This story reveals how a group of everyday citizens—committed to protecting the health of their community and the Appalachian ecosystem—find strength, influence, and friendship by embracing sustainability as a community practice: one of the five practices of socially and emotionally engaged ecoliteracy. As you read, notice the diverse backgrounds of the individuals and the ways in which mountaintop removal mining has affected their lives.

At 9:45 on a cold February morning in 2011, a dozen Kentucky residents—including educators, writers, retired coal miners, and one rather determined coal miner’s daughter—gathered in the parking garage of the state capitol. Each carried a red lunch bag containing sandwiches, chips, and apples, along with their driver’s licenses in their pockets for identification. Some carried supplies of prescription medications. The best known among them, acclaimed seventy-six-year-old author and farmer Wendell Berry, had a toothbrush tucked in the inside pocket of his suit jacket. After decades of opposition to mountaintop mining in Appalachia, one of the most biologically important regions in the United States, the group had arrived at the capitol to confront the governor. And because they considered mountaintop removal mining both a human rights and an environmental issue, they were prepared to be arrested.

As an unidentified man left the building, fifty-four-year-old Teri Blanton ran ahead to catch the door. Then the group walked in, through a pedestrian tunnel, and up the stairs, pausing a few yards from Governor Steve Beshear’s office.

“Ready?” Blanton asked.

“Ready,” they answered.
Inside the governor’s office, someone informed the receptionist that they had sent a letter announcing their intention to visit but had received no response. The receptionist went behind a closed door and then returned to say that the governor was busy, but she would see if someone else could meet with them.

“Will that be all right?” she asked.

“I think we’ll just wait here to meet with the governor,” Blanton replied, as others settled in on couches and chairs.

A few minutes later, the receptionist asked if they would move down the hall to a conference room.

“I think we’ll just stay here and wait for the governor,” repeated Blanton.

Ten minutes later, Chief of Staff Mike Haydon offered to meet with them.

“I think we’ll just wait for the governor,” Blanton said for a third time.

Blanton, who received a 2010 Rainforest Action Network award for outstanding leadership to protect the environment, lost a brother to a coal mining accident and friends to cancer that she believes was coal-related. In her hometown of Dayhoit, Kentucky, she watched her children tromp through coal muck every morning to catch the school bus.

But, she insists, “I ain’t nobody’s damn victim.” Indeed, Blanton has stood up to coal companies, addressed hundreds of people at rallies, challenged a United States senator on MSNBC, and helped inspire an investigation that led to the designation of an EPA Superfund site.

Called “the Erin Brockovich of mountaintop mining,” Blanton has educated people about this issue on the local, state, and national level, displaying a home-grown brand of emotionally and socially engaged ecological intelligence. She especially seeks to help those of us who do not live anywhere near Kentucky or other coal mining states to recognize our personal connection to the Appalachian region. She reminds us that every time we flip on the lights in our home, office, or school, the electricity we use is often generated from burning coal.

THE ROLE OF COAL TODAY

The United States is the world’s largest producer of coal, the most significant source of electricity today. It fuels the generation of 45 percent of the electricity used in this country and 40 percent of the electricity used worldwide, with global coal consumption projected to increase 53 percent by 2035.

But if coal mining conjures up images of men going down into underground mines, to blast and dig out the sedimentary rock, that’s not the way it typically happens today. Sixty percent of coal mined in the United States is now acquired through surface mining, which uses a variety of techniques to remove soil, rock, and entire ecosystems to access the minerals below the surface. This includes strip mining, open pit mining, and mountaintop mining (or mountaintop
Lessons from a Coal Miner’s Daughter

Mountaintop mining—the most profitable albeit most destructive form of coal mining—is carried out in six basic steps:

1. Use bulldozers to clear trees and level the mountaintop.
2. Drill small holes through the dirt and rock and drop in powerful explosives that blow as much as 800 feet off the mountaintop to reveal the coal seams below the surface.
3. Excavate the coal using power shovels or a 2,000-ton, twenty-story-high dragline, one of the largest machines in the world.
4. Bulldoze the remains of the shattered mountains and their ecosystems (what the industry calls “overburden”) into the valleys and streams below.
5. Gather the coal and transport it to a plant to be washed before shipping. Then dump the liquid waste, or slurry—containing arsenic, lead, mercury, magnesium, and selenium—into a hillside dam.
6. “Reclaim” the area. By law, the coal company is required to create “useful landscapes” after a mining operation is completed. This can include, for example, replacing soil, replanting trees, and restoring the basic contours of the landscape that existed before the mountains were blasted and bulldozed away. Put another way, they are obliged to remake nature’s design—a feat few find plausible.

Mountaintop mining is largely confined to the Appalachian Mountains, one of the economically poorest—and ecologically richest—regions in the United States. (If mountaintop mining occurred in more affluent parts of the country, Robert F. Kennedy Jr., has said, it would likely lead to jail time.) The oldest mountain range in North America, the Appalachian Mountains are home to an extraordinary diversity of flora and fauna, thanks to the legacy of the Ice Age and a generally mild climate.

As a result of mountaintop mining, an estimated 500 mountaintops, one million acres of forest, and 2,000 miles of streams have been destroyed since the mid-1980s. In 2010, a team of researchers also found higher rates of hospitalizations and deaths due to heart, lung, and kidney problems in mountaintop mining regions than elsewhere in the United States. And a number of mining communities have become ghost towns, as residents have sold their homes to coal companies rather than live amid the noise, pollution, and general devastation of the landscape. In Lindytown, West Virginia, for example, only two occupied houses remain in what was once a small mining town: one belonging to an elderly woman suffering from Alzheimer’s, whose family felt it would be too disorienting to move, and another belonging to her son.
The burning of coal—acquired through mountaintop mining or, for that matter, any other means—also threatens a number of the life-support systems on which we depend. For example, the United States alone produces close to two billion tons of carbon dioxide (CO$_2$) per year from coal-burning power plants. And CO$_2$ is a significant contributor to climate change, the increasing acidity of the oceans, and interference with Earth’s nitrogen cycle, leading to “dead zones” in oceans and rivers. (Dead zones are areas where oxygen levels are too low to support marine life. The Gulf of Mexico, for example, is home to a dead zone as large as the state of New Jersey.)

**“NOBODY’S DAMN VICTIM”**

Blanton, Berry, and a growing number of others have been expressing their opposition to mountaintop mining for years. Berry, in fact, says that he has voiced his opposition to all surface mining for nearly a half century. Reflecting on the destruction inflicted on his home state during that time, Berry wrote, “This is a history by any measure deplorable, and a commentary sufficiently devastating upon the intelligence of our politics and our system of education.” By way of example, he pointed to a lack of understanding about the difference between the long-term value of a well-maintained forest ecosystem and the short-term gain of coal mining—likening the difference to “using a milk cow, and her daughter and granddaughters after her for a daily supply of milk, renewable every year—or killing her for one year’s supply of beef.”

**Deconstructing the Meaning of “Cheap”**

Coal is the most common source of electricity in the world because it is plentiful—and one of the cheapest forms of energy, per kilowatt-hour (kWh). But there is a great difference between price and cost, as a recent life cycle analysis of coal revealed.

“Each stage in the life cycle of coal—extraction, transport, processing, and combustion—generates a waste stream and carries multiple hazards for health and the environment,” wrote Paul R. Epstein, the late associate director of Harvard Medical School’s Center for Health and the Global Environment. These costs, known as hidden or external costs, are not paid for by coal manufacturers and therefore are not reflected in the price. They are instead transferred to society at large.

“We estimate that the life cycle effects of coal and the waste stream generated are costing the U.S. public a third to over one-half of a trillion dollars annually,” Epstein wrote in the February 2011 issue of *Annals of the New York Academy of Sciences*. Moreover, many of these hidden costs are cumulative.

His report identified health, economic, and environmental hazards at various stages of coal’s life cycle, from extraction and processing to transportation and combustion. Among the economic
Moreover, he has said, our education system plays a role in the perpetuation of ecological destruction, because it is based on the faulty premise of an economy that externalizes health, environmental, and other costs: “The change that is called for is a shift from the economy to the ecosphere as the basis of curriculum, teaching, and learning.” The ecosphere, Berry says, is the true basis and context for any economy.15

After decades of opposition, Berry announced in 2008 that he was losing patience, and that it was time to invoke civil disobedience. “If your government will not rise to the level of common decency, if it will not deal fairly, if it will not protect the land and people, if it will not fully and openly debate the issues, then you have to get in the government’s way,” he declared at a rally against mountaintop mining that year.16

The final straw came in 2010. After the Environmental Protection Agency (EPA) announced that it would block eleven mining permits out of concern for the impact of mining on the state’s waterways, Governor Beshear partnered with the coal industry to sue the agency.17 This action, as Blanton put it, made clear that the government put coal interests above the interests of people, land, and water—and it was time to get in the government’s way.

With this as the motivation for their visit to the state capitol in February 2011, Blanton, Berry, and the others were determined to wait for the governor to listen to them, no matter how long it took. As they waited, several reporters arrived and asked, “Do you really think talking to a governor who has sided with the coal industry will work?”

Impacts are the cost of federal and state subsidies of the coal industry, decline of property values as a result of mountaintop mining, damage to farmland and crops resulting from pollution, loss of tourism, and costs to taxpayers of environmental monitoring and mitigation.

Among the health impacts are increased rates of mortality and morbidity resulting from elevated levels of soot and other fine particles in the air, and higher rates of sudden infant death syndrome.

Among the environmental impacts are methane emissions that lead to climate change, loss and contamination of streams, destruction of local habitats and biodiversity, acid mine drainage, air pollution, heavy metal pollution, ozone emissions, soil contamination from acid rain, and destruction of marine life from mercury pollution and acid rain.

In short, if the price of coal reflected its true cost, it would nearly triple—making coal no longer one of the cheapest, but one of the most expensive, forms of energy today.
“I don’t know if it will work or not,” Berry responded. “The question is, ‘Is it right?‘ I know it’s right.”

A short time later, word came that the governor would meet with the group.

“Remember to stand tough,” Blanton reminded everyone. “It’s not just about meeting with us, but meeting our demands.”

Eighty-year-old Patty Wallace, who once thought she’d be making quilts at her age rather than participating in a protest, held up a sign that spelled out these demands:

1. Stop the destruction of land, water, and people by mountaintop removal.
2. Support the economic transition with good jobs for miners and communities.
3. Engage in sincere, civil, public conversation about how we solve these serious issues.

When the governor arrived, Berry spoke first. Several members of this group had repeatedly presented their concerns about the impact of mountaintop mining, he said, but they had never even received acknowledgement of a problem. “Instead, and far to the contrary, the government has publicly identified with the coal companies and has undertaken, with public funds, to support their interests in a court of law. We are here to say, as citizens and as taxpayers, that this is not acceptable.”

Then, one by one, the others spoke up.

Bev May, a nurse from eastern Kentucky, showed the governor and a growing cadre of reporters a jar of brown water that she said came from the municipal water system near her home in Floyd County.

“Does that look like the state has done its job?” asked Stanley Sturgill, a retired coal miner and federal mine inspector from Lynch, Kentucky. “I worked in coal mines for forty-one years. Now, you know and I know and everybody here knows that mountaintop removal is a whole lot cheaper than coal mining. But it doesn’t make sense when you end up with water like that.”

Rick Handshoe, a retired police radio operator, spoke of there being so much methane in the water where he lived that he worried his elderly father’s house might explode if he forgot to open the windows before showering. He spoke of the crawdads, frogs, and fish dying in the stream where he played as a child. “When chickens won’t drink out of it,” he said, “you know it’s bad.” And he invited the governor to come out and see it for himself.

After listening politely, with hands clasped in front of him, the governor said he could respect their differences of opinion; however, he thought that surface mining could be done responsibly. He then excused himself.

Blanton turned to the reporters and said, “We’re not satisfied with the communication we had here today. We need clean water and a governor who will stand up for the people, not the polluters.”
Berry added that he was pleased—because the exchange exposed the flaws in the governor’s position. “He [the governor] thinks surface mining can be done without harm to land or streams. It’s clear that nobody on our side thinks that’s true, because we’ve seen the results or experienced them in our own families and homes. The idea here that there are two sides that can legitimately disagree is simply wrong. You can’t rationally argue that the Earth ought to be destroyed.”

And then they waited, expecting and hoping to be arrested, for the sake of the attention it would bring to the issue. But several hours later, the head of Capitol security said that they were welcome to stay through the weekend. Surprised, they decided to do so. A few people ran out to pick up pillows, toothbrushes, and sandwiches. Others sent out news releases and posted updates on Facebook. As the hours passed, they found places to read, talk, and sleep. At around 8:30 p.m., Berry stood up, put on his jacket, and headed for the door. Blanton called out in a nervous voice, “Wendell, Wendell, are you leaving us?”

“No,” he said. “I’m going to brush my teeth.”

On Monday, the group emerged from the building to the applause of about 1,000 people who had gathered outside for the I Love Mountains Rally, an annual event calling for clean water and energy. Despite the fact that things hadn’t gone as they had planned, the group did attract attention for their cause in numerous publications, including the New York Times and The Huffington Post. They also succeeded in extracting a promise from the governor to come to eastern Kentucky and visit the mountaintop removal sites—a promise he fulfilled two months later. And they deepened their commitment to putting the health of people and the planet first, no matter what.

“I don’t think you should invest in things like this on the condition that you win,” Berry said. “You have to do it for other reasons. You have to do it because you are committed to the health of the land and community and the people. You do it because it’s right. And you have as much fun as you can.”

THE INTELLIGENCE CONNECTION

The decision to engage in civil disobedience made by this group of Kentucky citizens (nearly one-third of whom were educators) was born out of an extended sense of empathy for the mountains, water, people, and other life—as well as an understanding of the interrelationship between human actions and natural systems. Each person had his or her own story, but perhaps Blanton’s story best illustrates the effectiveness of leading with emotionally and socially engaged ecological intelligence—be it consciously cultivated or instinctive.

Blanton grew up on a dirt road in Harlan County, Kentucky. The daughter of a coal miner and the sister of a coal miner who died in a mining accident, Blanton left Harlan County briefly to marry, and then returned at twenty-five as a single mother of two. She bought a few acres of land behind her parents’ house and settled into a mobile home with her children and two big dogs.
Ecoliterate

William “Bopper” Minton is a husky-voiced, grab-you-for-a-hug-on-first-meeting kind of guy. At forty, he lives with his longtime girlfriend and their seven-year-old daughter, Madison. It’s not a big house, he explains, but it’s his house—the same house he’s lived in since the sixth grade. He remembers a childhood spent mostly outdoors, swimming, even bathing, in Little Goose Creek, which abuts his property. But when his daughter, who calls herself “Little Bopper,” recently had her first sleepover, he would not let the kids go outside to play—just as he does not let her out of the house after she comes home from school. His eyes turn red, fill, and then overrun with tears as he tells the story.

“She kept saying, ‘Why can’t we go out and play, Daddy?’” It was a question presumably asked more for her friend’s sake than her own, since she was already all too familiar with the answer.

When Madison was six months old and just beginning to crawl, Bopper gave her a bath, put her in a diaper, and took her outside. He gently placed her down on one side of the porch, walked to the other, and said, “Come to Daddy!” One can imagine the pride and joy—traces of which show on his face still—as he watched her crawl toward him. But when he scooped her up and held her in front of him, he discovered that his little girl was covered in black dust: hands, arms, belly, legs, feet, and toes. Having bathed her only moments before, he knew this could be only one thing: coal dust.

Furious, he picked her up again, put her in the car, and drove up the road to the big coal processing plant, which was built after his family moved into the home previously owned by his

Coal mining moved into her community of Dayhoit in the 1970s. Blanton didn’t think much about it until 1982, when her children had to wait for the school bus on the same road coal trucks traveled many times a day, spewing coal dust stirred up by each set of passing wheels.

“You know, my son would say, ‘Our shoes get dirty before we get to school,’” Blanton recalls. “And, one morning, he told me, ‘Somebody has to drive us across this part of the road every day, because the coal muck is there.’ I went down there, and I’d seen it,” she says, referring to a large puddle of black water and coal sludge, “and it was just disgusting.”

She called the county highway department to ask that they clean up the sludge, even by simply digging a ditch so the sludge would run off to the side of the road rather than pool near the school bus stop. Instead, the next day, a coal truck appeared outside her mobile home and circled it all day.

“I called the road department dude back,” she recalls, “and said, ‘By any chance, did you call the mining company?’”

When he said yes, she asked to speak to his supervisor, whose only response was, “Lady, you have to learn to live with this if you live in a coal mining town.”

“I beg to differ,” she said. “My kids aren’t wading through muck to get on the school bus.”
Lessons from a Coal Miner’s Daughter

Then she told the mining company that if they thought sending a coal truck to circle her home all day would intimidate her, they had another thing coming. “I don’t know why I felt so fearless,” she notes. “I probably should have been afraid, you know, but I wasn’t.”

Blanton continued to contact the highway department, which eventually built a new road so her kids didn’t have to catch the school bus on the same road traveled by coal trucks. But her problems were far from over. Her children began breaking out in rashes after taking baths, and she discovered that the ground-water feeding her well was poisoned with toxic chemicals from a nearby coal plant.20

Realizing that other people were also being affected, she joined forces with two other women to educate her community about the problem and asked state and federal authorities to test their water. The women were portrayed as hysterical housewives in the local newspaper, she recalls. But they succeeded in getting the water tested, which revealed that their wells had been contaminated with vinyl chloride, trichloroethylene, and other volatile organic contaminants for some twenty-five years.

In 1992, the EPA declared Dayhoit a Superfund site, giving the federal government the authority to clean it up. Some 5,000 pounds of contaminated soil were
excavated (and trucked to Alabama to be stored next to a poor African-American community\textsuperscript{21}). Next, the officials prepared to extract the contaminated groundwater through a pump-and-treat system. As Blanton investigated this process, she found reasons to fear that the carcinogens and other toxic chemicals would simply be transferred from the water to the air.

“In my mind, I knew that they were going to poison me and my kids all over again,” recalls Blanton, herself a cancer survivor.\textsuperscript{22} So she loaded her mobile home onto a flatbed truck and moved it, her children, and her dogs to the other end of the state.

Leaving Dayhoit, however, did not mean leaving behind her commitment to dealing with the problem of mountaintop and other forms of coal mining. She had come to understand all too well their impact on the people, land, and water. And she felt too much empathy for the people of her hometown—many of whom had died in their fifties and sixties.

Blanton became a leader in Kentuckians for the Commonwealth and founded the Canary Project, which focuses on reducing dependence on coal and other fossil fuels, strengthening mining laws and regulations, and demanding the enforcement of existing laws. She has spent thousands of hours lobbying in Frankfort, Kentucky, and Washington, D.C.

As she evolved into a leader who instinctively reflected the capacities of socially and emotionally engaged ecoliteracy, Blanton learned many lessons about effective leadership. Among the most essential, she says, are these:

\textbf{Don’t communicate from a place of anger.} “I started out expressing anger,” she recalls. “\textit{I was} angry. But that was not going to reach anybody.” You must be aware of your own feelings, have the ability to control them, and develop the facility to interact effectively with others.

\textbf{Reach people on the human level through stories.} “I could tell you one statistic after another,” she says. “But that isn’t going to reach you.” Effective leaders have empathy toward others and make connections for people by focusing on the human impact.

\textbf{Foster dialogue instead of debate.} “I always try to find a place in conversation where you and I agree on something,” she says. “And once we agree on something, then we can go on to have a dialogue.”

\textbf{Speak from the heart.} Blanton learned this from Wallace, who told her at a rally years before, “Put down the damn speech and talk from your heart.”

\textbf{Make ecological connections clear to others.} As Blanton and others sang while waiting in the governor’s office,

\begin{verbatim}
If you blow up the mountains,
Push it in the valley,
You gonna reap just what you sow.
\end{verbatim}
In this story, Teri Blanton, Patty Wallace, Bev May, Stanley Sturgill, Wendell Berry, and others hold a deep connection to Appalachia, its people, and the landscape. Reflect on your own connection to a place, now or in the past. Can you think of a location for which you would be willing to fight? Think about your students. Do they seem to have a connection to the place in which they live? How might you help them develop such a connection?