. There are several excellent books and articles available on journal writing and you may wish to share the ideas from these articles with your students (see Journal writing resources on page 24).
4. On the board' write some thought-provoking quotes by naturalists. Have a class discussion about the meaning and environmental significance of these quotes. Some examples might be:
 - "Harmony with the land is like harmony with a friend; you cannot cherish his right hand and chop off his left... the land is one organism." (Aldo Leopold, *The Land Ethic*)
 - "No important change in ethics was ever accomplished without an internal change in our intellectual emphasis, loyalties, affections, and convictions. The proof that conservation has not yet touched these foundations of conduct lies in the fact that philosophy and religion have not yet heard of it. In our attempt to make conservation easy' we have made it trivial." (John Muir' *His Life and Letters and other Writings*)
5. Have students create a timeline listing the writers and their works. Discuss observed trends from these articles with your students. To extend this activity' you could have students record historical events, scientific advances, or other activities which were or are going on at these times.